

# Annexure - I

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## CHAPTER - I INTRODUCTION

- 1.0 Energy is the fountainhead through which flows the economic growth of a country, in turn accelerating the social development of the Nation. The energy sector has to undergo a strict scrutiny to fulfill the promise of adequacy, reliability, quality standards and environmental friendliness topped with economy.
- 1.1 The Country has made significant progress in the energy sector with the quantum jump from a mere capacity of 1713 MW in 1950 to around 400 GW in 2021. The identified hydro potential of the country estimated at around 1,50,000 MW has a lot to look forward in terms of harnessing the same to meet the growing need of the energy and also promoting regional development in the country. Hydro despite being technologically well established source of energy has of late faced challenges in terms of long gestation period, cumbersome clearances & higher cost viz-a-viz the other sources of renewable energy.
- 1.2 The growth of demand has been rising continuously from a mere 18 kWh per person in 1950 to 1208 kWh in 2020. The demand estimation in the current decade is likely to maintain a growth rate of over 6% per annum.
- 1.3 Himachal Pradesh is blessed with abundant water resources in its five major river basins Satluj, Beas, Ravi, Chenab and Yamuna. Total hydro potential of all these river basins in the state is 24567 MW.

The Government of Himachal Pradesh has always been alive to the well being of the people of the state and at the same time contributing to the fulfillment of national objectives. The vision of the state is to be the leader in hydro power development and to diversify state green energy portfolio. Finding it difficult to harness the potential of power in the state due to scant resources facing a stiff competition from the development of other infrastructure needs of the state, it was found prudent to seize the initiative of partnership with Central /Joint sector as also the Private sector. Thus "Hydro Power Policy, 2006" for the state was formulated with the objective of providing adequate energy at economical cost, capital investment in hydro power and to promote efficient & environment friendly initiatives.

- 1.4 Out of the total estimated hydro potential of country at around 1,50,000 MW, only about 47000 MW (32%) capacity has been harnessed. However, a capacity of 10,948 MW (45%) has been commissioned in Himachal Pradesh out of total potential of 24567 MW and projects of 2625 MW capacity are under construction. Apart from this, allotted projects of 9165 MW capacity are under clearance and balance potential is under allocation.
- 1.5 Himachal Pradesh is targeting 10,000 MW green energy capacity addition by 2030 which brings focus on prioritizing the early completion of under construction hydro projects, bringing under clearance projects to construction stage and allocation of balance unallocated projects apart from increased priority on development of solar, wind & bio-mass potential. There will also be added emphasis on optimization of capacity of the existing and pipeline hydro power projects.
- 1.6 Himachal Pradesh has estimated capacity of 34,111 GW in respect of renewable sources other than hydro - 34 GW Solar, 84 MW Wind and 27 MW Biomass. Himachal Pradesh has inherent advantages in development of Pumped Storage Projects (PSPs) and can develop itself as water battery of the country. This calls for immediate identification of the PSPs potential apart from incentivising such projects in a big way by the Central as well as the State Government.

Besides, hybrid projects with small hydro development coupled with solar / wind power need to be investigated and identified.

**1.7** The economic growth leads to growth in energy demand and in fact both are intertwined. In the challenging scenario of climate change and commitments under Paris Agreement, the high demand of energy is going to be met out by non-conventional / green energy in future primarily from Variable Renewable Energy (VRE) sources like wind & solar. Hydro power thus can contribute significantly to meet balancing requirement of the grid. In addition, Storage projects / PSPs / BESS / Hydrogen Storage are Long Duration Energy Storage (LDES) systems which need prioritization. However, hydro power sector needs to be appropriately compensated through policy interventions in the form of financial assistance especially for prioritising creation of peaking storages and also the expeditious clearances mechanism apart from preferential tariff mechanism.

**1.8** In spite of getting so much emphasis at national and state level, the share of hydro power in the country has declined from 26.12% in March, 2005 to 12.35% in March, 2020. The installed capacity through other renewables has increased in the country from 3,812 MW in March, 2005 to 1,04,031.32 MW as on 30.11.2021 clearly pointing to the need of renewed focus by all the stakeholders on expeditious development of remaining hydro power potential in the country.

**1.9** Hydro Power Policy, 2006 of the state has served its objectives well. Over the last 15 years, there has been paradigm shift in energy scenario of the country. The Country is moving towards renewable energy i.e. total green energy as per Paris Agreement and commitments made under this COP-26. The solar and wind power share is increasing at a faster rate than the hydro. Hydro power along with hybrid, battery, pumped storages and hydrogen energy are going to be the focus areas in coming years. As of now, only frequency control ancillary services are mandated by CERC and provided by Inter-State Generating Stations (ISGS) and substantial need is going to arise for other ancillary services like voltage control and black start etc. Hydro power is the most suitable instrument for such requirement. The new policy framework aims at providing an affordable, reliable and quality power to the consumers round the clock, throughout the year, mitigate the social, economic and environmental impacts and take care of various mandates of the Electricity Act, 2003 which seeks to promote competition, protect the interest of the consumers, tariff rationalization, strengthening the Regulatory Institutions and providing indiscriminate open access to different users.

**1.10** To cater to the challenges and getting maximum benefit out of the emerging and dynamic energy scenario of the country, the Hydro Policy of the state needed to undergo an overhaul, in conformity with the new policies, regulations & challenges and also need to devise new policy instruments for expeditious harnessing of pumped storage potential, biomass & solar power and hydrogen energy in the state has led to the evolution of new Energy Policy 2021 of the state.

## **CHAPTER-II**

### **JOURNEY OF POWER DEVELOPMENT IN THE STATE**

- 2.0** Hydro power development journey in the state had started much before the State was granted full statehood in 1971. State has the honour to commission second hydro-electric project of the country - 100 KW Bhuri Singh Project in district Chamba, having been executed by the erstwhile Raja of Chamba state in 1908. Subsequently, 1.75 MW capacity Chaba project near Shimla during 1913 and 48 MW Shanan project near Joginder Nagar in district Mandi during 1932 were commissioned. Later, 66 MW capacity Bassi HEP was executed by the department of Multi-Purpose-Projects & Power. Subsequently, during the year 1963, the 1478 MW Bhakra dam project was commissioned.
- 2.1** After achieving Statehood, Himachal Pradesh State Electricity Board (HPSEB) was constituted in 1971 and entrusted with the responsibility of development, generation, transmission and distribution of electricity. Bhakra Beas Management Board later in the year 1977 commissioned 990 MW Beas Satluj Link Project and in 1978, 396 MW Pong Dam Project. In the same year, HPSEB added to the installed capacity by commissioning Giri HEP of 60 MW.
- 2.2** To expedite the harnessing of the potential, State further roped in central sector agency - National Hydro Power Corporation (NHPC), which completed 180 MW Baira Siul in 1980 and subsequently commissioned Chamara-I, II & III HEPs with total capacity 1071 MW in Ravi Basin. HPSEB steadily progressed to commission 6 MW Binwa HEP in 1984 and achieved laurels by commissioning 2 MW Rongtong HEP in district Lahaul Spiti at an altitude of EL 3600 m. Further, in the year 1989, HPSEB set a landmark in the engineering field by constructing the Country's first underground power house namely Sanjay Vidyut HEP 120 MW.
- 2.3** For expeditious harnessing of hydro power, the State formed a Joint Venture with Central Government - Nathpa Jhakri Power Corporation (NJPC) in 1988, which subsequently was renamed as Satluj Jal Vidyut Nigam Limited (SJVN Limited) in the year 2002 (now SJVN Limited) with the State's share of 26.85% (December, 2021). SJVN Limited has successfully commissioned two projects of capacity 1912 MW - Nathpa Jhakri HEP 1500 MW & Rampur HEP 412 MW and is in process of implementation of many other projects in the state.
- 2.4** In 1988, HPSEB added to the feathers in its cap by achieving the target of 100% electrification of census villages of Himachal Pradesh.
- 2.5** Realizing the importance of faster development, the State opened the sector for private project developers in 1990s. It was considered necessary to bring in private sector investment and expertise in the field and the initiative fructified by the commissioning of 86 MW Malana-I HEP in 2001. For harnessing mini, micro and small hydro projects, a dedicated state agency named HIMURJA was constituted in the year 1989, which realized its efforts in the form of commissioning of its first project 200 kW Kothi in 2001 followed by 100 kW Sural project in tribal area of Pangj in 2002.
- 2.6** In the initial years of 21<sup>st</sup> Century, State Power Sector set records by commissioning projects like country's largest single-stage project Nathpa Jhakri 1500 MW HEP, Malana-I 86 MW, Baspa-II 300 MW, Chamara-II 300 MW, Larji 126 MW, Allain Duhangan 192 MW, Karchham Wangtoo 1000 MW, Chamara-III 231 MW, Budhil 70 MW, Parbati-III 520 MW, Rampur 412 MW and Koldam 800 MW.
- 2.7** Last ten years have posed several challenges to hydro sector development in the state especially in terms of environmental and social factors, unfavourable and uncertain tariff

scenario coupled with increased enchantment of investors with the Solar / Wind power projects and other conventional energy sources. Several policy initiatives taken in last four years have resulted in infusing renewed vigour to this sector thereby considerably eliminating the inertia in the sector,

**2.8** In order to increase the pace of development of the sector and to facilitate the private investment leading to substantial economic activity in the remote and interior areas of the state, the State Government formulated Hydro Power Policy for the state in 2006 and introduced provisions like Local Area Development Fund (LADF) etc. for improving ownership of projects by the local communities.

**2.9** After the introduction of Electricity Act, 2003, Himachal Pradesh Power Corporation Limited (HPPCL) was established as generation arm in 2006, Himachal Pradesh Power Transmission Corporation Limited (HPPTCL) in 2007 as Transmission arm and HPSEB was reorganized as HPSEB Limited (HPSEBL) with prime function of distribution. Himachal Pradesh State Load Despatch Center (HPSLDC) was established in 2002.

**2.10** HPPCL was allotted major chunk of hydro power projects of 2070 MW capacity in 2009. In total 22 hydro power projects and two solar power projects with installed capacity of 3156 MW and 15 MW respectively were allotted. Currently, 3 hydro power projects namely Sainj 100 MW, Kashang-I 65 MW & Sawra Kuddu 111 MW HEPs and one solar power project Berra Dol 5 MW are under operation and 19 hydro power projects & 1 solar power project are at different stages of development with aggregate installed capacity of 2875 MW.

**2.11** The transmission system requirements of Himachal Pradesh are different as compared to other states since it caters to the evacuation of power during the period it has surplus power and imports power from other states during winter months. The intra-state transmission network of the state comprising 66 kV and above is being operated by HPSEBL and HPPTCL. HPSEBL had been responsible for creating and maintaining the transmission system till 2008 before the unbundling of HPSEB under the reforms process. HPPTCL was then declared as State Transmission Utility (STU) and is the deemed transmission licensee. It is now responsible for planning and execution of all new 66 kV and above systems in the state. The open access in transmission as per the provisions of Electricity Act makes HPPTCL under obligation to provide on-demand open access to the transmission systems to facilitate such multi lateral energy transmission on payment of transmission charges as determined by Himachal Pradesh Electricity Regulatory Commission (HPERC). It is obligatory to provide evacuation system for any Project above 100 MW and transmission system availability, beyond inter-connection point for projects below 100 MW capacity. HPPTCL completed Wangtoo 400 / 220 / 66 kV, Bhoktoo 220 / 66 kV and Lahal 400 / 220 kV substations. To meet the target of harnessing 10,000 MW by 2030 as fixed by State, HPPTCL has drawn a master plan in consultation with Central Transmission Utility (CTU) and Central Electricity Authority (CEA) for strengthening of Intra-State Transmission System by using State of art technology and making available evacuation system for added capacity.

**2.12** HPSEBL was constituted in 2010 as a sole State Distribution Utility. Currently, the yearly consumption of the State is about 10,000 MUs out of which 88% of the requirement is being met from hydro power generation. HPSEBL tied up power of 291 MW from Central Sector Projects through long term PPAs ending 2003 as the requirement was not possible to be met from own projects, the demand forecast prompted HPSEBL to tie up further a quantum of about 837 MW of power from central/ joint sector projects besides PPAs with private sector project developers, between 2003 and 2011, however, the self-sufficiency was attained in the year 2012. HPSEBL is procuring power from small hydro power projects up to 25 MW and also PPAs have been signed with solar power projects for about 61 MW as mandated by

HPERC. Out of these 30 MW capacity of solar power projects and 503 MW capacity of small hydro power projects below 25 MW have been commissioned and power being procured by HPSEBL.

**2.13** HPERC is independently taking care of the interest of consumers and project developers by regulating generation, transmission and distribution tariffs and making all out efforts to create and maintain a transparent, fair and forward looking approach in all sectors.

**2.14** Himachal Pradesh State Load Despatch Society (HPSLDS) was established by converting Himachal Pradesh State Load Despatch Center (HPSLDC) as an independent entity in the year 2010 to undertake the economic despatch of electricity from generating stations to various load centers including the online real time monitoring. HPSLDS is a separate legal entity for system operations.

**2.15** State is always ready to embrace new technologies and reforms in all spheres of the energy domain. State is presently focusing on expeditious development of hydro potential in the State and also to diversify its green energy portfolio. Energy sources like Solar, Wind, Biomass Energy & Waste to Energy will be the game changer in future, so State is developing the necessary policy tools to meet the challenges. The augmentation of power generation through exploration of possibility of conversion of existing run of river schemes into storage / pumped storage / adding pondage capacity and identification of new Pumped Storage Projects shall be given the importance. The realization of tourism potential in the hydro sector, energy storage, smart transmission & distribution, green and sustainable products with the use of green & sustainable energy, energy conservation, promotion of e-vehicles and development of charging infrastructure are also the subject matter of proposed policy framework.

**2.16** Sunrise sectors like green steel, cement & other green products produced from green energy shall be prioritized for creating vibrant clean export capabilities.

## **CHAPTER - III**

### **POLICY OBJECTIVES**

- 3.0** Himachal Pradesh is leader in hydro power generation in the country and contributing nearly one-fourth of total hydro generation. Approximately 45% of total hydro potential in the state has been harnessed and in next 10 years, nearly 10,000 MW renewable energy will be added. The state shall endeavor to ensure that the new policy framework is geared towards meeting the challenges and benefiting from the opportunities offered by changing energy scenario through robust transmission infrastructure, new technologies in generation like Hybrid, Pumped Storage Projects, Battery Energy Storage System, Green Hydrogen etc. along with the development of infrastructure for energy management. Consumers' interest and rights will be protected through the intervention like smart-metering and robust distribution network. Sustainable environmental and social measures in conformity with the Central and State Government regulations shall be put in position keeping in view the aspirations of local communities.

**The Principal objectives of Energy Policy - 2021 are as under:**

#### **I. Generation**

- 3.1** To ensure clean and green energy development through expeditious harnessing of full energy potential especially hydro & solar.
- 3.2** To add additional 10,000 MW of green energy through Hydro, Solar & Other Green Energy sources by 2030.
- 3.3** For expeditious development of green energy sources, a four pronged strategy by way of participation of State, Joint, Central and Private Sectors shall be adopted.
- 3.4** To achieve the status of total green energy state for Himachal Pradesh by switching over from thermal / gas / nuclear to green sources of energy.
- 3.5** To promote optimum adoption of appropriate IT tools, GIS Technologies, hydrological and meteorological data for precise planning and development of Hydro and Solar energy potential.
- 3.6** To encourage retrofitting and creation of storage in existing projects through enabling policy framework.
- 3.7** To promote community ownership during implementation, operation and maintenance of hydro-electric projects.
- 3.8** To provide policy framework for creation of hybrid projects.
- 3.9** To provide policy framework for Pumped Storage Projects on standalone basis and also in conjunction with the components of existing or under execution projects.

#### **II. Transmission/Grid Stability**

- 3.10** To develop adequate and efficient transmission network in the State.
- 3.11** To create transmission master plan with the objective to facilitate planning and timely execution of hydro & solar projects.

~~3.12 To create power evacuation infrastructure for upcoming projects in time bound manner.~~

3.13 To create transmission infrastructure for catering to ancillary services requirement.

3.14 To address the challenges in implementation of Pumped Storage Projects.

3.15 To ensure grid stability through independent monitoring/regulatory framework supported with timely creation of infrastructure and capacity in generation/transmission/distribution.

### III. Distribution

3.16 To ensure 24x7 reliable, quality energy supply to all consumers.

3.17 To achieve the single digit AT & C losses by 2025.

3.18 To improve the consumer services in consonance with the Electricity ("Rights of Consumers") Rules, 2020 and to ensure expeditious grievance redressal system.

3.19 To promote efficient demand/supply Side Management through better forecasting, management and deployment of tools like ToD tariff.

3.20 To promote the introduction of smart grid, smart pre-payment meters & smart distribution network.

3.21 To ensure availability of Green Energy to all consumers by 2030.

### IV. Use of ICT

3.22 To promote Ease of Doing Business for facilitation of investors.

3.23 To make available enabling infrastructure like Single Window Clearance system for speedy grant of necessary clearances.

### V. Socio-Economic Measures

3.24 To ensure local area development through activities funded by hydro project developers during implementation & provide regular stream of income during operation & maintenance of project throughout its life span.

3.25 To generate employment to the local population during the construction & operation of projects as per their skills & qualification.

3.26 To make available project-related infrastructure of roads, bridges, healthcare & education etc. to local population.

3.27 To protect the rights of the local inhabitants for irrigation and drinking water requirements and maintain riverine eco system, by ensuring availability of environmental flow of water immediately downstream of diversion structure and maintain Free Flow/ Riparian Distance between two consecutive/ cascading projects.



## **VI. Energy Management**

- 3.28** To establish and promote a Power Trading Entity in the state and to optimize revenue generation.
- 3.29** To promote energy conservation.
- 3.30** To develop system for Energy Accounting & Auditing.
- 3.31** To create a pool of capable, knowledgeable and experienced energy professional.
- 3.32** To develop capacity building mechanism.
- 3.33** To establish core technical competence in professionals in the state to initiate and sustain use and effective management of emerging technologies in energy sector.

## **VII. Regulatory**

- 3.34** To promote transparency, consistency and predictability in regulatory approach and RE & RPO compliance to be ensured by regulatory commission.

## CHAPTER IV ENERGY GENERATION

- 4.0** Himachal Pradesh is blessed with hydro potential of 24,567 MW distributed over five river basins, out of which 10,948 MW has been harnessed (as on 31<sup>st</sup> October, 2021) and out of remaining 13,619 MW, maximum potential will be harnessed by 2030.

State is diversifying its energy portfolio by adding solar, wind, bio-mass & other non-conventional energy sources. State is also considering and encouraging bundling of Hydro Power with other Variable Renewable Energy (VRE) sources like Solar & Wind. As on 31<sup>st</sup> August, 2021 total allotted solar power capacity is 55.47 MW, out of which 28 MW has been commissioned and 1995 MW Solar potential will be added by 2030. Other energy sources like wind, bio-mass, and waste to energy etc. will also be added in the State's energy basket.

### **4.1 HYDRO**

Government of Himachal Pradesh adopted a four-pronged approach to harness its potential of hydro power in State Sector, Central Sector, Joint Sector and Private Sector. The State has harnessed 765 MW in the State Sector and 1912 MW in the Joint Sector. Central sector has contributed maximum to the harnessing of potential of the state with its share of 5545 MW. Due to proactive approach to attract investment, State has been able to harness 2565 MW in Private Sector. Currently, projects with 2625 MW capacity are under construction and of 9165 MW capacity are under various stages of clearance. Balance hydro potential is under allotment and investigation stage.

Sr. No.	Category	Harnesses		Balance to be harnesses		Total	
		No. of Projects	Capacity in MW	No. of Projects	Capacity in MW	No. of Projects	Capacity in MW
1	Up to 5 MW	112	362.12	775	1642.28	887	2004.40
2	Above 5 to 25 MW	30	392.06	85	1143.80	115	1535.86
3	Above 25 MW	27	10034.70	62	10509	89	20543.70
4	HP Share		159.17		324	0	483.17
<b>Total</b>		<b>169</b>	<b>10948.05</b>	<b>922</b>	<b>13619.08</b>	<b>1091</b>	<b>24567.13</b>

**Note:**

- i. Projects up to 25 MW have been classified as Small Hydro Electric Projects (SHEPs).
- ii. The allotment of projects up to 5 MW capacity is being done through HIMURJA, whereas the allotment of projects above 5 MW capacity is being done through Directorate of Energy (DoE) on competitive bidding route in Private Sector and through Memorandum of Understanding (MoU) route in State, Central and Joint Public Sector Undertakings (PSUs).

#### **4.1.1 PROJECTS ABOVE 5 MW CAPACITY**

##### **A. Allotment Policy**

The allotment of projects above 5 MW capacity in private sector shall be done through ICB Route on Build, Own, Operate and Transfer (BOOT) basis. The agreement shall remain in

force up to a period of 40 years from the Scheduled Commercial Operation Date (SCOD) of the project. Thereafter, the project shall revert back to the State Government free of cost and free from all encumbrances and liabilities. After completion of 40 years, State may either extend the agreement on mutually agreed terms & conditions or may go for competitive bidding under Renovation and Modernisation (R&M) mode for next thirty years, however, the royalty payable to state for the extended period in any case will not be less than 30%.

The allotment of projects to public sector shall be made on Memorandum of Understanding (MoU) Route basis for 70 years further extendable for the period up to 100 years on the terms and conditions mutually agreed between state and the project developer.

**B. Allotment Conditions of Projects through Competitive Bidding in Private Sector:**

- i) The 'Eligible Bidder' shall mean any entity which can qualify as a generating company as defined in Electricity Act, 2003 Part-I Section 2[28] or as defined in the Bid Document.
- ii) All projects shall be advertised through Notice Inviting Proposals (NIP) in various national newspapers and official website <https://doehimachal.nic.in/> for Global invitation of bids from the eligible bidders.
- iii) The bidder, who has purchased a bid document and submit the bid in joint venture/ consortium, must be the lead partner in the joint venture/ consortium with the highest equity stake not less than 26%.
- iv) The bidder would be required to quote upfront premium, over & above the minimum upfront premium of Rs. 1 Lakh per MW.
- v) The bidder shall be assessed on the basis of technical, financial and upfront premium parameters as per criteria prescribed in the **Annexure-I**. The eligible bidder who obtains highest marks shall be considered to be successful bidder (H-1).
- vi) If the bidder has bid for more than one project, the assessment of bidder based on the qualifying parameters shall be done by considering cumulative capacity of projects bid for and the prequalification shall be done based on the capacity to execute projects by the bidder as per qualifying criteria for project(s) starting with highest capacity project bid for and so on.
- vii) After evaluation of bids, a Letter of Intent (LoI) shall be issued to the Successful Bidder (H-1) with an invitation to fulfill the condition laid out there in inviting him to deposit the upfront premium payable for the project, in following two installments:-
  - a) First installment comprising 50% amount of total upfront premium payable for the project, shall required to be deposited within thirty days from the date of issuance of Letter of Intent.
  - b) Balance 50% amount of upfront premium shall be required to be deposited at the time of signing of Implementation Agreement (IA).
- viii) In case the Highest Bidder (H-1) fails to deposit the full amount of First Installment of the Upfront Premium within the stipulated time period or if the Highest Bidder(H-1) withdraws his Bid, the Government will offer the project to the next Highest Bidder as follows:

- a) If none of qualified bidders actually deposits the first installment of the upfront premium, the Government of Himachal Pradesh shall cancel the bid.
- b) Any bidder, who is issued Letter of Intent (LoI) but does not deposit the first installment of the upfront premium within the stipulated time period, LoI shall be terminated with the forfeiture of bid security.
- ix) The amount of upfront premium payable by the successful bidder, cost of the bid document and the processing fee shall not form part of the project cost.

#### **C. Allotment of Projects through MoU Route:**

- i) The projects to the Central/ State Public Sector Utilities (PSUs) or Joint Sector will be allotted through MoU route with mutually agreed terms and conditions on BOOT basis.
- ii) The projects up to capacity of 10 MW (renewable sources) for captive use of power for existing industries or for new industrial units within the state shall be allotted without competitive bidding after assessing the capabilities of the project developer on MoU route in accordance with the power requirement of the industrial units already set up or to be set up subject to fulfillment of all the legal, regulatory and procedural requirements. 12% uniform royalty will be applicable in hydro projects.

#### **4.1.1.1 Project Implementation Provisions**

##### **A. Private Sector Projects**

- i) The scope of the work will be from concept to commissioning and operation, inter-alia, survey and investigations, arrangement of transmission system for the evacuation of power and preparation/review of Detailed Project Report (DPR). The transmission system up to interconnection point for evacuation of power shall form part of the project.
- ii) For setting up the HEPs, concurrence from the competent authorities of State / Centre shall be obtained by the allottee as per the procedure applicable from time to time.
- iii) The original allottee shall incorporate a Special Purpose Vehicle (SPV) for the implementation of the project with its registered office in Himachal Pradesh with the equity participation as specified hereunder. All rights and obligations shall thereafter be transferred to SPV. The constituents of the allottee as defined as per Clause 4.1.1 B (iii) above, as an entity, would be considered the Principal Promoters. The Principal Promoters shall retain the controlling interest i.e. 51% equity in the new entity. In the event of any contravention, the Government of Himachal Pradesh shall terminate the PIA / IA forthwith at any stage.
- iv) The Government may consider the request of the allottee for changing the name while forming the SPV (Single Company or Consortium of Companies) or any time later.
- v) The Principal Promoters with the prior approval of State Government are allowed to sell / transfer their equity up to 100% during the implementation period of the project in the name of any third party which is possessing equivalent or higher technical and financial strengths, subject to the fulfillment of the below mentioned terms &

conditions. However, there will be no restriction in respect of transfer of the project after commissioning;

- a) A detailed proposal showing competence in terms of financial and technical credentials of the new entity willing to acquire the project, is submitted for consideration of the Government by either of the parties, along with the firm letter of consent and valid resolutions duly passed by the Board of Directors of both the parties, stating that all liabilities and responsibilities assigned in favour of the allottee shall be acceptable to the new entity.
- b) An undertaking to the effect that all liabilities as well as payments due in favour of the allottee are duly accepted by the new entity.
- c) The new entity should possess adequate financial as well as technical competence in such a manner that the credential of the new entity should meet the strengths required for qualification as per the allotment terms and conditions.
- d) For allowing change / transfer of equity of Principal Promoters, a fee @ Rs.50,000/- per MW subject to maximum of Rs.50 lakh is to be deposited at the time of signing of Tripartite Agreement (TA) / Supplementary Pre-Implementation Agreement (SPIA) / Supplementary Implementation Agreement (SIA) for transfer of project along with all liabilities / responsibilities in the name of new entity.

- vi) If any project developer changes / dilutes equity participation of the constituent member(s) of the Company or changes the name of the Company / Limited Liability Partnership (LLP) firm / Body Corporate without the prior approval of the Government, a penalty at the rates described below shall be levied. Accordingly, a Supplementary PIA/IA/TA to this effect shall be signed within two months from the conveyance of approval. Project developer shall intimate to the Government about the above changes as early as possible on priority within 6 months.

Sr. No.	Description	Penalty Charges
1.	For any equity change without the prior approval of the Government.	Rs.20,000 per MW subject to maximum of Rs.20 lakh.
2.	For change of name of the Company / Firm without the prior approval of the Government.	Rs.20,000 per MW subject to maximum of Rs.20 lakh.
3.	For change in equity as well as change in name of the Company / Firm without prior approval of the Government.	Rs.20,000 per MW subject to maximum of Rs.20 lakh.

- vii) Following milestones shall required to be achieved by the project developer failing which consequential action as mentioned below will be taken by Government.

#### MILESTONES FOR PROJECT IMPLEMENTATION

Sr. No	Milestones	Time Period	Consequential Action.
1.	Deposition of 1 <sup>st</sup> installment of upfront premium	Within 1 month of issuance of Letter of Intent	Withdrawal of Letter of Intent
2.	Issuance of Letter of	Immediately after deposition	---

	Allotment	of 1 <sup>st</sup> installment of upfront premium	
3.	Signing of Pre-Implementation Agreement(PIA)	Within 1 month from the date of issuance of Letter of Allotment.	Extension up to a maximum 1 month for the reasons beyond the control of project developer. If project developer fails to sign the PIA even within extended time, allotment of project shall be cancelled with forfeiture of all deposits.
4.	Submission of Detailed Project Report (DPR) as per guidelines at Annexure-II.	24 months from the date of signing of PIA for projects above 5 MW & up to 25 MW and 30 months for projects above 25 MW. (Additional 6 months for projects falling under Chenab river basin in the districts of Lahaul and Spiti, Pangi area of Chamba and Dodra Kwar area of Shimla)	Extension up to a maximum period of 12 months for the reasons attributable to the project developer subject to deposit of an extension fee @ Rs.20,000 per MW per month {extension for the period of delay on account of reasons beyond the control of project developer shall be allowed without imposition of extension fee subject to satisfaction of department} failing which, allotment of project shall be cancelled with forfeiture of all deposits.
5.	Grant of Technical Concurrence (TC)	Within 5 months from the date of acceptance of DPR.	Timelines for processing of DPRs for timely grant of TC are at Annexure-III. If the timelines are exceeded on account of non-response of project developer towards observations on DPR, the allotment of the project shall be cancelled with forfeiture of all deposits. Relaxation up to 6 months time will be given, if the observations are beyond the control of the project developer.
6.	Signing of the Implementation Agreement (IA).	Within 2 months from the date of grant of TC.	Extension up to a maximum of 1 month for the reasons beyond the control of project developer. If project developer fails to sign the IA even within extended time, allotment of Project shall be cancelled with the forfeiture of all deposits.
7.	Application for connectivity & Long Term Open Access (LTOA) Agreement with HPPTCL.	Within 1 month from the date of signing of IA.	Extension up to a maximum of 1 month for the reasons beyond the control of project developer. If project developer fails to achieve the milestone even within extended time, allotment of project shall be cancelled with the forfeiture of all deposits.

8.	Signing of Connectivity Agreement & Long Term Open Access (LTOA) Agreement with HPPTCL.	Within 4 months from the date of signing of IA.	Extension up to a maximum of 3 months for the reasons beyond the control of project developer. If project developer fails to achieve the milestone even within extended time, allotment of project shall be cancelled with the forfeiture of all deposits.
9.	Achieving Zero date (start of construction period)	Within 6 months from the date of signing of IA.	Extension up to a maximum period of 6 months for the reasons attributable to the project developer subject to deposit of an extension fee @ Rs.20,000 per MW per month {extension for the period of delay on account of reasons beyond the control of project developer shall be allowed without imposition of extension fee subject to satisfaction of department} failing which, allotment of project shall be cancelled with forfeiture of all deposits.
10.	Scheduled Commercial Operation Date (SCOD) of the Project	Zero date plus construction period allowed as per TC plus extension of time granted by this State, if any.	Delays during construction period on account of the reasons beyond the control of project developer shall be considered if applied with full justification within six months from the COD of project and shall be condoned / adjusted only after satisfaction of the appropriate competent authority within six months from the receipt of application. SCOD of the project shall not be revised beyond synchronization of any one unit.
11.	Commercial Operation Date (COD) of the Project.	Actual date when last unit of the project commences commercial operation.	Incentive / Disincentive as per Clause No. 4.1.1.1 A (xlii & xliii)
12.	Handing over of the Project to the Government	The date determined on completion of 40 years from the Scheduled Commercial Operation Date (SCOD) of the project.	Action as deemed fit.

**Notes:**

- a. In case, the project developer is unable to achieve financial closure within the time limit specified above for achieving zero date, the project developer agrees to start construction work on the project positively within the time limit specified above by investing from its equity component. The financial closure shall be concluded within six months of start of the construction work on the project after achieving Zero Date.

b. In case, unit-wise construction schedule approved is different for different units of the project, then unit wise SCOD will be considered and it will be for calculation of disincentive / penalty only and it will not redefine the project's SCOD as defined above. The project developer shall not be entitled for any benefit with respect to transfer of project after completion of the agreement period by referring to unit wise SCOD.

c. Directorate of Energy is authorized to re-define the milestones afresh where 100% equity transfer is permitted by the State Government by entering into revised agreement for the stalled projects.

d. A technical cell will be created under DoE to be headed by Chief Engineer (Design) for time bound processing of DPRs as specified in milestones table for accordance of TC. This cell will provide necessary technical assistance and guidance to project developers for preparation of DPRs and sorting out the technical matters. This cell will also be responsible for physical monitoring of the projects during the construction and operation stage of the projects.

e. Reasons for condonation of delays in achieving various milestones not attributable to the project developer shall be considered and decided by the Director, Energy after approval of Administrative Department.

viii) All stages of project implementation for the purpose of grant of extension where delays are not attributable to the project developers shall be allowed on the grounds as summarized below:-

a. Delay in submission of DPR will be condoned on the following grounds:-

(i) Delay in accordance of Term of Reference (ToR) approval by Ministry of Environment, Forest and Climate Change (MoEF&CC), as the case may be, beyond 12 months after signing of PIA, subject to the condition that inputs / case stand submitted within 6 months after PIA.

(ii) Delay due to domain change / relocation of project components or any discrepancies observed in allotted domain (or) to ensure optimization of potential.

(iii) Delay in obtaining clearance from the National Board of Wildlife, where applicable.

(iv) Law and Order issues in the project area.

b. Delay in achieving Zero Date in view of non-obtaining of various statutory clearances from various Government departments on the following grounds:

(i) Delay in grant of environment clearances by MoEF&CC due to frequent changes in the procedure & guidelines.

(ii) Delay in diversion of Forest / Government land due to non-finalization of committees under FRA.

(iii) Delay in acquisition & lease of Forest land due to reasons not attributable to the project developers subject to the satisfaction of Directorate of Energy.



(iv) Delay in signing of Connectivity Agreement & Long Term Open Access (LTOA) agreement in view of non-finalization of power evacuation arrangements by HPPTCL / HPSEBL.

(v) Delays caused due to hurdles created by locals/NGOs by way of illegal strikes, unethical demands, and threats to projects management.

**c. Delay in achieving Commercial Operation Date (COD):**

Delays during construction period on account of the reasons beyond the control of project developer shall be considered separately on case to case basis if applied with full justification within 6 months from the COD and shall be condoned / adjusted only after the satisfaction of the appropriate competent authority within 6 months from the receipt of application. SCOD of the project shall not be revised beyond synchronization of any one unit.

**d.** In cases of the projects falling in protected Wild Life Sanctuary / National Parks, delay in obtaining permission from Competent Authority needs to be exempted from levy of extension charges provided that the project developer has applied for the respective Clearance / NOC / Lease of Government land in all respects within the stipulated time frame.

**ix)** The project developer shall be required to obtain all the non-statutory / statutory clearances / NOCs / approvals required for the implementation of project from various departments including Gram Panchayats as may be specified by the Government.

**x)** Self attested copies of NOCs obtained from different departments shall be submitted to Directorate of Energy. The project developer is required to furnish an affidavit, on Rs. 50/- stamp paper duly notarized, to the effect that "all the conditions in the NOCs obtained from the different departments shall be abided by them".

**xi)** Once the construction activities in connection with project start at any of the site after due vetting and clearance by all the authorities concerned, no authority or any regulatory body will pass any order regarding stoppage of the work at site. If any local body, regulatory authority or department finds during inspection that the project authorities are not adhering to any safeguards relating to workers safety, protection of environment, landscape, forest and flora & fauna or conservation of minerals etc, such violation shall be immediately brought to the notice of Directorate of Energy for issuing necessary directions to the concerned project authorities for ensuring the compliance of such regulations, laws or guidelines. Directorate of Energy after evaluating all the aspects will ensure the compliance in time bound manner and resort to stoppage of work in rare cases of continuous violation after obtaining approval of the Government since there are huge implications of such stoppages in terms of time and cost over runs, which affects adversely the interest of State Government as well as project developer.

**xii)** The project developer shall fix the elevations with reference to Survey of India bench mark(s).

**xiii)** The project developer shall be allowed to set up temporary aerial ropeways / cable ways of any type for transporting material, men & machinery without the requirement of NOC of Gram Panchayat subject to adherence to safety parameters as per prevailing rules and regulations.

- xiv) HPSEBL shall provide electricity connection for the construction power required on priority basis wherever feasible. The required system for the same will be created by HPSEBL as per the prevailing regulations timely to ensure expeditious execution of the project.
- xv) Such projects where project developers have not met the milestones and terms and conditions of the PIA shall be reviewed on monthly basis by the committee under the chairmanship of Administrative Secretary, MPP & Power to GoHP for recommending appropriate action as deemed fit as per the merit of the case to the State Government.
- xvi) The validity of Pre-Implementation Agreement shall be up to signing of Implementation Agreement.
- xvii) The project developer shall submit monthly hydrological and meteorological data observed at the project site and monthly progress report to Directorate of Energy on the prescribed format.
- xviii) The Department of Energy shall create a hydrological and meteorological data bank in respect of different river basins with currently available data and that to be provided by the project developers on monthly basis for its use by various project developers for utilization for hydrological studies with respect to project development.
- xix) The project developer will be permitted to withdraw from the project after the conveyance of non-feasibility of the project during the preparation of DPR, if the State Government is satisfied that the project developer has sufficient ground to establish that the project is not techno-economically viable, without any liability on the Government of Himachal Pradesh for the expenditure incurred by the project developer in this period for any purpose related to the project other than the amount deposited by the project developer on account of upfront premium. This amount shall be refunded to the project developer without interest.
- xx) The project developer will approach the Directorate of Energy during the preparation of DPR with complete proposal for re-defining of domain on account of discrepancy, if any, found in allotted domain after transfer of Survey of India benchmark at the Project site as control point and verification of coordinates.
- xxi) The project developer shall develop project in the domain allotted by the state. In respect of projects up to 25 MW capacity, the project developer and the Directorate of Energy shall ensure minimum horizontal distance of 250 m or elevation difference of 50 m as the case may be, between two projects, depending upon the topography and terrain of the area to have visible flow of water in the original stream. However, the Domain Change Committee constituted by the State Government on case to case basis may allow relaxation of this condition considering the technical, design, socio-economic & topographical aspects. For projects more than 25 MW capacity, the project developer shall maintain free flow distance between two consecutive projects as per recommendations of MoEF & CC, Cumulative Environment Impact Assessment (CEIA) studies and Carrying Capacity Studies (CCS).
- xxii) Cases of domain change will be placed before the following Domain Change Committee along with recommendations given by concerned agencies:-

Sr. No.	Designation	Member
1.	Additional Chief Secretary/Principal Secretary (MPP & Power)	Chairperson
2.	Director, Energy	Member
3.	Chief Executive Officer, HIMURJA.	Member
4.	Director (Civil), HPSEBL.	Member
5.	Chief Engineer (Energy) / Head (Allotment Cell), Directorate of Energy.	Member Secretary

xxiii) The project developer shall have no claim on any project upstream or downstream of the allotted project. There shall be a stream / basin wise coordination committee of various project developers of concerned stream/ basin under the chairmanship of Director Energy to resolve any issue arising with the upstream and downstream project with respect to construction, water availability, transmission, sharing of cost/ obligation/ benefit etc. as referred.

xxiv) The projects will be allotted on the basis of tentative installed capacity as mentioned in the Notice Inviting Proposal / Bid Document / LoA / PIA. However, in case the capacity of a project increases / decreases upon firming up of the potential by the competent authority, the project developer shall be required to sign the Revised Capacity Agreement (Supplementary PIA / IA / SIA) with the Government within a period of 30 days from the date of communication of approval.

The competent authority for approval of the capacity enhancement/reduction in respect of the projects up to 25 MW will be Directorate of Energy if the increase / decrease is within 20% of the allotted capacity. Beyond this the approval of Administrative Department will be required.

Following provisions shall be applicable with regard to approval of capacity addition / reduction:

a) Capacity addition charges @ Rs. 1 lakh / MW on additional capacity will be applicable for the future enhancement of the already approved capacity. The pending liabilities in respect of capacity enhancement already approved and agreed will not be affected.

b) No additional free power in lieu of capacity enhancement shall be levied in all future enhancement approvals. However, it shall not affect projects where capacity enhancement has already been approved and agreed.

Already agreed and signed commitments with respect to additional free power will not be affected. For the future reference with respect to addition / reduction in capacity, the capacity last approved for which IA/SIA signed before the policy notification will be considered as benchmark for the calculation of capacity addition/reduction.

c) If the capacity reduction is more than 20% of allotted capacity, the project developer will have the option of surrendering the project with refund of upfront premium without interest, within a maximum period of 2 years from signing of PIA. The project developer may however opt to retain the project with the adjustment of upfront premium against the revised capacity.

- d) If the capacity reduction is within the 20% limit of the allotted capacity, no concession or adjustment in upfront premium shall be permitted.
- e) Processing fee @ Rs.10,000 per MW for processing the proposal of addition/reduction in capacity of project will be levied on the increased/decreased capacity.
- f) No fresh NOCs / consultations required from Gram Panchayats for projects up to 25 MW in case allotted installed capacity is enhanced within the allotted domain or if approved redefined domain falls in the same Panchayat.
- g) If the capacity addition / reduction amounts to change in category of the project, the policy applicable to such category after enhancement or reduction of the capacity shall prevail.
- xxv) The project developer shall reimburse to the state utility the amount spent on survey & investigations and infrastructure works of the project, if any, up to the date of signing of PIA, with simple interest @ 10% per annum, within six months of signing PIA. The expenditure to be reimbursed shall be intimated in the bid document and the same shall form a part of the project cost.
- xxvi) The agreement shall remain in force up to a period of 40 years from the Scheduled Commercial Operation Date of the project. Thereafter, the project shall revert to the State Government free of cost and free from all encumbrances and liabilities. The project assets would be maintained by the project developer in a condition that would ensure rated efficiency of the project and residual life of civil, mechanical and electro-mechanical components at any point of time. During the 10<sup>th</sup>, 20<sup>th</sup>, 30<sup>th</sup>, 35<sup>th</sup> & 40<sup>th</sup> years of operations, the Government of Himachal Pradesh or one of its appointed agencies would carry out mandatory inspection of the project in this regard. After the inspection at 35<sup>th</sup> year decision will be taken with respect to transfer / extension / maintenance of the project within 2 years of the inspection.

If during such inspections it is found that the project capacity or life is being undermined by inadequate maintenance, the Government of Himachal Pradesh reserves all the rights to terminate the agreement at any time.

- xxvii) The project developer shall carry out the investigations / execution / operation & maintenance of the project keeping in view all quality control and safety measures as per relevant IS Codes / adopted standards and O&M Manual. The project developer shall allow access to the authorized representative(s) of the state to all the locations of the project to inspect compliance in this respect at all stages during the agreement period.

- xxviii) The project developer shall be allowed to use the muck / mineral generated during the execution of the project work and to set up captive stone crusher in the project area as per the HP Miner Mineral Rules provided the project developer adheres to the prevailing environmental safe guards. The royalty on the usage of such minerals shall be payable to the State Industries department as per rules. The project developer shall be required to follow environmental related regulations concerning disposal of muck and soil etc.

The project developer shall use such material for the project as may be found suitable for the construction and the remaining material shall be allowed to be used by other development departments of the state subject to the prevailing Rules and Regulations.

The project developer shall ensure that the material excavated from the site shall be dumped in the area duly approved by the Ministry of Environment, Forest & Climate Change (MoEF&CC), GoI/State Pollution Control Board.

xxix) CAT plan @ 1.5% or as notified by the competent authority from time to time for all projects having capacity above 10 MW will form as a part of the project cost.

xxx) The project developer shall ensure release of minimum environmental flow (e-flow) immediately downstream of the diversion structure of the project throughout the year, at season-wise rates as recommended by MoEF&CC, GoI. E-flow discharge shall be monitored by the concerned departments/agencies.

For projects below 25 MW capacity, where recommendations are not made by MoEF & CC, the e-flow shall not be less than the threshold value of 15% of the minimum inflow observed in the lean season in line with the State Pollution Control Board notification.

In case of violation by project developers, action will be taken by the department and appropriate authority in line with the prevailing guidelines and laws.

xxxi) State reserves the right to abandon or reduce capacity / discharge of any identified project for meeting the commitment towards social / environmental concerns.

xxxii) In case any existing facilities including but not limited to, irrigation systems, water supplies, roads, bridges, buildings, communication system(s), power systems and water mills are adversely affected because of the implementation of the project, the project developer shall be responsible for taking remedial measures to mitigate such adverse effects. The cost of the above remedial measures shall become a part of the project cost. Such facilities shall be mutually identified and agreed upon between the project developer and the State Government. The project developer shall not interfere with any of the existing facilities till an alternate facility, as identified, is created.

xxxiii) The project developer shall ensure to protect the water rights of the local inhabitants for drinking and irrigation purposes etc. by verifying the revenue entries and activities of Jal Shakti department so as to ensure that such rights are not infringed upon. Any dispute in the matter shall be referred to a committee headed by Deputy Commissioner involving Jal Shakti and Revenue departments. However, the decision of the committee shall be final and binding on all the parties. The Government of Himachal Pradesh shall have the right for withdrawal of water from the river course for the consumptive use of pumping or by gravity for the purpose of potable water supply and irrigation to the affected villagers.

xxxiv) The project developer shall take appropriate steps, as may be required, for the protection of fish culture as per environmental requirements and give an undertaking to the Fisheries department of the local area that wherever feasible, rearing of fish shall be promoted by the project developer in consultation with the Fisheries department in the project area at the time of implementation of the project.

xxxv) After ensuring the successful trial run of the project and fulfillment of codal formalities and procedures laid down by the appropriate authorities, the Directorate of Energy shall

~~grant permission for declaration of COD of the project as per the guidelines at Annexure-IV.~~

**xxxvi)** The State agencies – HPPTCL or HPSEBL as the case may be, shall create the required evacuation infrastructure for all the projects as per the terms and conditions of the connectivity agreement strictly as per the CERC/HPERC regulations. HPERC shall so fix the norms for interconnection that the average cost for creation of such system is duly accounted for, while fixing the generic tariff for different categories.

**xxxvii)** The project developer shall have to provide employment to bonafide himachalis in respect of all the unskilled / skilled staff and other non-executives as may be required for execution, operation and maintenance of the project. However, the first preference will be given to oustees. In the event of non-availability of the requisite skilled manpower at various levels with requisite qualification and experience, the project developer will be free to recruit such persons from outside the state.

(a) The project developer shall satisfy that the contractors/sub-contractors engaged by them for the project shall give employment to local people / himachalis for appointment as supervisors, workmen and labourers / workers in the project. The engagement of minimum himachalis in the project shall be as per the Industrial Policy of the State Government.

(b) In regard to direct recruitment of engineers and other executives, other things being equal in terms of eligibility criteria, qualification, experience etc., the project developer shall give preference to the candidates well conversant with customs, culture, language and dialects of Himachal Pradesh.

(c) The project developer shall ensure that during the deployment of himachalis in respect of executive/non-executive/workmen (skilled / unskilled) categories at any stage of the project implementation, if it is not possible to recruit 100% staff from himachalis for justifiable reasons, only then the project developer shall maintain not less than 80% of the total employees/officers/executives from bonafide himachalis persons as per State Industry Policy.

(d) The project developer shall provide employment as per the provision of R&R plan duly approved by the competent authority.

(e) The petty contracts of the road work, retaining walls, buildings construction, carriage of construction material like sand, aggregate, cement, steel etc, engagement of all categories of other service providers, taxis for the staff deployed to the sites, engagement of other light and heavy vehicles, running of canteens / mess engagement of security personnel through ex-servicemen shall normally be awarded to locals / Himachalis.

(f) The project developer shall also provide training programme to the locals affected by the project so that they are in a position to get employment in respect of various technical/administrative jobs in the Project.

**xxxviii)** Various issues faced by the project developers during the implementation of the project will be addressed by the department. State Level Committee under the chairpersonship of Hon'ble Power Minister of Himachal Pradesh as per Annexure-V shall review the progress from time to time.

**xxxix)** The project developer shall inform the local police station / chowki and the labour office about the details of the work force engaged from within the state or outside regularly. The project developer shall facilitate and fund opening of a temporary police station / chowki in the project area in respect of projects of capacity above 100 MW. The project developer shall also bear the cost of deployment of police personnel during the construction phase of the project.

**xl)** The project developers will be free to dispose of power from the Projects, after allowing for royalty in the shape of share of free power / revenue to the State, in any manner they like in accordance with the provisions contained in the Electricity Act, 2003 and the rules and regulations made there under. However, in case of hybrid / bundled power, energy storage, additional benefit to the project from the pondage etc shall be shared with the State Government in addition to share of free power in the same proportion as is the free Power (as agreed in IA/SIA) to the pre-existing capacity of the project as and when the such services are commissioned after approval from the State Government.

**xli)** The project developer shall provide royalty in the shape of free power from the project during the entire agreement period to the Government of Himachal Pradesh at the rate agreed in their respective agreements (IA/SIA) of the deliverable energy of the project, from the date of synchronization of first unit whereas, the projects allotted in future shall provide royalty in the shape of free power @ 12% uniformly.

In addition to above, the project developer shall contribute additional 1% Free Power over and above the agreed rates of normal Free Power Royalty Component to the State Government towards LADF.

**xlii) Incentive For Early Commercial Operation of the Project:**

In case the COD of the project is achieved prior to the SCOD of the project, the project developer shall be entitled for incentive as under:-

**a)** From COD of the project up to the SCOD of the project, such percentage of project deliverable energy as agreed in respective agreements two tenths (0.2) percentage points for each period of seventy three (73) days (or part thereof) falling between the COD and SCOD of the project generating units:

**b)** Incentive will be calculated and will be given in the form of energy with free power energy delivery and it will be decided within 6 months of the COD of the project / generating unit and will be adjusted in next 12 months in twelve equal installments.

**xliii) Dis-incentive for Delayed Commercial Operation of the Project:**

In case the COD of the project is delayed beyond the SCOD of the project, the project developer shall be liable for dis-incentive as under:-

**a)** Dis-incentive shall not be imposed in the event of synchronization of unit(s) achieved prior to SCOD subject to the condition that other generating unit(s) of the project shall achieve COD of respective generating units within 3 months from the date of synchronization of first generating unit.

- b) ~~From SCOD of the respective generating units and up to the COD of the respective generating units;~~ such percentage of project deliverable energy as agreed in respective agreements, two tenths (0.2) percentage points for each period of seventy three (73) days (or part thereof) falling between the COD and SCOD of the respective units.
- c) Dis-incentive will be calculated and will be given in the form of energy with free power energy delivery and it will be decided within 6 months of the COD of the project/ generating unit and will be adjusted in next 12 months in twelve equal installments.
- xliv) The Government has constituted Local Area Development Committee (LADC) in each district for project (s) being implemented in each river valley for the management of pre-commissioning and post-commissioning Local Area Development Fund (LADF). The detailed procedure for management of LADF has been described in Chapter V.
- xliv) The following amendments made in the Hydro Policy by the State Government vide notification dated 15.05.2018 shall not be applicable to the projects which will be commissioned beyond 31<sup>st</sup> December, 2028:
  - a) In case of already allotted (but not commissioned) projects, the free power quantum to be received on account of free power share of the state will be deferred for the critical period of initial 12 years from the date of achieving SCOD or COD of the project, whichever is earlier. The quantum to be deferred shall be recovered during the balance agreement period in a uniform percentage rate for all the ongoing private sector projects which are under construction and at various stages of clearances. The project developers shall be liable to sign revised PIA / IA / SIA as the case may be.
  - b) The entire power generated from the projects having capacity up to 25 MW will be mandatorily purchased by HPSEBL at the HPERC determined tariff. The same shall be applicable to the projects which shall be commissioned after 15.05.2018.
  - c) No open access charges for the use of intra-state transmission network shall be payable by hydro electric projects having capacity up to 25 MW which shall be commissioned after 15.05.2018.
- xlvi) The project developers shall be at liberty to erect common dedicated transmission lines for joint evacuation of power from two or more projects by way of suitable consortium agreements. HPSEBL/HPPTCL, as the case may be, will ensure availability of evacuation arrangement before commissioning of the project.
- xlvii) The tariff in respect of projects up to 25 MW capacity shall be determined by HPERC with respect to date of achieving COD of project instead of the date of signing of IA, only if project is completed within the stipulated time period as approved in TC after achieving the zero date except force majeure conditions or reasons not attributable to the project developers.
- xlvi) Any incentives announced in respect of different categories by various Ministries of Government of India from time to time providing central financial assistance for development of micro hydel & small hydro programme in the country shall be applicable for the projects as per the policy.



~~xlix)~~ The project developer shall ensure that the land is used exclusively for the activities related to the project. Any land exceeding the bonafide requirement of the project shall be surrendered to the State Government.

i) Any other issue not appearing herein, in relation to development of projects of any capacity and any energy source shall be addressed by Directorate of Energy.

ii) Any difference and/or disputes arising at any time between the parties out of the PIA / IA / SIA or interpretation thereof shall be resolved by the parties hereto by mutual negotiations, failing which, the matter shall be referred to a two-tier grievance redressal process. The matter shall be addressed by the departmental Grievance Redressal Committee constituted under the Chairpersonship of Director, Energy, Shimla. In case the issue remains unresolved to the satisfaction of the project developer, the matter shall be referred to a state government level committee. If the project developer is still not satisfied with the verdict, the dispute shall be subject of the jurisdiction of civil courts of Himachal Pradesh.

#### B. Public Sector Projects

i. The scope of the work will be from concept to commissioning and operation, inter-alia, survey and investigations, arrangement of transmission system for the evacuation of power and preparation/review of DPR. The transmission system up to interconnection point for evacuation of power shall form part of the project.

ii. MoU/PIA/IA shall be signed between GoHP and concerned PSU. The main features of the MoU/PIA are as given in Annexure-VI. IA shall be finalized after mutual consultation with the PSUs.

iii. Following milestones shall be required to be achieved by the project developer failing which consequential action as mentioned below will be taken by Government.

#### MILESTONES FOR PROJECT IMPLEMENTATION

Sr. No	Milestones	Time Period	Consequential Action.
1.	Signing of MoU/PIA	Within 1 month from the date of issuance of Letter of Allotment.	Extension up to a maximum 1 month for the reasons beyond the control of project developer. If project developer fails to sign the MoU/PIA even within extended time, allotment of project shall be cancelled
2.	Submission of Detailed Project Report (DPR) as per guidelines at Annexure-II or CWC guidelines.	24 months from the date of signing of MoU/PIA for projects above 5 MW & up to 25 MW and 30 months for projects above 25 MW (Additional 6 months for projects falling under Chenab river basin in the districts of Lahaul and Spiti, Pangi area of Chamba and Dodra Kwar	Extension up to a maximum period of 12 months for the reasons attributable to the project developer subject to deposit of an extension fee @ Rs.20,000 per MW per month (extension for the period of delay on account of reasons beyond the control of project developer shall be allowed without imposition of extension fee subject to

		area of Shimla)	satisfaction of department} failing which, allotment of project shall be cancelled with forfeiture of all deposits.
3.	Grant of Technical Concurrence (TC)	Within 5 months from the date of acceptance of DPR.	Timelines for processing of DPRs for timely grant of TC are at Annexure-III. If the timelines are exceeded on account of non-response of project developer towards observations on DPR, the allotment of the project shall be cancelled with forfeiture of all deposits. Relaxation up to 6 months time will be given, if the observations are beyond the control of the project developer.
4.	Signing of the Implementation Agreement (IA)	Within 2 months from the date of grant of TC	Extension up to a maximum of 1 month for the reasons beyond the control of project developer. If project developer fails to sign the IA even within extended time, allotment of project shall be cancelled with the forfeiture of all deposits.
5.	Application for connectivity & Long Term Open Access (LTOA) Agreement with HPPTCL or PGCIL (CTU).	Within 1 month from the date of signing of IA.	Extension up to a maximum of 1 month for the reasons beyond the control of project developer. If project developer fails to achieve the milestone even within extended time, allotment of project shall be cancelled with the forfeiture of all deposits.
6.	Signing of Connectivity Agreement & Long Term Open Access (LTOA) Agreement with HPPTCL or PGCIL (CTU).	Within 4 months from the date of signing of IA.	Extension up to a maximum of 3 months for the reasons beyond the control of project developer. If project developer fails to achieve the milestone even within extended time, allotment of project shall be cancelled with the forfeiture of all deposits.
7.	Achieving Zero date (start of construction period)	Within 6 months from the date of signing of IA.	Extension up to a maximum period of 6 months for the reasons attributable to the project developer subject to deposit of an extension fee @ Rs.20,000 per MW per month {extension for the period of delay on account of reasons beyond the control of project developer shall be allowed without imposition of extension fee subject to satisfaction of department} failing which, allotment of project shall be

			cancelled with forfeiture of all deposits.
8.	Scheduled Commercial Operation Date (SCOD) of the Project	Zero date plus construction period allowed as per TC plus extension of time granted by State, if any.	Delays during construction period on account of the reasons beyond the control of project developer shall be considered if applied with full justification within six months from the COD of project and shall be condoned / adjusted only after satisfaction of the appropriate competent authority within six months from the receipt of application. SCOD of the project shall not be revised beyond synchronization of any one unit.
9.	Commercial Operation Date (COD) of the Project.	Actual date when last unit of the Project commences commercial operation.	Incentive / Disincentive as per Clause No. 4.1.1.1 A (xlii & xliii).
10.	Handing over of the Project to the Government	The date determined on completion of the period specified in the MoU/IA from the Scheduled Commercial Operation Date (SCOD) of the project.	Action as deemed fit.

**Notes:**

- a) In case, the project developer is unable to achieve financial closure within the time limit specified above for achieving zero date, the project developer agrees to start construction work on the project positively within the time limit specified above by investing from its equity component. The financial closure shall be concluded within six months of start of the construction work on the project after achieving Zero Date.
- b) In case, unit-wise construction schedule approved is different for different units of the project, then unit wise SCOD may be considered and it will be for calculation of disincentive / penalty only and it will not redefine the project's SCOD as defined above. The project developer shall not be entitled for any benefit with respect to transfer of project after completion of the agreement period by referring to unit wise SCOD.
- c) Directorate of Energy is authorized to re-define the milestones afresh where 100% equity transfer is permitted by the State Government by entering into revised agreement for the stalled projects.
- d) Reasons for condonation of delays in achieving various milestones not attributable to the project developer shall be considered and decided by the Director Energy after approval of Administrative Department.

**4.1.2 SMALL HYDRO ELECTRIC PROJECTS (SHEPs) UP TO 5 MW**

887 Small Hydro-Electric Projects (100 KW- 5 MW) with capacity of 2004.40 MW have been allotted for development through Private/Public Sector participation. Out of these, 112 projects of 362.12 MW capacity stand commissioned.

The projects shall be allotted for a period of 40 years on BOOT/BOT basis. The agreement shall remain in force up to a period of 40 years from the SCOD of the project. Thereafter, the project shall revert to the State Government free of cost and free from all encumbrances and liabilities. After completion of 40 years, State may either extend the agreement on mutually agreed terms & conditions or may go for competitive bidding under Renovation and Modernisation (R&M) mode for next thirty years; however, the royalty payable to state for the extended period in any case will not be less than 30 %.

#### **4.1.2.1 Small Hydro Power Development Programme in Himachal Pradesh**

##### **A. Private Sector Participation**

The State Government has taken several policy initiatives to encourage Private Sector participation in small hydro power.

The process of harnessing of potential in small hydro sector through private sector participation began during 1995-96. Since then, the allotment of project sites has been a continuous process.

##### **B. Projects to be offered for Private Sector participation**

###### **i. Projects Identified by HIMURJA**

###### **ii. Projects Identified by the Project Developers designated as Self Identified Projects**

###### **a) General conditions applicable to the projects under B (i&ii) above:**

- i.** The Small Hydro-Electric Projects up to 2 MW capacity are exclusively reserved for bonafide himachalis. Co-operative Societies, Companies, Voluntary Societies, Trusts, Partnership Concerns and Sole Proprietorship Concerns comprising wholly of bonafide himachalis will be eligible for allotment in this category.
- ii.** While allotting the projects above 2 MW and up to 5 MW, preference will be given to the bonafide himachalis and this includes Co-operative Societies, Companies, Voluntary Societies / Trusts, Partnership concerns; Sole Proprietorship concerns comprising wholly of bonafide himachalis. If there is more than one himachali applicant then preference shall be accorded to applicant from the relevant area and district by way of providing additional / preferential marks.
- iii.** While allotting the projects, implementation track record of the project developer will be considered. Technical and financial evaluation will be carried out as per **Annexure-VII**.
- iv.** If project developer is financially & technically capable of developing more than one project then projects up to total capacity of 50 MW may be allowed to project developer under implementation and allotment category subject to the Net Worth of project developer as defined in annexure above.

###### **b) Minimum requirements to apply projects under Self Identified Category:-**

To ensure proper identification of projects under self-identified category and to avoid cascading of the projects and to make SHEPs more environment friendly, the project developers are advised to meet the following minimum requirements before putting in an

**application for self-identified project:**

- i.** Applicants should clearly mention the following information in their project proposal to be attached with the application:
  - a.** Coordinates of weir site, power house and tailrace along with elevations.
  - b.** Name of stream(s).
  - c.** Basin.
  - d.** Copy of topo-sheet indicating the co-ordinates & elevations.
  - e.** Elevations of upstream & downstream projects on the same stream, if any.
- ii.** The project developer and the Directorate of Energy / HIMURJA shall ensure minimum horizontal distance of 250 m or elevation difference of 50 m as the case may be, between two projects, depending upon the topography and terrain of the area to have visible flow of water in the original stream. However, the Domain Change Committee constituted by the State Government on case to case basis may allow relaxation of this condition considering the technical, design, socio-economic & topographical aspects.
- iii.** The project developer shall fix the elevations with reference to Survey of India bench mark or some authenticated reference point already established. Some sort of identification mark need to be put at site and photographs of weir site and power house location need to be attached with the proposal. Proposals submitted without photographs shall be rejected.
- iv.** No proposal/application shall be accepted on the streams and elevations for which applications received in the past and are held up due to court cases. For clarifications the applicants may consult HIMURJA.
- v.** Applications for elevations & streams clashing with already allotted, identified or under investigation schemes by HIMURJA/DoE/HPSEBL/ by any other Government agency shall be rejected and application fee shall stand forfeited. It will be the responsibility of the project developer to check with the record of concerned agency before putting in an application.
- vi.** Applications not found fit from an environmental / ecological view point shall be rejected.
- vii.** No applications will be entertained for projects on major rivers such as Satluj, Beas, Ravi, Chenab, Yamuna and also on Tirthan river & its tributaries in Kullu district.
- viii.** Pre-Feasibility Report to be attached with the proposal.
- ix.** Reputed experts / consultants having vast experience in the field of hydro power sector and having provided consultancy during implementation of minimum three projects will be registered with the department and the department will notify the terms & conditions for such engagement, which will be duly determined in transparent manner. The private project developers shall engage experts / consultants out of the empanelled experts/ consultants for the preparation of proposal in respect of self-identified projects.

**C. Guidelines for Private Investors:**

- i.** Any private investor whether himachalis or outsiders such as Private Ltd. Company /

~~Public Ltd. Company / Partnership concern / Sole Proprietary and Cooperative Societies / Voluntary Societies / Trusts~~ comprising wholly of bonafide himachalis is eligible to apply for the allotment of these SHEPs. The applications for the HIMURJA identified projects / self-identified projects shall be received after advertisements issued by Government / HIMURJA in Giri Raj and in leading newspapers. Applications shall be scrutinized by HIMURJA and approved by the Government.

ii. As the potential sites have been identified on the basis of preliminary reconnaissance only, the interested project developers should, in their own interest, visit the sites for verifying various project related parameters viz. discharge, head, water availability, habitation etc. HIMURJA shall not be responsible for any kind of variation. The project developers shall also ensure that the project components do not fall in the wild life sanctuaries, national parks, eco protection zones etc. and also do not interfere / overlap with the existing and proposed Hydro-Electric Projects of State, SPSUs / CPSUs HIMURJA, Joint CPSUs and private project developers, before submitting their offers on the prescribed format. In case, DPRs and some of the clearances have already been obtained in respect of some projects and projects are allotted, the allottee will have to settle and bear the cost of DPR and other expenditure incurred, if any, and interest thereon within a year.

iii. The application shall be accepted on the prescribed format and should accompany the application fee & requisite documents. The application shall include the information regarding name of the stream / nallah, estimated capacity, assessed head and assessed design discharge, project layout sketch showing the elevations of the main project components, names of the projects already allotted upstream/downstream of the proposed site, if any etc. Application with the same name as that of the project already allotted upstream / downstream will not be allowed. The joint inspection in case of self-identified projects shall be carried out by HIMURJA / committee comprising of officials of all concerned departments like HIMURJA, Revenue, Jal Shakti, Public Works, Forest, Fisheries etc. including upstream / downstream project representatives as notified by Government of Himachal Pradesh to ascertain the interference, if any, with the existing projects along with the elevation / horizontal distance as prescribed and other aspects of concerned departments related to development of project. The Project Officer, HIMURJA of concerned area will be Member Secretary of the committee and he will ensure the joint inspection of the site and report thereof.

iv. If a project developer is interested to apply for more than one project, separate application for each project shall be submitted along with application fee.

v. The application must be complete in all respects, supported with the requisite documents accompanied with a non-refundable application fee and Earnest Money Deposit (EMD) as prescribed. EMD is chargeable per MW and the fraction of MW on pro rata basis. EMD is refundable in case of unsuccessful applicant and in case of successful applicant the same will be adjusted against the security deposit. Financial appraisal of the application shall be done on the basis of "Net Worth" of the applicant. The application shall be assessed on the basis of various parameters viz. financial strength, technical strength and project development experience of the applicant as prescribed in Annexure-VII. If the project developer makes application for multiple Projects and qualifies, then the financial and technical capabilities shall be assessed cumulatively while considering allocation of multiple projects as eligible. No interest shall be paid on the EMD to be refunded or adjusted against security.

vi. For the projects up to 2 MW capacity reserved for himachalis, the applicant should have

Net Worth of Rs.75 lakhs (Seventy-Five Lakhs) per MW to become eligible for further processing of application, failing which the proposal shall be rejected out rightly, whereas for the projects above 2 MW & up to 5 MW Net Worth of Rs.1 crore (One Crore) per MW shall be required by himachali applicant to become eligible. In the eventuality of non-meeting of these conditions, such proposals will be rejected out rightly.

vii. For non-himachali, Net Worth of Rs 2 Cr (Two Crore) per MW shall be required to become eligible for further processing the application, failing which, the proposal shall be rejected out rightly.

viii. After qualifying the eligibility criteria mentioned in clause vi & vii above, further assessment shall be done as per the prescribed formula.

ix. If a project developer enhances the capacity of already allotted project after TC / signing of IA then the project developer shall be required to furnish the processing fee afresh on the prescribed rates.

x. State reserves the right to reject any or all offers without assigning any reason(s).

xi. The project developer will acknowledge receipt of Consent Letter within one month and furnish affidavits, security charges, processing fee, upfront premium within one month from the date of issue of Consent Letter. A Letter of Allotment shall accordingly be issued after receipt of confirmation to the Consent Letter, deposit of 1<sup>st</sup> installment of upfront premium and processing fee. In case, project developer's confirmation is not received or upfront premium, security, processing fee and other relevant essential documents are not deposited by the due date, it shall be presumed that project developer is not interested in taking up the project and Consent Letter shall be withdrawn.

xii. Furnishing of Security Deposit at prescribed rate which shall be used as Performance Security for achieving different milestones and adjusted against extension charges that may become due and are not paid in case of cancellation of project at any stage.

xiii. Furnishing of non-refundable Processing Fee per project as prescribed for different categories in Annexure-VIII.

xiv. Upfront Premium (non-refundable), shall be charged at following rates:

- a) For projects up to 2 MW capacity: Nil.
- b) For projects above 2 MW up to 5 MW capacity: Upfront premium will be charged @ Rs 1,00,000/- per MW in two stages i.e. @ Rs. 50,000/- per MW at the time of allotment of the project to be deposited within one month from the date of issuance of Consent Letter and @ Rs. 50,000/- per MW at the time of signing of IA.
- c) If after enhancement of capacity, the capacity of the project remains up to 5 MW the project developer shall have to pay upfront premium @ Rs 1,00,000/- per MW on whole capacity as capacity enhancement charges.
- d) If after enhancement of capacity, the capacity of project exceeds 5 MW, the category of the project shall change and shall be governed by appropriate conditions as applicable under the provisions of this policy document.

xv. Following milestones shall be required to be achieved by the project developer, failing which, consequential action as mentioned below will be taken by the Government:

### MILESTONES FOR PROJECT IMPLEMENTATION

Sr. No.	Milestones	Time Period	Consequential Action
1.	Upfront premium above 2 MW and up to 5 MW: 1 <sup>st</sup> installment	Within 1 month of issue of Consent Letter.	Withdrawal of Consent Letter and forfeiture of all deposits.
2.	Processing fee	Within 1 <sup>st</sup> month of issue of Consent Letter	
3.	Issuance of letter of allotment	On receipt of 1 <sup>st</sup> installment of upfront premium & processing fee and furnishing of confirmation to the Consent Letter.	
4.	Signing of Memorandum of Understanding (MoU)	Within 1 month from date of issuance of Letter of Allotment.	Extension up to a maximum 1 month for the reasons beyond the control of project developer. If project developer fails to sign the MoU even within extended time, allotment of project shall be cancelled with forfeiture of all deposits.
5.	Submission of Detailed Project Report (DPR) as per guidelines at Annexure-II or CWC guidelines.	Within 24 months from the date of signing of MoU. (Additional 6 months for projects in Lahaul & Spiti, Pangi of Chamba district and Dodra Kwar of Shimla).	Extension up to a maximum period of 12 months for the reasons attributable to the project developer subject to deposit of an extension fee @ Rs.20,000 per MW per month {extension for the period of delay on account of reasons beyond the control of project developer shall be allowed without imposition of extension fee subject to satisfaction of department}, failing which, allotment of project shall be cancelled with forfeiture of all deposits.
6.	Grant of Technical Concurrence (TC)	Within 5 months from the date of acceptance of DPR.	Timelines for processing of DPRs for timely grant of TC are at Annexure-III. If the timelines are exceeded on account of non-response of project developer towards observations on DPR, the allotment of the project shall be cancelled with forfeiture of all



			deposits. Relaxation up to 6 months time will be given if the observations are beyond the control of the project developer.
7.	Signing of Implementation Agreement (IA)	Within 2 months of grant of TC.	Extension up to a maximum of 1 month for the reasons beyond the control of project developer. If project developer fails to sign the IA even within extended time, allotment of project shall be cancelled with the forfeiture of all deposits.
8.	Application for connectivity & Long Term Open Access (LTOA) Agreement with HPPTCL/HPSEBL	Within 1 month from the date of signing of IA.	Extension up to a maximum of 1 month for the reasons beyond the control of project developer. If project developer fails to achieve the milestone even within extended time, allotment of project shall be cancelled with the forfeiture of all deposits.
9.	Signing of Connectivity Agreement & Long Term Open Access (LTOA) Agreement with HPPTCL/HPSEBL	Within 4 months from the date of signing of IA.	Extension up to a maximum of 3 months for the reasons beyond the control of project developer. If project developer fails to achieve the milestone even within extended time, allotment of project shall be cancelled with the forfeiture of all deposits.
10.	Achieving Zero date (start of construction period)	Within 6 months from the date of signing of IA.	Extension up to a maximum period of 6 months for the reasons attributable to the project developer subject to deposit of an extension fee Rs.20,000 per MW per month {extension for the period of delay on account of reasons beyond the control of project developer shall be allowed without imposition of extension fee subject to satisfaction of department}, failing which, allotment of project shall be cancelled with forfeiture of all deposits.
11.	Scheduled Commercial Operation Date (SCOD) of the project	Zero date plus construction period allowed as per TC plus extension of time granted by State, if any.	Delays during construction period on account of the reasons beyond the control of project developer shall be considered if applied with full justification within six months from the COD of project and shall be condoned / adjusted only after satisfaction of the appropriate competent authority

			within six months from the receipt of application. SCOD of the project shall not be revised beyond synchronization of any one unit.
12.	Commercial Operation Date (COD) of the Project	Actual date when last unit of the project commences commercial operation.	Incentive / Disincentive as per Clause 4.1.1.1 A (xlii & xliii).
13.	Handing over of the Project to the Government	The date determined on completion of 40 years from the Scheduled Commercial Operation Date (SCOD).	Action as deemed fit.

**Notes:**

- a. In case the project developer is unable to achieve financial closure within the time limit specified above, the project developer agrees to start construction work on the project positively within the time limit specified above by investing from its equity component. The financial closure shall be concluded within six months of start of the construction work on the project after achieving Zero Date.
- b. In case of unit wise construction schedule approved is different for units of the project then unit wise SCOD may be considered and it will be for calculation of disincentive / penalty only and it will not redefine the project SCOD as defined above. The project developer shall not be entitled for any benefit with respect to transfer of project after completion of the agreement period by referring unit wise SCOD.
- c. HIMURJA is authorized to re-define the milestones afresh where 100% equity transfer is permitted by the State Government by entering into revised agreement for the stalled projects.
- d. A technical cell will be created under DoE to be headed by Chief Engineer (Design) for time bound processing of DPRs as specified in milestones table for accordance of TC, this cell will provide necessary technical assistance and guidance to project developers for preparation of DPRs and sorting out the technical matters. This cell will also be responsible for physical monitoring of the projects during the construction and operation stage of the projects.
- e. Reasons for condonation of delay in achieving various milestones not attributable to the project developer shall be considered and decided by the head of the department (HIMURJA) after approval of Administrative Department.

xvi. All stages of project implementation for the purpose of grant of extension where delays are not attributable to the project developers shall be allowed on the grounds as summarized below:-

a. Delay in submission of DPR will be condoned on the following grounds:-

- i. Delay due to domain change / relocation of project components or any discrepancies observed in allotted domain.
- ii. Delay in obtaining clearance from the National Board of Wildlife, where applicable.

**iii) Law and order issue in the project area.**

**b. Delay in achieving Zero Date in view of non-obtaining of various statutory clearances from various Government departments on the following grounds:**

- i) Delay in diversion of Forest / Government land due to non-finalization of committees under FRA.**
- ii) Delay in acquisition & lease of Forest land due to reasons not attributable to the project developers subject to the satisfaction of HIMURJA / Government.**
- iii) Delay in signing of Connectivity Agreement & Long Term Open Access (LTOA) agreement in view of non-finalization of power evacuation arrangements by HPPTCL & HPSEBL.**
- iv) Delays caused due to hurdles created by locals/NGOs by way of illegal strikes, unethical demands, and threats to projects management.**
- v) Delay in acquisition of private land not attributable to the project developer subject to satisfaction of HIMURJA / Government.**

**c. Delay in achieving Commercial Operation Date (COD):**

Delays during construction period on account of the reasons beyond the control of project developer shall be considered separately on case to case basis if applied with full justification within 6 months from the COD and shall be condoned / adjusted only after the satisfaction of the appropriate competent authority within 6 months from the receipt of application. SCOD of the project shall not be revised beyond synchronization of any one unit.

**d. In case of the projects falling in protected Wild Life Sanctuary / National Parks, delay in obtaining permission from competent authority needs to be exempted from levy of extension charges provided that the project developer has applied for the respective Clearance / NOC / Lease of Government land in all respects within the stipulated time frame correspondent to respective milestone(s).**

**xvii.** The project developer shall be required to obtain all the non-statutory / statutory clearances / NOCs / approvals required for the implementation of project from various departments including Gram Panchayats as may be specified by the Government.

**xviii.** Self attested copies of NOCs obtained from different departments shall be submitted to HIMURJA. The project developer is required to furnish an affidavit on Rs. 50/- stamp paper duly notarized, to the effect that "all the conditions in the NOCs obtained from the different departments and Gram Panchayat shall be abided by them".

**xix.** Once the construction activities in connection with project start at any of the site after due vetting and clearance by all the authorities concerned, no authority or any regulatory body will pass any order regarding stoppage of the work at site. If any local body, regulatory authority or department finds during inspection that the project authorities are not adhering to any safeguards relating to workers safety, protection of environment, landscape, forest and flora & fauna or conservation of minerals etc, such

violation shall be immediately brought to the notice of HIMURJA for issuing necessary directions to the concerned project authorities for ensuring the compliance of such regulations, laws or guidelines. HIMURJA after evaluating all the aspects will ensure the compliance in time bound manner and resort to stoppage of work in the rare cases of continuous violation after obtaining approval of the Government since there are huge implications of such stoppages in terms of time and cost over run which affect adversely the interest of State Government as well as project developer.

**xx.** The project developer shall set up its office within Himachal Pradesh after signing of IA and furnish the proof thereof to HIMURJA.

**xxi.** The validity of MoU shall be up to signing of IA.

**xxii.** The project developer shall submit monthly hydrological and meteorological data observed at the project site and monthly progress reports to HIMURJA on the prescribed format.

**xxiii.** The department of Energy shall create a hydrological and meteorological data bank in respect of different river basins with currently available data and that to be provided by the project developers on monthly basis for its use by various project developers for utilization for hydrological studies with respect to project development.

**xxiv.** The project developer shall fix the elevations with reference to Survey of India bench mark or some authenticated reference point already established.

**xxv.** DPR submission date shall be reckoned only after it has been found that the report is in conformity with Central Electricity Authority (CEA) / Central Water Commission (CWC) guidelines and within allotted / approved elevations & stream. The reports and studies shall be prepared by empanelled consultants. HIMURJA, after scrutiny will forward the DPR to Directorate of Energy, for according TC.

**xxvi.** The project developer will be permitted to withdraw from the project after the conveyance of non-feasibility of the project during the preparation of the DPR, if the State Government is satisfied that the project developer has sufficient ground to establish that the project is not techno-economically viable, without any liability on the Government of Himachal Pradesh for the expenditure incurred by the project developer in this period for any purpose related to the project other than amount deposited by the project developer on account of upfront premium. This amount will be refunded to the project developer without interest.

**xxvii.** The project developer will approach the HIMURJA during the preparation of DPR with complete proposal for re-defining of domain on account of discrepancy, if any, found in allotted domain after transfer of Survey of India benchmark at the project site as control point and verification of coordinates.

**xxviii.** The project developer shall develop project in the domain allotted by the government. The project developer and the Directorate of Energy / HIMURJA shall ensure minimum horizontal distance of 250 m or elevation difference of 50 m as the case may be, between two projects, depending upon the topography and terrain of the area to have visible flow of water in the original stream. However, the Domain Change Committee constituted by the State Government on case to case basis may allow relaxation of this condition considering the technical, design, socio-economic & topographical aspects.

xxix. Cases of domain change will be placed before the following domain change committee along with recommendations given by concerned agencies:-

Sr. No.	Designation	Member
1.	Additional Chief Secretary/Principal Secretary (MPP & Power)	Chairperson
2.	Director, Energy.	Member
3.	Chief Executive Officer, HIMURJA.	Member
4.	Director (Civil), HPSEBL.	Member
5.	Chief Engineer (Energy) / Head (Allotment Cell), Directorate of Energy	Member Secretary

xxx. The project developer shall have no claim on any project upstream or downstream of the allotted project. There shall be a stream / basin wise coordination committee of various project developers of concerned stream/ basin under the chairmanship of Director Energy to resolve any issue arising with the upstream and downstream project with respect to construction, water availability, transmission, sharing of cost/ obligation/ benefit etc. as referred.

xxxi. The projects will be allotted on the basis of tentative capacity as mentioned in the Notice Inviting Proposal / LoA / MoU. However, in case the capacity of a project increases / decreases upon firming up of the potential by the competent authority, the project developer shall be required to sign the Revised Capacity Agreement (Supplementary MoU / SIA) with the Government within a period of 30 days from the date of communication of approval.

The competent authority for approval of the capacity enhancement/reduction in respect of the projects up to 25 MW will be Directorate of Energy if the increase / decrease is within 20% of the allotted capacity. Beyond this the approval of Administrative Department will be required. Such cases in respect of projects up to 5 MW will be routed by project developer through HIMURJA.

Following provisions shall be applicable with regard to approval of capacity addition / reduction:

- The Capacity Addition Charges shall be payable by the project developer for the capacity enhanced in a single installment at the time of signing of Revised Capacity Agreement.
- No additional free power in lieu of capacity enhancement shall be levied in all future enhancement approvals. However, it shall not affect projects where capacity enhancement has already been approved and agreed.

Already agreed and signed commitments with respect to additional free power will not be affected. For the future reference with respect to addition / reduction in capacity, the capacity last approved for which IA/ SIA signed before the policy notification will be considered as benchmark for the calculation of capacity addition/reduction.

- If the capacity reduction is more than 20% of allotted capacity, the project developer will have the option of surrendering the project, with refund of security

deposit without interest, within a maximum period of 2 years from date of issue of Consent Letter. The project developer may however opt to retain the project.

- d) If the capacity reduction is within the 20% limit of the allotted capacity, no concession or adjustment in upfront premium shall be permitted.
- e) Processing fee @ Rs.10,000 per MW for processing the proposal of addition/reduction in capacity of project will be levied on the increased/decreased capacity.
- f) No fresh NOCs / consultations required from Gram Panchayats in case allotted installed capacity is enhanced within the allotted domain or if approved redefined domain falls in same panchayat.
- g) If the capacity addition/reduction amounts to change in category of the project, the policy applicable to such category after enhancement or reduction of the capacity shall prevail.

**xxxii.** The project developer shall pay all taxes and duties or other levies etc. to the GoI / GoHP as per the statutory rules in force from time to time.

**xxxiii.** The agreement shall remain in force up to a period of 40 years from the Scheduled Commercial Operation Date of the project. Thereafter, the project shall revert to the State Government free of cost and free from all encumbrances and liabilities. The project assets would be maintained by the project developer in a condition that would ensure rated efficiency of the project and residual life of civil, mechanical and electro-mechanical components at any point of time. During the 10<sup>th</sup>, 20<sup>th</sup>, 30<sup>th</sup>, 35<sup>th</sup> & 40<sup>th</sup> years of operations, the Government of Himachal Pradesh or one of its appointed agencies would carry out mandatory inspection of the project in this regard. After the inspection at 35<sup>th</sup> year decision will be taken with respect to transfer / extension / maintenance of the project within 2 years of the inspection.

If during such inspections it is found that the project capacity or life is being undermined by inadequate maintenance, the Government of Himachal Pradesh reserves all the rights to terminate the agreement at any time.

**xxxiv.** The project developer shall carry out the investigations/execution/operation & maintenance of the project keeping in view all quality control and safety measures as per relevant IS Codes / adopted standards and O & M Manual. The project developer shall allow access to the authorized representative(s) of the Government of Himachal Pradesh to all the locations of the project to inspect compliance in this respect at all stages during the agreement period.

**xxxv.** The project developer shall ensure release of minimum environmental flow (e-flow) immediately downstream of the diversion structure of the project throughout the year. The e-flow shall not be less than the threshold value of 15% of minimum inflow observed in the lean season in line with the State Pollution Control Board notification.

In case of violation by the project developer, action will be taken by Department and by appropriate authority in line with the prevailing guidelines and laws.

**xxxvi.** State reserves the right to abandon or reduce capacity / discharge of any identified project for meeting the commitment towards social / environmental concerns.

- xxxvii. In case any existing facilities including but not limited to, irrigation systems, water supplies, roads, bridges, buildings, communication system(s), power systems and water mills are adversely affected because of the implementation of the project, the project developer shall be responsible for taking remedial measures to mitigate such adverse effects. The cost of the above remedial measures shall become a part of the project cost. Such facilities shall be mutually identified and agreed upon between the project developer and the State Government. The project developer shall not interfere with any of the existing facilities till an alternate facility, as identified, is created.
- xxxviii. The project developer shall ensure to protect the water rights of the local inhabitants for drinking and irrigation purposes etc. by verifying the revenue entries and activities of Jal Shakti department so as to ensure that such rights are not infringed upon. Any dispute in the matter shall be referred to a committee to be appointed by the State Government involving Jal Shakti and Revenue departments. However, the decision of the State Government shall be final and binding on all the parties. The Government of Himachal Pradesh shall have the right for withdrawal of water from the river course for the consumptive use of pumping or by gravity for the purpose of potable water supply and irrigation to the affected villagers.
- xxxix. The project developer shall take appropriate steps, as may be required, for the protection of fish culture as per environmental requirements and give an undertaking to the Fisheries department of the local area that wherever feasible, rearing of fish shall be promoted by the project developer in consultation with the Fisheries department in the project area at the time of implementation of the project.
- xl. The State agencies – HPPTCL or HPSEBL as the case may be, shall create the required evacuation infrastructure for all the projects as per the terms and conditions of the connectivity agreement strictly as per the CERC/HPERC regulations. HPERC shall so fix the norms for interconnection that the average cost for creation of such system is duly accounted for, while fixing the generic tariff for different categories.
- xli. The provision under the Himachal Pradesh Transfer of Land (Regulation) Act, 1968 in Tribal Areas shall be adhered to.
- xlii. The provisions regarding employment to bonafide himachalis shall be governed by Clause No.4.1.1.1.A (xxxvii).
- xliii. The project developer shall inform the local police station and the labour office about the details of the work force engaged from within the state or outside regularly.
- xliv. In respect of safety, quality control and water management the project developer shall be governed by the provisions contained under Chapter XIV regarding policy provisions for private project developers implementing projects above 5 MW capacity, wherein an authority under DoE shall be governing body of State.
- xlvi. Various issues faced by project developers during the implementation of the project will be addressed by the department. State Level Committee under the chairpersonship of Hon'ble Power Minister of Himachal Pradesh as per Annexure-V shall review the progress from time to time.
- xlvi. The project developer, in respect of various local area development activities and local area development fund, shall be governed by the provisions contained under Chapter V.

**xlvi.** The declaration of Commercial Operation Date of the projects shall be governed by the provisions contained under clause 4.1.1.1 A (xxxvi) regarding policy provisions for private project developers implementing projects above 5 MW capacity.

**xlvii.** Incentives on early commissioning and dis-incentives on delayed commissioning of the project shall be governed by clause No 4.1.1.1 (A) (xlii & xliii).

**xlviii.** The project developer shall provide royalty in the shape of free power from the project during the entire agreement period to the Government of Himachal Pradesh at the rate agreed in their respective agreements (IA/SIA) of the deliverable energy of the project, from the date of synchronization of first unit whereas, the projects allotted in future shall provide royalty in the shape of free power @ 12% uniformly.

In addition to above, the project developer shall contribute additional 1% Free Power over and above the agreed rates of normal free power royalty component to the State Government towards LADF. The balance energy, after adjustment of free energy, may be used/sold by the project developer in the following manner:

- a. Made available at the interconnection point to the HPSEBL, wherein HPSEBL will mandatorily purchase the entire power generated from the projects up to 5 MW capacity at the HPERC determined tariff:

Solid tap connectivity at the nearest 11 kV or 22 kV line up to 2 MW generation capacity will be allowed, with appropriate protection.

No wheeling/transmission charges shall be payable for free energy from the generating station to the interconnection point.

- b. Make captive use within the state or evacuate power for captive use or third party sale outside the state:

For sale/captive use of power outside the state, the HPSEBL shall levy wheeling charges prevailing from time to time in line with the provisions of this policy.

1. Any change in the name and consortium of the project developer shall not be allowed from the date of allotment except as allowed against clauses mentioned herein under. It shall be mandatory for a project developer to submit an affidavit stating therein that no change in consortium and name of directors/ promoters have been made. In case of default on the part of project developer, allotted projects shall be liable for cancellation, except the project developer follows the provisions laid down in clauses mentioned herein under and submit their request and other necessary documents required for effecting any change in name and consortium of the project.

#### **I. Transfer of equity**

##### **A. In case of Non-Himachalis**

The project developers (*Non-Himachalis*) implementing Hydro-Electric Projects are permitted to transfer the ownership by way of selling their equity stakes up to 100% during the implementation of the project in the name of any third party at any stage which is possessing equivalent or higher technical and financial strengths. However, there will be no restriction in respect of transfer of the



project after commissioning. This provision will be applicable to projects of all sizes up to 5 MW.

In lieu of allowing change in name / transfer equity of Principal Promoters, a fee as per **Annexure-VIII** is to be deposited at the time of signing of Tripartite Agreement for transfer of project along with all liabilities/responsibilities in the name of new entity.

**B. In case of Himachalis:**

**(a) Transfer of shares from Himachali to Himachali promoters:-**

In case of Bonafide Himachalis/Co-operative Societies/Companies/Voluntary Societies/Trusts/Partnership Concerns/Sole Proprietorship concerns comprising wholly of Bonafide Himachalis to whom projects up to 2 MW and above 2 MW up to 5 MW capacity are allotted, the Government may consider the request of the promoters to transfer ownership wholly or partially to any other Bonafide Himachalis/Co-operative Societies/ Companies/Voluntary Societies/Trusts/Partnership concerns/ Sole Proprietorship Concerns comprising wholly of Bonafide Himachalis, at any stage after allotment.

**(b) Transfer of shares from Himachali to Non-Himachali promoters:-**

In case of bonafide himachalis to whom projects up to 5 MW capacity are allotted, the Government may consider the request of promoters to sell/transfer 74% equity shares during implementation of project to Non-Himachalis which is possessing equivalent or higher technical and financial strengths and full disinvestment after commissioning.

In lieu of allowing sale/transfer of equity shares from Himachali promoters to Non-Himachali and change in name of the company, a fee as prescribed in **Annexure-VIII**, shall be charged at the time of signing of Tripartite Agreement for transfer of project in the name of new entity.

**(c) The fee shall be charged every time the project developer, both Himachalis & Non-Himachalis, changes the shareholding/changes name of entity.**

**(d) In case the project developer changes the name of the company/change shareholding within permissible limit without prior approval of the Government, penalty as per **Annexure-VIII** for each change shall be payable by the project developer.**

**(e) In case of death of any of the promoters the shares will be transferable to his legal heir (s) after approval of the Government.**

**(f) Transfer of equity shares by Himachali to Non-Himachali / Himachali together, is allowed within the percentage as prescribed herein above.**

- ii. Such projects where project developers have not met the milestones and terms and conditions of the MoU shall be reviewed on monthly basis by the committee under the chairmanship of Administrative Secretary, MPP & Power, GoHP for recommending appropriate action as deemed fit as per the merit of the case to the State Government.

iii. The project developer shall be allowed to set up temporary aerial ropeways / cable ways of any type for transporting material, men & machinery without the requirement of NOC of Gram Panchayat subject to adherence of safety parameters as per prevailing rules and regulations.

liii. HPSEBL shall provide electricity connection for the construction power required on priority basis wherever feasible. The required system for the same will be created by HPSEBL as per the prevailing regulations timely to ensure expeditious execution of the project.

liv. The project developer shall be allowed to use the muck / mineral generated during the execution of the project work and to set up captive stone crusher in the project area as per the HP Minor Mineral Rules provided project developer adheres to the prevailing environmental safe guards. The royalty on the usage of such minerals shall be payable to the State Industry department as per rules.

The project developer shall use such material for the project as may be found suitable for the construction and the remaining material shall be allowed to be used by other development departments of the state, subject to the prevailing Rules and Regulations.

The project developer shall ensure that the material excavated from the site shall be dumped in the area duly approved by the Ministry of Environment, Forest & Climate Change (MoEF&CC), GoI and State Pollution Control Board.

lv. The State shall encourage the up-gradation of existing water mills and installation of the new water mills both for mechanical and electrical application by the bonafide himachalis. For this purpose, the Government of Himachal Pradesh shall provide technical and financial assistance, besides, availing the corresponding subsidies / incentives notified by MNRE. The beneficiaries shall include the bonafide himachalis of the area because they are well conversant with the local terrain, topography and other socio-economic conditions of the people. First preference shall be given only to the owners of sites of such traditional gharats; then to the residents of the village, the district, the rest in that order. The owners of the existing water mills who are willing to install new water mills at the potential sites shall have to obtain necessary approvals from the competent authorities as per the requirements of the scheme. In case of water mills providing the electrical and mechanical output, the power so generated shall be utilized by the owner for his own captive use or otherwise as permitted by the law. However, such project developers are exempted from the payment of 1% development charges for local areas.

lvi. The project developers shall be at liberty to erect common dedicated transmission lines for joint evacuation of power from two or more projects by way of suitable consortium agreements. HPSEBL/HPPTCL, as the case may be, will ensure availability of evacuation arrangement before commissioning of the project.

lvii. The tariff in respect of projects up to 5 MW shall be determined by HPERC with respect to date of achieving COD of project instead of the date of signing of IA, only if project is completed within the stipulated time period as approved in TC after achieving the zero date except force majeure conditions or reasons not attributable to the project developers.

**lviii.** Any incentives announced in respect of different categories by various Ministries of Government of India from time to time providing central financial assistance for development of Micro & Small hydro programme in the Country shall be applicable as per the policy.

**lix.** The project developer shall ensure that the land is used exclusively for the activities related to the project. Any land exceeding the bonafide requirement of the project shall be surrendered to the State Government.

**lx.** The following amendments made in the Hydro Policy by the State Government vide Notification dated 15.05.2018 shall not be applicable to the Projects which will be commissioned beyond 31<sup>st</sup> December, 2028:

a) In case of already allotted (but not commissioned) projects, the free power quantum to be received on account of free power share of the state will be deferred for the critical period of initial 12 years from the date of achieving SCOD or COD of the project, whichever is earlier. The quantum to be deferred shall be recovered during the balance agreement period in a uniform percentage rate for all the ongoing private sector projects which are under construction and at various stages of clearances. The project developers shall be liable to sign revised MoU / IA / SIA, as the case may be.

b) The entire power generated from the projects having capacity up to 25 MW will be mandatorily purchased by HPSEBL at the HPERC determined tariff. The same shall be applicable to the projects which shall be commissioned after 15.05.2018.

c) No open access charges for the use of intra-State transmission network shall be payable by hydro electric projects having capacity up to 25 MW which shall be commissioned after 15.05.2018.

**lxi.** Any other issue not appearing herein, in relation to development of projects of any capacity and any energy source shall be addressed by Directorate of Energy.

**lxii.** Any difference and/or disputes arising at any time between the parties out of the MoU / IA / SIA or interpretation thereof shall be resolved by the parties hereto by mutual negotiations, failing which, the matter shall be referred to a two-tier grievance redressal process. The matter shall be addressed by the departmental Grievance Redressal Committee constituted under the Chairpersonship of Chief Executive Officer, HIMURJA, Shimla. In case the issue remains unresolved to the satisfaction of the project developer, the matter shall be referred to a state government level committee. If the project developer is still not satisfied with the verdict, the dispute shall be subject of the jurisdiction of civil courts of Himachal Pradesh.

## **4.2 ENERGY STORAGE – PUMPED STORAGE, BATTERY ENERGY STORAGE, HYDROGEN STORAGE & OTHER STORAGE AND HYBRID ENERGY**

**4.2.1** As renewable power share is increasing in the total energy portfolio of the country so are the challenges of reliability of power. In the renewable energy sector, major contribution is from solar & wind power and the share of solar is going to increase with each passing day. With solar energy, the issues of predictability and reliability arise, posing challenges for transmission network especially grid stability due to its intermittent nature. Here lies the importance of energy storage systems. In recent past, a lot of thrust is being given to the storage especially the pumped storage capacity in India.

**4.2.2** Moreover, increasing share of solar and wind power would pose challenge to the DISCOMs for ensuring quality power supply especially in the light of Consumers Right Rules, 2020. Recent energy market transactions have shown that DISCOMs are competing for limited peaking power available and facing uncertainty in balancing demand & supply.

**4.2.3** As per the 19<sup>th</sup> Electric Power Survey, a capacity addition of 46,420 MW in the country is required during the period 2022-27. This capacity addition is the peaking capacity requirement to be met in the grid. The requirement is to be met from the conventional sources of power generation and preferably hydro and storage devices.

**4.2.4** Given the present energy mix, for any capacity addition from conventional sources in future, capability of flexibility of generation needs to gain focus. Hydro power can contribute significantly to meet balancing requirement of the grid except for seasonal variations. However, hydro power would need to primarily meet peaking requirement. Pumped storage is long term technically proven and operationally flexible way of energy storage on a large scale to store intermittent and variable energy generation by solar and wind sources and is bound to gain increased focus.

**4.2.5** Government of India recognizes the gravity of challenges posed by the ever increasing RE penetration and the importance of Energy Storage System. In this direction, the country has started the process of establishment of ESS in country.

Due to the versatility of Energy Storage System(ESS) and its ability to provide services across the entire value chain of power sector, it can be conceived either on standalone basis or in complementarily with generation, transmission and distribution

MOP vide order dated 23.11.2021 and Addendum dated 30.11.2021 in supersession of earlier orders regarding "Waiver of Inter-State Transmission Charges on Transmission of the Electricity generated from Solar and Wind Sources of Energy" extended the waiver to the Energy Storage System(ESS) and the Hydrogen usage also.

The State Government is committed to use policy tools to develop the storage of energy in various forms in the state as under:

#### **4.2.6 PUMPED STORAGE**

Pumped storage has been proved to be most efficient and technologically reliable energy storage system. In Himachal Pradesh, as per the Central Electricity Authority (CEA) study, two schemes of pumped storage with total capacity of 3600 MW have been identified, each of 1800 MW - Majra Pumped Storage Project (having Bhakra Dam as lower reservoir and Renuka ji Pumped Storage Project (with Renuka ji dam as the lower reservoir). Two other schemes Thana Plaun HEP (191 MW) and Triveni Mahadev HEP (72 MW), each having additional potential of 100 MW through pumped storage have been identified by the State Government. In Himachal Pradesh, interspersed rivers and streams will have many feasible sites for pumped storage schemes. State is proactively planning to explore this new area and developing capability and capacity by way of providing policy and implementation framework by engaging experts in the field.

Implementation of differential tariff for peak and off-peak generation is urgently needed and the pumping operation is to be incentivized. Pumped storage projects (PSP) may be incentivized by viability gap funding on the lines of funding of renewable energy from National Clean Energy and Environment Fund or alternatively a low cost funding by agencies such as World Bank, ADB etc. Some benefits extended to the conventional hydro projects viz.

deferred state's royalty power, mandatory PPAs up to defined capacity, etc. to bring down the tariff where tariff was high originally, may need to be extended to the PSPs. Also concession in transmission charges may be considered to be provided to PSPs.

#### **4.2.6.1 Nodal Agency**

Directorate of Energy be designated as a nodal agency for exploring and promoting of all storage systems in the state.

#### **4.2.6.2 Procedure of Allotment**

Proposals for identified / self-identified PSP will be invited every 6 months. A Pre-Feasibility Report (PFR) shall be submitted along with the proposal. The State Government will notify the necessary criteria for evaluation of the proposals and also the terms & conditions of allotment of the projects. The State Government after necessary evaluation also taking into account the overall interest of all other projects located or proposed in the vicinity or in the same river basin shall allot the same and an agreement shall be signed with the developer.

In proposals envisaging use of existing reservoir of any project, preference shall be given to the existing developer subject to assessment of technical feasibility and commercial considerations.

The request of State/Central/Joint Sector PSUs may be considered by the State Government for allocation of PSPs on MoU route.

#### **4.2.6.3 Policy measures for Pump Storage Projects:**

The following relaxations shall be accorded to the PSPs which are commissioned before 31.03.2030:-

##### **i. Exemption of Free Power Royalty**

Pumped storage project being energy storage scheme different from conventional hydro project shall be kept out of the preview of free power royalty.

##### **ii. Exemption from Local Area Development Fund (LADF)**

Pre-commissioning and post-commissioning requirements of LADF will not be applicable in case of PSPs.

##### **iii. Non-applicability of Hydro Power provisions**

If existing power projects want to add pumped storage projects, increased capacity will not be considered a part of hydro projects. Only provision of this part will be applicable on such increase in capacity.

##### **iv. Assured Evacuation arrangement**

State Government will ensure creation of necessary arrangements for evacuation of power through HPPTCL as per prevailing provisions.

**v. Land**

Government land, if available will be granted on nominal lease amount of Re. 1/sq. m. State Government will accord necessary priority in processing diversion proposals under FCA, 1980 for diversion of forest land.

Land to be acquired for off the river pump storage projects shall be exempted from payment towards stamp duty and registration fees.

**vi. Tariff Policy**

Tariff for pump storage schemes shall be notified separately by HPERC taking into account the CERC regulations and assigning necessary weightage to the ancillary benefits which accrue from such power.

**vii. Customized Package**

The State Government may notify the customized package of incentives on case to case basis depending upon the requirement of various entities and the compulsions of emerging power scenario and such package may include equity support, viability gap funding, exemptions from royalty power, etc.

**viii. Open Access Charges**

Open Access charges on input energy for small PSPs of capacity up to 5 MW shall be exempted for initial 10 years from COD of the project.

**ix. Regulatory framework for PSPs shall be in line with solar and wind projects.**

**x. Pumped storage project developers will be permitted to establish captive solar power plants inside or outside the state and in such cases intra-state transmission charges to the extent of 50% shall be waived for a period of five (5) years from the date of commissioning.**

**xi. The input green energy required for PSPs shall be exempted from Electricity Duty levied by the State Government for a period of ten (10) years from the date of commissioning (COD).**

**4.2.7 Creation of Peaking Storage in existing Run of the River Projects.**

State Government will encourage existing run of the river projects to add / create peaking storage capacity, if feasible.

**(i) Additional capital investment made in creation of such peaking storages shall be pass-through in tariff.**

**(ii) In cases of long term PPAs with HPSEBL, HPERC shall allow such additional costs by revising the tariff allowable for such projects on case to case basis, however, no exit from PPA with HPSEBL shall be allowed.**

**(iii) If the capacity of the project increases after adding such storage, no capacity addition charges or additional free power shall be leviable.**

(iv) Additional cost involved in creating of such storage shall not be counted towards computation of Local Area Development Fund dues.

(v) In case of cascading projects, it will be open for the developers to finalize modalities of cost and benefit sharing for creation of additional storage for one or all the projects and the benefit of the concession on royalty power allowable under this part shall be limited to the extent of four hours of total storage created. Such agreements and modalities finalized by the developers shall be placed before the State Government for approval.

(vi) Storage addition will be encouraged through the incentives for the projects which intend to add storage over and above the existing storage capacity / approved capacity and come with the proposal for storage resulting in peaking power facilities for the project and separate SIA will be signed. The project shall be entitled to incentives of free power as under:

(a) For storage addition of minimum 2 hours:

A rebate of 1% in the applicable free power royalty rate shall be admissible for 12 years from the date of commissioning of the storage.

(b) For storage addition above 2 hours:

A further rebate @ 0.25% for each hour of additional storage created beyond 2 hours shall be permissible in the applicable free power royalty rate subject to maximum of 0.5%.

#### 4.2.8 Battery Energy Storage System (BESS)

A Battery Energy Storage System is a type of energy storage power station that uses a group of batteries to store electrical energy. The main function is to provide artificial inertia as the stored electricity can be called upon to provide fast response. The battery banks can be charged from the solar photovoltaic modules as well as from the conventional energy available from the grid. Thus Battery Energy Storage systems can be easily installed near the active power stations and share the same grid to provide power.

Battery Energy Storage System needs to be prioritized to maintain grid frequency, to act as fast acting energy reserve and to impart black start capability etc.

##### 4.2.8.1 Need of Battery Energy Storage Systems in the State

More than 88 % of the power availability with Himachal Pradesh is from hydro power stations which are mostly run-off-the river type HEPs. Generation from these power houses is totally dependent on the water inflow and is affected because of changing climate conditions, day to day weather changes, floods, high silt etc. Thus unlike other states where major part of their availability is from firm sources like thermal/gas/nuclear/storage power plants, in Himachal Pradesh the major part of availability is from hydro power projects wherein generation is highly unpredictable. Further major portion of our availability is from central sector/joint sector/shared generation run off the river hydro power projects and scheduling of power in their case is done by Northern Regional Load Despatch Centre (NRLDC) as peaking station as per the overall grid requirement. Thus, though the State has sufficient peak power to meet its peaking power requirement but in absence of control of state on scheduling of such power stations results in more deviations in schedules which further makes it difficult for state to maintain its draws from grid within its schedules.

Further, though the State is 100 % electrified but there are certain remote and tribal areas in the state where power is normally not available due to many reasons. Though small hydro electric projects have been installed in these areas to meet out the energy demands but it has been observed that in winters the discharge in the streams gets reduced resulting drastic decline in generation of small hydro electric projects. Therefore, there is need for some alternate energy source to ensure uninterrupted electricity supply in these areas and Battery Energy Storage System can be one such source which can be effectively used to provide reliable power to these remote and tribal areas of the state.

#### **4.2.8.2 Policy Initiatives for Battery Energy Storage Systems in the State**

In the interest of grid security by way of maintaining frequency, voltage & draws from grid within specified limits, reducing the congestion/overloading of system, proper utilization of renewable power, alternate power during emergencies, reduction in power purchase cost etc. as explained above, State Government is committed going to encourage installation of BESS in the state through following steps:

- The State Government will prioritise development of BESS in the state, keeping in view the policies / regulatory framework at national level.
- The BESS will be used for providing balancing & ancillary services to maintain grid security and grid discipline and HPERC shall encourage the DISCOM to install more and more such capacity by permitting the expenditure so incurred as pass through for overall tariff fixation.
- These systems as per requirement will be used for reducing the transmission / distribution network capacity addition costs & to reduce congestion management by establishing BESS based micro-grids.
- DISCOM will be encouraged to create optimum BESS capacity for emergency power requirements in case of sudden rise in demand or outages etc.
- Study will be conducted to explore the feasibility of setting up BESS near the existing distribution transformer setup of the DISCOM to provide capacity support to the system in case of overloading of such transformers.
- Installation of BESS by other Government / Semi-Government / Private Sector agencies will be encouraged and power so produced will be purchased by DISCOM at APPC rate approved by HPERC time to time.
- In order to encourage the setting up of BESS, State Government will consider providing customized package of incentives in tariff or installation as per the viability of the scheme.

#### **4.2.9 Green Hydrogen Energy Storage**

India's current carbon intensive industrial grey hydrogen consumption is 5.6 million tonnes and will increase to 11.7 million tonnes by 2030 (refinery and fertilizer sector) --- India's target is 5 million tonnes of zero carbon hydrogen (green hydrogen) production by 2030 serving both existing and new applications. Current price for hydrogen generation is around \$ 4 / kg and is expected to be reduced to \$ 1 / kg by 2030.



**Hydrogen Economy and Infrastructure:** Government of India is proactively approaching towards early development of Hydrogen (H<sub>2</sub>) Economy Infrastructure in the Country. Green Hydrogen (H<sub>2</sub>), which is formed through electrolysis of water with the help of RE power, is the next generation fuel.

Government has a focus for promoting enablers for Green Hydrogen Production and utilization in various industries and sectors. This step will further lead to increase in RE capacity addition as for production of Green Hydrogen through electrolysis of water, electricity generated from RE plants is required.

State of Himachal Pradesh is surplus in energy during summer & monsoon months and this surplus energy can be put for green hydrogen generation. The state shall explore diversion of surplus energy for the green hydrogen generation. Also green ammonia production for fertilizer industry and as a hydrogen carrier will be explored.

### **Policy Measures**

The State is looking forward to encourage the energy storage in the form of green hydrogen / ammonia and offer certain support and incentives to the prospective hydrogen generating companies as under:

- (i) The State Government may offer its surplus energy for the hydrogen generation through electrolysis near the hydro plants or industrial areas.
- (ii) On case to case basis, the State Government may make available the idle Storage infrastructure such as tunnels, adits etc. by devising appropriate benefit sharing mechanism with project promoters.
- (iii) The State shall give all the incentives available to the industries under Industrial Incentive Policy, 2019 to the hydrogen energy generation or storage units. All components of such plants will be covered for the purpose of such incentives.
- (iv) Intra-state transmission charges for power required for green hydrogen generation plants in the state will be exempted subject to the power being used from hydro projects up to 25 MW capacity or state's share of free power and state's Generation Utility up to 31<sup>st</sup> December, 2026.
- (v) Hydrogen generation plant consumers / developers will be exempted from electricity duty up to 31<sup>st</sup> December, 2026.
- (vi) Registration & stamp duty for establishment of hydrogen generation plants will be exempted up to 31<sup>st</sup> December, 2026.
- (vii) State shall ensure availability of water as input material for electrolysis for generation of green hydrogen.
- (viii) Green hydrogen distribution network through the pipelines may be encouraged through customized incentives.
- (ix) Green hydrogen use in the state in the industrial sector shall be encouraged through the incentives.
- (x) Green hydrogen use in the state's remote areas like Pangi, Lahaul & Spiti, Bara Bhanghal and Dodra Kwar etc. shall be encouraged through incentives for the purpose

of emergency and backup lighting purpose and fulfilling other requirements of remote area and nomads.

- (xi) Sunrise sectors like green steel, cement & other green products produced from green hydrogen shall be prioritized for creating vibrant clean export capabilities .
- (xii) State nodal agency shall be Directorate of Energy which shall enter into arrangements with the research institutes like IIT Mandi, NIT Hamirpur & any other R&D facilities for promotion of R&D Investment in the sector.

#### **4.2.10 HYBRID RENEWABLES**

The solar & wind power sources have the characteristics of intermittency and technological limitations of performance for a regular electricity supply. Several technology based modifications are taking place around the world to make the renewable energy generation from these sources more efficient and reliable by coupling them with other conventional sources of power generation. This coupling of generation gives rise to advent of hybrid energy. Hybrid renewable energy generation as solar-wind, solar-biomass, wind-biomass and variable-conventional hybrid as solar-hydro, wind-hydro, solar / wind - pumped storage hydro can help in achieving balanced power portfolio.

Flexibility in Generation and Scheduling of Thermal/Hydro Power Stations through bundling with Renewable Energy and Storage Power:-MoP vide notification dated 15<sup>th</sup> November, 2021 issued revised Scheme for Flexibility in Generation and Scheduling of Thermal/Hydro Power Stations through bundling with Renewable Energy and Storage Power. This flexibility will provide the Power Generators an opportunity to optimally utilize generation from RE sources and also help in reducing emissions and it shall also facilitate further RE Capacity addition.

Under the revised scheme, any Generating Company having coal/lignite/gas based thermal generating station or hydro power station may establish or procure renewable energy from a Renewable Energy (RE) power plant which is either co-located within the premises or at new locations within its vicinity.

Huge renewable push for solar and wind sources needs to match similar push for other sources to balance the grid, which requires hybrid generation. Scattered nature of wind and solar resources may further help distributed generation and consumption of energy at the point of generation, saving cost of transmission and distribution infrastructure as well as transmission / distribution losses.

State Government is planning to address this challenge by way of bundling hydro power with the other renewable sources like solar, wind & bio-mass or pumped storage projects which could prioritize the development of latter and ensure better price and quality of power.

##### **4.2.10.1 Nodal Agency**

Directorate of Energy shall be designated nodal agency for exploring and promoting all Hybrid projects in the state. If nature of the project is changed from hydro to hybrid, approval of the State Government shall be required and separate SIA will be signed for the same. Such SIA will also include the provisions to protect the interest of the State Government with respect to the free power and / or any other commercial benefits arising out of project. Directorate of Energy shall examine the proposal of capacity addition through alternate source of energy to

ascertain its qualification as hybrid / bundling of power resources so as to be eligible for incentives as under:

#### **4.2.10.2 Incentives**

- (i) Any existing hydro electric project having PPA with the DISCOM intending to convert itself into hybrid mode by adding capacity to the already commissioned capacity and thereby exceeding the 25 MW ceiling prescribed for the mandatory purchase will have option to exit PPA if entered after 2018.
- (ii) If the capacity after hybridization / bundling remains within 25 MW the IPPs will not have option to exit the PPA, however, the DISCOM will be bound to enter into PPA for the additional power on the rate determined by HPERC subject to the condition that such addition shall not be more than the 50% of the hydro power capacity of the project. If such addition of solar capacity is up to 5 MW, the DISCOM will enter into PPA on the generic tariff notified by HPERC.
- (iii) For those allotted or commissioned hydro electric projects of capacity more than 25 MW intending to bundle with solar power, the State Government may grant permission for usage of the surface area of reservoir or any other vacant space in the possession of such IPP for the development of the same subject to the clearance from the ecological aspects.

### **4.3 SOLAR POWER POLICY**

#### **4.3.1 Background**

In hills, grid reliability is a constraint due to geographical, topographical and climate constraints and decentralized generation from solar is more efficient and easy to access. Low gestation period of 12 months and also reduced cost with technology upgrade has led to economic cost of generation.

National Institute of Solar Energy (NISE) has estimated a potential of 34 GW of solar power taking into account 3% of total wasteland and roof top surface areas of the consumers for this purpose. Indian Renewable Energy Development Agency Limited (IREDA) has estimated a potential of about 53 GW taking into account 5% of the waste land.

In consonance with the new trajectory finalized by MNRE, GoI whereby 500 GW of renewable energy is to be added by the year 2029-30, which includes 330 GW through solar, 140 GW through wind and 30 GW from other sources. Accordingly, a target of 1995 MW has been fixed for the state to be added through solar by the end of the year 2029-30. To align the state's target with national target of 500 GW, approximately 1950 MW capacity will be required to be added by 2030. However, the State Government will prioritize the establishment of large solar power projects/solar parks in the cold desert area of the state by encouraging the developers to create optimum amount of BESS capacity to ensure effective utilization of the evacuation system. Similarly, the State Government will also promote the BESS backed solar power projects to develop micro grids in the remote areas.

#### **4.3.2 Need for Solar Policy Revision**

It is desirable to align state's policy goals with the national policy and targets. This policy shall be applicable for solar power projects. However, with the improvement in solar and

related technologies and their relevance to the state, the State Government will prioritize introduction of solar thermal systems like solar water heating system, concentrated solar thermal (cst) systems, heat pumps etc. which will be promoted for heating, community cooking, space heating & cooling applications. The State Government will consider providing suitable financial incentives to promote use of these green and efficient technologies. This will also ensure the flattening of the peak demand to some extent apart from improving the living standard of people especially those living in higher hills.

#### **4.3.3 Prime Aims and Objectives of the Policy**

- i) Promote generation of electricity from solar energy for energy security for sustainable development.
- ii) Strengthen and sustain the policy of 100% clean electricity consumption in the state, by providing firm base load power during the sunshine time of the day.
- iii) Empower people in the remote and rural areas with 24x7 powers by way of decentralized solar power supply, especially in the unreliable grid systems in the hilly and remote areas.
- iv) Facilitate achieving Renewable Power Purchase Obligation (RPPO) by capacity creations in the state.

#### **4.3.4 Strategic Approach**

Development of solar power projects is different from development of other renewable sources like small hydro, biomass, municipal waste etc. It is not site specific resource and therefore can be set up on waste land, devoid of forests and having no other efficient alternative use. Solar photovoltaic panels are mounted and do not involve substantial change in profile of land and slopes.

- i) Average investment of about Rs.4.00 crore/MW at the current price is required for development of solar power project, thus a huge investment to the tune of about Rs.8000 crore shall be required to achieve the target of 1995 MW through solar power as per the national target of 280 GW. However, the State Government will take all necessary steps to harness its maximum solar potential which is estimated to be 34 GW as per the studies. Most investment shall come from private or joint Sector. Distributed generation of smaller capacities across the state have huge advantages and hence State will promote small projects all across the state to meet local needs through local farmers, unemployed youth and other local entrepreneurs and also enable capital investment from outside the state in bigger projects.
- ii) Generation is de-licensed and no approvals are required.
- iii) State Government will facilitate the developers in obtaining statutory clearances, if any, and procedures and processes for various state level clearances and support will be made simple, transparent with self certified documentation and with clear time lines, so as to ensure doing business with ease.
- iv) Land is crucial requirement for solar power projects, because it has to be the most efficient in terms of location, slopes, solar radiation, cost, proximity to EHT/HT grid and load centers. Land bank of State Government, waste land for solar parks will be identified and developed to facilitate large investments.
- v) Preference in power purchase from solar generation within the state will be given.

### 4.3.5 Solar Capacity Addition

After the revision of the Solar Power Policy- 2016, some progress has been made and solar power projects ranging from 250 kW capacity to 5.00 MW capacity have been set up in the last 4 years with a cumulative capacity of 28 MW. In addition, 14.72 MW capacity Grid Connected Rooftop Solar Plants have also been installed.

Further keeping in view the new trajectory of the MNRE, GoI for achieving RPPO obligations, the capacity addition shall be made in the following modes:

#### i) Grid Connected Rooftop Solar Plants

##### a) Grid connected Rooftop Solar Plants under Net Metering Scheme:

The domestic electrical consumers of HPSEBL shall be eligible to install grid connected Rooftop Solar Plant on their rooftop/premises irrespective of consumer sanctioned load. Incentives under the grid connected rooftop solar scheme will be applicable as per the guidelines issued by Government of India or State Government from time to time. The system will be connected to the grid with bi-directional meters, whereby the consumer will use solar generation for his consumption and the surplus will be fed to the grid. The surplus energy will be adjusted in the monthly energy bills of the consumer and in case the generated energy from the solar plant is more than that consumed from the grid the same will be carried forward at the end of the billing cycle in the year or shall be paid in cash at the rate equivalent to 50% of the generic tariff for the year notified by the HPERC for the Ground mounted solar power projects up to 5 MW capacity.

##### b) Grid connected Rooftop Solar Plants under captive use:

The industrial, commercial, institutional and other consumers shall be permitted to install grid connected rooftop solar plants on their vacant rooftops. The energy generated from these plants can be used for self consumption within the same premises. The surplus energy, not consumed by the consumer can be fed to the grid for which consumer will be paid as per the charges notified by HPERC every year. However, the consumer will have to seek consent from HPSEBL as per the powers delegated before setting up the grid connected rooftop solar plant.

#### ii) Ground Mounted Solar Power Projects

##### a) Solar Power Projects ranging from 250 kW – 1 MW capacity for Bonafide Himachalis.

Under this scheme, solar power projects ranging from 250kW – 1 MW capacity shall be allotted to bonafide himachalis only. These projects will preferably be set up near HPSEBL sub-station or near the 11 kV/22 kV HT distribution feeder. In case, the availability of the land is not in close vicinity of existing HPSEBL sub-station/11kV/22kV distribution feeder, the applicant may construct a 11kV/33kV feeder from the proposed project site up to nearest existing HBSEBL sub-station/ 11kV/ 33kV distribution feeder at his own cost and risk of transmission losses and in future the line will be maintained by the applicant. The energy generated from these solar power projects shall mandatorily be purchased by HPSEBL, if commissioned on or before 31.03.2030 at HPERC approved tariff applicable at the

date of allotment of the project and shall remain in force as per the terms and conditions stipulated in the PPA. The purpose of the scheme is to promote entrepreneurship in the state and also put to use the barren land which may be available with farmers and other land owners.

**b) Solar Power Projects of capacity greater than 1MW up to 5 MW.**

HIMURJA shall, through wide publicity, invite applications from prospective applicants for setting up of solar power projects on own land or land taken on lease and the energy generation from such projects, if commissioned on or before 31.03.2030 shall be purchased by HPSEBL on the tariff fixed by HPERC.

**c) Solar Power Projects of capacity greater than 5 MW**

Solar power projects of capacities greater than 5 MW can be developed by any Solar Power Project Developer or under any scheme the State Government may notify or under the Ultra Mega Renewable Energy Park Scheme of MNRE, GoI as per the availability of land, and transmission corridor where the project is to be set up. The project developer will be at liberty to dispose of power generated in any manner i.e. captive consumption, sale to any consumer within the State, sale to any trader or exchange or entity or consumer outside the State.

**d) Floating Solar Power Projects**

The State Government may invite the proposals from prospective developers for setting up Floating solar power projects on reservoirs or lakes in the state. Preference will be given to the developers who have existing reservoirs for hydro projects.

**4.3.6 Land Requirement:**

- i) Approximate land requirement for solar photovoltaic technology is 2 Hectares per MW. In the hilly terrain, due to topographical considerations, usable surface of the land may not be available in contiguity and in entirety and therefore maximum limit of land per MW capacity shall be 2.5 Hectare or 31 Bighas or 62 Kanals, unless in exceptional situations higher quantum of land is required.
- ii) Transfer of private and government lands for the purpose shall be allowed only on lease basis. Useful life of photovoltaic equipments is likely to go up to 30 years from the present level of 25 years. Keeping in view implementation time and expected additional life of project, the project developer may enter into lease for period up to maximum of 35 years. The land can be further given on lease if the developer wants to reinstall the solar power project on the same land by replacing the solar photovoltaic modules.
- iii) Transfer of Private land on lease shall require prior approval of the State Government under Section 118 of HP Tenancy and Land Reforms Act. Non-utilization of the land for the intended purpose and non commissioning within the time frame of 3 years, as laid down in the said Act, shall be violation of law and hence land shall be vested with the Government.
- iv) Transfer of Government land will be in accordance with lease rules of state.

#### 4.3.7 Nodal Agency:

- i) HIMURJA under the Department of Non Conventional Energy Source, Government of Himachal Pradesh will be the state level nodal agency for all capacities of solar power projects for the purpose of registration of projects, co-ordination, facilitation, administration of Central and State Government incentives if any, grant of consent/ approvals etc.
- ii) For the purpose of Power Purchase Agreement with DISCOM, HPSEBL shall be the dealing authority.
- iii) For statutory clearances/permissions, the concerned department shall be the relevant authority like Revenue department for lands, Forest department for Forest clearance etc.

#### 4.3.8 Procedure for Registration of Solar Power Projects:

- i. All the solar power projects shall be treated like industrial investment projects. Procedures and processes shall be simple and transparent and timelines for each process shall be laid down and adhered to. Main processes and procedures involved are registration, signing of PPA, interconnection, land transfers and other routine processes like electricity connection, water connection, approach roads, Town and Country Planning (TCP) approvals etc.
- ii. Solar power projects of all capacities, will be registered with HIMURJA and letter of approval/consent for setting up project, with commitment for support and assistance for project implementation, shall be issued by State Government through HIMURJA.
- iii. For the registration of the projects, following procedures and processes shall be followed:-
  - a) HIMURJA shall, through wide publicity, invite applications from prospective applicants for setting up of solar power projects on own land or land taken on lease in proximity to HPSEBL load centers in accordance with Solar Power Procurement Policy of HPSEBL. If the applications received is for less capacity than the capacity for which applications have been advertised then HIMURJA may repeatedly invite offers till the capacity is achieved.
  - b) All the Projects up to 5 MW capacity in a decentralized generation mode, to be set up whether under the State Scheme or any other scheme notified by Government of India or otherwise, shall be registered with HIMURJA on provisional basis on the lines of small and medium industrial projects. If the project developer intends selling power to HPSEBL, the project developer shall first decide the location of the project in prior consultation with HPSEBL and obtain consent to purchase. A standard application format will be made available on HPSEBL website and shall be filed electronically or other mode of mail. Letter of Registration and Consent shall be issued within three days, on a standard format, as token of approval of the State Government, based on which all necessary approvals shall be granted by the concerned departments.

c) All the projects of capacity above 5 MW shall be provisionally registered by HIMURJA with the prior approval of the State Level Empowered Committee (SLEC), comprising of the following:

- i) Additional Chief Secretary /Principal Secretary(MPP& Power and NES) - Convener.
- ii) Additional Chief Secretary /Principal Secretary (Revenue).
- iii) Principal Chief Conservator of Forests.
- iv) Director Energy, Directorate of Energy.
- v) Managing Director, HPSEBL.
- vi) Managing Director, HPPTCL.
- vii) Chief Executive Officer, HIMURJA- (Member Secretary).

The Committee will meet in such a periodicity that decision on every proposal is made within 15 days of receipt of application by HIMURJA. Application format will be common as devised for projects mentioned at (c) above. In case power is to be sold to HPSEBL, prior consent shall be required to be obtained by the project developer.

**4.3.9** HIMURJA shall issue Essentiality Certificate (EC) for transfer of land, government or private; within one week of application, once the project is registered as per procedure (b) or (c) above; within the ceiling norms of land per MW capacity. If additional land is required, EC shall be issued within 15 days after approval of Additional Chief Secretary / Principal Secretary (MPP & Power and NES).

**4.3.10** HIMURJA will charge processing fee (non-refundable) of Rs. 10,000 per project up to 1 MW and Rs. 1,00,000 per project for above 1 MW with application.

**4.3.11** Permanent registration will be done by HIMURJA on commissioning of the project.

**4.3.12 Implementation Guidelines for Solar Power Projects:**

The detailed guidelines for implementation of solar power projects in the state are attached at Annexure-IX.

**4.3.13 Disposal of Power:**

The project developers are at liberty to dispose of the power generated in any manner i.e. captive consumption, sale to any consumer within the state, sale to any trader or exchange or entity or consumer outside the state and sale to HPSEBL.

**4.3.14 Tariff:**

For projects up to 5 MW capacity, tariff for purchase of power by HPSEBL will be determined by HPERC, whereas tariffs for projects above 5 MW capacity will be discovered by the HPSEBL through competitive bidding mode. However, if a hybrid project has solar power as a component, the tariff for purchase of solar power by DISCOM exceeding 5 MW also shall be as determined by HPERC.

**4.3.15 Interconnection with Grid:**

- i. Open access to distribution system of HPSEBL has been provided by HPERC through Regulations. The project developers shall use network of HPPTCL and HPSEBL as per conditions laid down in the Open Access and Connectivity Regulation of HPERC



and signing an agreement with the state utility. Projects up to 2 MW capacity shall be allowed solid tap connectivity in 11kV network and above 2 MW capacity, the project line has to connect to 33kV or above sub-station.

- ii. HPSEBL and HPTCL shall ensure that the project developers do not suffer due to lack of evacuation infrastructure.
- iii. The project developer can install +/- 10% of the capacity of the project allotted to him. Addition / reduction over and above and below will not be accepted.
- iv. Transmission and wheeling charges as decided by HPERC and HPSEBL from time to time shall be payable by the project developer.
- v. Banking charges as decided by HPERC and HPSEBL from time to time shall be payable by the project developer.
- vi. The consumers in the state having connected load of more than 5 MW shall be allowed to install the captive solar power plant anywhere in the state. In such cases, demand charges shall continued to be paid to the DISCOM as per the contract demand.

#### **4.3.16 Project completion:**

It should ordinarily take about 12 months to commission the project after acquiring land, obtaining statutory clearances and achieving financial closure, depending upon the size of the project. As such, three years have been kept for project completion after provisional registration, which will be the implementation time of project. The project developer will not be liable for loss or damage due to delay in manufacturer and delivery of equipments resulting from any cause beyond the reasonable control including but not limited to compliance with regulations, orders or instructions of any federal state or municipal, Government or agency thereof, acts of God, acts of omissions of the purchaser, acts of civil and military authority, fire, floods, strikes, lockouts, altercations, embargoes, war, riots. Delay in transportation, to obtain necessary labour, manufacturing facility or inability to obtain material due to import or non-availability of raw material, any failure or restriction of power supply and delay in releasing payment shall not be considered Force Majeure circumstances for the purpose of extension in setting up the project. The onus of proving that the work was delayed due to Force Majeure shall rest with the project developer.

#### **4.3.17 Delays in Commissioning of Projects:**

- i) Wherever HPSEBL has signed PPA with the project developers, provisions contained in the PPA shall govern to regulate delays.
- ii) If project is set up on personal land, any delay is to the cost of the project developer.  
  
However, if land is obtained on lease with permission under section 118 of the Act, it shall vest with owner after due process of law, if not utilized for the purpose within the time frame laid down under Law.
- iii) If Government land is leased out, completion period will be 3 years, subject to further extension of one year to be granted on justified grounds, without any extension fee, failing which, lease will be cancelled.

#### **4.3.18 Direct Benefits to the Locals:**

- i. Of the total employment potential in the project, at construction and operations stages, 80% employment will be provided to bonafide residents of the state, with preference to those who transfer private land or to the right-holders of the Revenue estate where Government land is leased out for project.
- ii. Where-ever Government land, on which the right-holders have community rights, is leased out for project development, 1% of the total cost of the project, as fixed by HPERC on normative basis, shall be contributed by the project developer to Local Area Development Fund (LADF) for community development works. Where private land is used, no such contribution is mandatory, however, the project developer may contribute to LADF voluntarily.

#### **4.3.19 Transfer of the Project**

The solar power project can be transferred to any entity only after commissioning of the project.

#### **4.4 WIND ENERGY**

Out of total 87028 MW commissioned capacity of renewable energy in the country as on March, 2020, the share of wind energy is 37694 MW. The total wind power potential of the country has been revised and estimated to be 302 GW at 100 m hub height by National Institute of Wind Energy (NIWE), which is primarily spread over seven states only. Government of India had installed wind monitoring stations all over the country and issued wind potential maps for ground levels.

With the thrust of Government of India on renewable sources of energy, there have been several changes in the wind power harnessing technology with the increase in hub height to enable tapping of wind sources at greater height and increase in the range of wind velocity capable of generating power. As such, the capacity of wind power potential from wind source is rising. So much so that the hub height if possible to be increased from 100m to 120m the wind power potential of the country shall rise from 302 GW to 695 GW. The technological advancement shall give rise to a scenario, where the old wind farms may be replaced by higher hub height plants and generate far more power, which in turn shall improve the capacity utilization factor by a leap.

Himachal Pradesh has identified wind power potential of only 84 MW, which is yet to be tabulated by the National Institute of Wind Energy (NIWE). However, the explorations are on. State has designated HIMURJA as the nodal agency for the identification, allocation and harnessing of wind power potential in the state. The exploration of wind-solar hybrid projects shall also be carried out. If found viable, separate policy for wind and wind - solar hybrid shall be notified.

#### **4.5 BIOMASS ENERGY**

Biomass has always been an important energy source for the country considering the benefits it offers. It is renewable, widely available has the potential to provide significant employment in the rural areas. Biomass is also capable of providing firm energy. About 32% of the total primary energy used in the country is still derived from biomass and more than 70% of the country's population depends upon it for its energy needs. MNRE, GoI has realised the potential and role of biomass energy in the Indian context and hence has initiated a number of

programmes for promotion of efficient technologies for its use in various sectors of the economy to ensure derivation of maximum benefits. For efficient utilization of biomass, bagasse based cogeneration in sugar mills and biomass power generation have been taken up under biomass power and cogeneration programme.

Biomass power & cogeneration programme is implemented with the main objective of promoting technologies for optimum use of country's biomass resources for grid power generation. Biomass materials used for power generation include bagasse, rice husk, straw, cotton stalk, coconut shells, soya husk, de-oiled cakes, coffee waste, jute wastes, groundnut shells, saw dust etc. Biomass has significant potential and can be directly burned for heating or power generation, or it can be converted into oil or gas substitutes. Liquid bio-fuels, a convenient renewable substitute for gasoline, are mostly used in the transport sector.

#### **4.5.1 Potential**

MNRE, GoI conducted a study and as per the data, the current availability of biomass in India is estimated at about 750 million metric tonne per annum. The study indicated estimated surplus biomass availability at about 230 million metric tonne per annum covering agricultural residues corresponding to a potential of about 28 GW. Apart from this, about 14 GW additional power could be generated through bagasse based cogeneration projects in the country's sugar mills, if these sugar mills were to adopt technically and economically optimal levels of cogeneration for extracting power from the bagasse produced by them.

The MNRE, GoI has been implementing biomass power/co-generation programme since mid-nineties. Over 800 biomass power and bagasse/non-bagasse cogeneration projects aggregating to 10170 MW capacity have been installed in the country for feeding power to the grid.

#### **4.5.2 Availability of Resources & Potential in the State.**

The State has an area of 1,25,885 hectare estimated to be covered with Chir pine forests and as per the study conducted by Indo German Dhauladhar project 1.2 tonne of pine needles are shed per hectare by Chir pine trees annually. Thus, approx 1,51,062 tonne of pine needles is shed by the Chir pine forests every year. These pine needles are very combustible and cause devastating forest fires especially in summer months causing loss of timber, resin, wild life and other bio diversity worth crores of rupees. In addition to this the Department of Forest has to do many activities to prevent forest fires which include developing forest lines, control burning and payment for collection of pine needles on which a huge budget is spent every year. The State has two types of Chir pine forests i.e. Lower or Shivalik Chir pine forests and Upper or Himalayan Chir Pine forests.

Apart from Chir pine forest, some of the areas have vast quantity of Lantana bush, which is not being put to any use till now. The Lantana is abundantly available forest weed with abundant biomass and can be used as alternate renewable source of energy. Lantana as a specie is thought to be toxic and is dangerous to the livestock.

#### **4.5.3 Policy Initiatives by the State**

Though not much intervention has been made in formulating of Biomass Policy in the state but the Forest department during 2006 added Pine needles in the Minor Forest Produce and granted permission for export permit fee for Chir Pine needles which was fixed at Rs 5 per quintal. Subsequently, the State Government notified a policy for collection and removal of Chir pine needles from forest areas and also providing investment subsidy for setting up of pine needle based industries on dated 27-7-2018. The purpose of the policy was to encourage all the

stakeholders to work for the removal of Chir pine needles from the forest land to reduce fire hazards and to encourage the industry to use Chir pine needles as a fuel.

#### **4.5.4 Setting up of Biomass based Projects**

Based on the above facts there is a considerable potential to generate power or bio fuel etc from the abundant Biomass available in the state. In order to promote Biomass based projects in the state it is necessary to formulate a policy which will aim in developing Biomass based projects and will provide a common platform to the Independent Power Producers who wish to set up these projects. A recent report by the University of Horticulture, Nauni, Distt Solan has carried out a study for producing ethanol from the Chir pine needles. Though the study is at a nascent stage but in coming months they have planned to conduct more tests so that commercial production at a larger scale can be done. This policy endeavors to facilitate production of bio fuels through utilization of locally available bio mass which will help in reducing the environmental degradation caused by the pine leaves and will also create employment in rural areas.

#### **4.5.5 Industrial by-products based Plants**

There are certain industrial units in the state, which have by-products like sugar, paper or steam etc. from which surplus energy can be generated. The industry will be encouraged to set up co-generation plants either to generate electricity for captive use or utilizing it for other applications.

#### **4.5.6 Waste to Energy Plants**

Apart from this there is also a need of developing Waste to Energy plants in the state in consultation with Urban Development Department and Municipal Corporations. There are 61 Urban Local bodies (ULBs) in the state and as per the data available each body is generating approximating minimum of 1 tonne of waste each day. The total waste generation from these ULBs is approx 380 tonne per day which can be put to prudent use by developing Waste to Energy plants based on latest technologies.

#### **4.5.7 Implementation Strategy**

- i. HIMURJA will be the nodal agency to facilitate Biomass/ Waste to Energy based projects in the state. All Biomass project developers in the state will be required to submit their project proposals to HIMURJA for approval. The application will be required to be submitted in the prescribed format, complete in all respects. These projects will be registered with HIMURJA and letter of approval/consent for setting up project, shall be issued by HIMURJA after prior approval of State Government.
- ii. HPERC shall determine generic tariff for Biomass/ Waste to Energy projects up to capacity of 5 MW.
- iii. Suitable incentives may be introduced by the State Government for promoting Biomass based plants for power or bio fuel generation. Apart from this, Central Financial Assistance can also be availed from MNRE, GoI.
- iv. In view of the recommendation of the State Pollution Control Board it has recommended to use bio fuels, biogas as a fuel in the industry instead of pet coke and furnace oil which leads to emission of harmful gases in the air. In order to work in tandem with the fuel policy framed by Department of Science and Technology/ State Pollution Control Board

incentives can be given for production of bio fuel or by providing incentives for collection of pine needles for production of bio fuel.

#### **4.5.8 Incentives under the Policy**

- i.** The Biomass based projects and Waste to Energy projects shall be treated like investment in industrial project and will be entitled to the benefits prescribed under the prevailing Industrial Promotion Policy of Central Government and State Government.
- ii.** The project developer shall be eligible for Central Financial Assistance to be provided by MNRE, GoI as prevalent at the time of commissioning of the project.
- iii.** If any Industrial consumer in the state sets up the Biomass/ Waste to Energy projects for captive use in the State, such energy generated and consumed by such units shall be exempted from payment of Electricity Duty.
- iv.** The intra-state wheeling charges shall be exempted in case of Biomass/ Waste to Energy generation projects located inside the state.
- v.** The energy generated from the Biomass / Waste to Energy projects will be purchased by HPSEBL as per the tariff determined by HPERC.
- vi.** Mapping of forest residue will be done division wise so as to assess the exact potential in particular areas where the Biomass based projects could be set up either for power generation or for setting up briquetting plants.
- vii.** The project will preferably be set up near HPSEBL sub-station or near the 11 kV / 22 kV HT distribution feeder.

## **CHAPTER - V**

### **LOCAL AREA DEVELOPMENT FUND**

#### **5.0 BACKGROUND**

Hydro Power development though is a source of green and clean source of power, the minimal careful planning on the environment and socio-economic well being of the affected population, also need to be addressed. Similarly, the multi-purpose projects which have major objective of irrigation, flood moderation, drinking water needs etc. and a low component of hydro power generally responsible for a wider scale of displacements and consume huge submergence areas. As such, the provisions of local area development shall be applicable for the hydro power development as well as multi-purpose projects, which gives the feeling of ownership to the local communities. The mitigation measures must have adequate provision in the project design and cost. These provisions are towards Environment Management Plan (EMP), Catchment Area Treatment (CAT) Plan, restoration of loss of environment through Compensatory Afforestation (CA) and Net Present Value payment, Rehabilitation and Resettlement (R & R) Plan, infrastructure and capacity development in the area etc..

For local area development and to address of the impacts of hydro project execution, various local development activities need to be carried out in the local area surrounding the project. For this purpose, the initiative of the State Government was the first in the country with an eye on welfare of the local communities. A special provision of Local Area Development Fund (LADF) from the projects was made by the State Government in its Hydro Power Policy - 2006, so as to ensure visible additional benefit to local communities in the project area as part of the cost of a project. The people of the affected area were aimed to be made aware of the allocation likely to flow to them so that on one hand gainful infrastructure and local area development activities can be planned well in advance and on the other hand local communities develop an interest in expeditious completion of projects. Accordingly, a provision of 1.5% of the final cost of projects above 5 MW capacity and 1% for projects up to 5 MW capacity was made mandatory to be made by the project developer toward LADF.

In order to make the long term provision for sustainable development of hydro projects which have long life, introduction of Post-Commissioning LADF funded through revenue generation from 1% of power generated, in the form of an annuity over the entire life of the project, was made by the Government of India in its Hydro Power Policy 2008.

In order to administer LADF and to manage such development activities, the Hydro Power Policy, 2006, provided the constitution of a district level Local Area Development Committee (LADC) comprising of various stakeholders including Government departments, project developers and public representatives/ nominated members from Project Affected Areas, in respect of hydro electric projects being implemented in each river valley of the state, by the various agencies in Power Sector in the state viz. State Sector/Joint Sector/Central Sector/Private Sector.

#### **5.1 COMPOSITION OF LADF**

The LADF shall comprise of contribution by Project i) amount based on final project cost and ii) as additional free power after commissioning as envisaged in the State and National Hydro Power Policies. The project developers in the state shall contribute towards LADF in two stages.

### **5.1.1 Pre-Commissioning LADF:**

The project developer shall contribute a minimum of 1.5% of the final project cost for projects of capacity more than 5 MW and a minimum of 1% for projects of capacity up to 5 MW towards LADF for financing local area development activities during the execution of project.

### **5.1.2 Post Commissioning LADF:**

The project developer shall contribute additional 1% free power over and above the agreed rates of normal free power royalty component to the State Government. The revenue generated from sale of such 1% free power from the project will be assigned to the LADF for providing regular stream of revenue for income generation to the Project Affected Families in the form of annuity over the entire life of the project. This additional 1% free power share of the host state will be a pass through in tariff.

## **5.2 ADMINISTRATION AND MANAGEMENT OF LOCAL AREA DEVELOPMENT FUND (LADF)**

### **5.2.1 DEFINITIONS:**

#### **5.2.1.1 PROJECT AFFECTED FAMILY (PAF):**

Means a family whose land or house or other property or source of livelihood has been partly or fully affected by the development of a hydro electric project and resident family whose name have entry in the Parivar Register of the Gram Panchayat(s) / local bodies of the Project Affected Area on the date of allotment of the project.

#### **5.2.1.2 PROJECT AFFECTED AREA (PAA):**

Means the area where actual project components including submergence area/muck dumping area, mine/quarry area, infrastructure including project roads, project's dedicated township, offices, construction facilities, welfare facilities and any other facility directly related to project implementation are located. Townships and offices such as design office or head office not directly connected with the particular project site are excluded. Unit for declaring PAA would ordinarily be the Gram Panchayat (GP). However, in the case of projects up to 5 MW capacity, where component(s) pertains only to specific wards and do not impact the rest of the Gram Panchayat then those wards shall be separately enumerated and considered as PAA.

In case of projects involving resettlement, the area for resettlement shall also be covered as PAA.

#### **5.2.1.3 PROJECT AFFECTED ZONE (PAZ):**

Means the area surrounding such PAA where impact of the project on the lives of people is considerable even if no direct project activity is taking place there. The categorization of PAZ on the basis of project size will be as under:

- a) **For projects of capacity up to 5 MW:** Only such contiguous wards/ panchayats to PAA as are considered to be impacted by the project.
- b) **For projects of capacity from 5 MW to 100 MW:** All the contiguous panchayats to PAA as are considered to be impacted by the project, in the same or adjoining district(s).

- ~~c) For projects of capacity above 100 MW: Entire block or all such contiguous panchayats to PAA as are considered to be impacted by the project in the same or adjoining district(s).~~

#### 5.2.1.4 Declaration of Project Affected Families / Areas:

- a) PAF in all cases shall be declared by the concerned Deputy Commissioner before the signing of the IA mandatorily.
- b) PAA & PAZ for projects up to 100 MW will be declared by the concerned Deputy Commissioner. For projects over 100 MW will be declared by Government of Himachal Pradesh on the recommendation of concerned Deputy Commissioner. In case of a project falling in more than one district the PAA & PAZ will be declared by Government of Himachal Pradesh. No expenditure will be incurred till the PAA and PAZ are notified.
- c) The declaration of PAA & PAZ shall be completed prior to signing of IA. The project developer will submit the proposal to the Deputy Commissioner within 2 (two) years of signing of MoU/PIA.
- d) In case of scattered and isolated PAA e.g. mining and dumping areas etc., the PAZ will be only such adjoining panchayats to PAA as are considered to be impacted by the project.

### 5.3 STANDARD GUIDELINES TO ADMINISTER AND MANAGE LADF

The standard guidelines to administer and manage LADF in an objective, transparent and efficient manner are as under:

#### 5.3.1 Pre-Commissioning LADF

- a) Initially the pre-commissioning LADF will be worked out on the basis of the project cost as per TC of the project for depositing with Government of Himachal Pradesh. After completion of the project, the LADF will be worked out on the final completed cost of the project. However, for the projects upto 25 MW capacity, LADF will be worked out on the basis of capital cost considered by HPERC while determining the generic tariff.
- b) The project cost will be as approved by Central Electricity Authority (CEA)/GoI / GoHP and includes IDC, CAT, R&R expenses etc. Escalation will be included at the time of approval of revised cost. The LADF contribution made on the basis of Project cost as per TC initially, shall be adjusted and payable on the final completion cost of the project as per cost to completion arrived at the time of COD (Actual expenditure made plus estimated cost of balance ongoing works) to be confirmed after completion of all works of the project as submitted and approved by Directorate of Energy.
- c) The balance amount of LADF worked out on final project cost shall be deposited by the project developer within 6 months of the COD after getting approval/confirmation of final project cost by the Directorate of Energy subject to the entitlement defined under clause (a) above.
- d) For proper management and account specially keeping in view the pending liabilities and interest due against LADF, a centralized LADF account will be managed by nodal agency/department. Nodal agency will transfer the amount on account of LADF to the concerned district immediately.



### **5.3.2 Post Commissioning LADF:**

The project developers of projects of all capacities shall contribute 1% free power for LADF over and above the rates of royalty agreed to be paid to the State in the IA/ SIA, as the case may be. This additional 1% free power provided to the host state will be a pass through in tariff. The revenue collected, by the nodal agency i.e. Directorate of Energy from sale of such 1% free power contribution from the project developer will be transferred to the concerned LADC.

## **5.4 REALIZATION OF LADF CONTRIBUTION**

### **5.4.1 Pre-Commissioning LADF:**

a) The payment schedule of pre-commissioning LADF shall be as under :

i) 1<sup>st</sup> installment comprising 25% of total payable LADF is to be deposited at the time of signing of IA along with the Bank Guarantee (BG) of the 2<sup>nd</sup> & 3<sup>rd</sup> installments of LADF amount, which shall be returned immediately after receipt of amount against the due installments.

ii) 2<sup>nd</sup> installment of 25% will be paid within one year of Zero Date and 3<sup>rd</sup> installment of 50% will be paid within two years from achieving of Zero Date. The balance amount worked out on the basis of total completed cost within six months after achieving COD of the project. The completed cost will be settled at the time of allowing COD of the project.

b) In case of failure to adhere to the time lines as prescribed under (i) and (ii) above, the project developer shall be levied interest on the due amount of LADF @ 12 %.

c) In case of failure to deposit pre-commissioning LADF dues by the project developer, the recovery of the amount due along with interest component shall be carried out in terms of energy to be computed as an uniform percentage of the deliverable energy; six month after COD of the project. The quantum of deduction shall be worked out on the basis of average sale rate corresponding to the previous year realization on account of sale of free power by Directorate of Energy and the same shall be recovered within next one year in 12 equal installments. This provision will be incorporated in the IAs / SIAs. This provision will also apply to the commissioned projects which are defaulting in the payment.

### **5.4.2 Post Commissioning LADF:**

The 1% free power contribution to LADF shall be sold by the State Government along with its share of normal free power. The amount equivalent to average net realization per unit multiplied by the number of units for which 1% is to be paid will be placed at the disposal of LADC annually. The average price per unit will be worked out on the basis of net proceeds of total free power sale by the State Government divided by total number of units involved, after allowing Two (2) paisa per unit to be retained by the State Government as the expenses of Directorate of Energy.

## **5.5 INSTITUTIONAL ARRANGEMENT FOR ADMINISTRATION OF LADF**

5.5.1 There shall be a State Level Committee headed by Additional Chief Secretary/Principal Secretary (MPP & Power) to monitor the operation of the LADF arrangements, adherence to guidelines and time lines for deposit in the fund at various stages. The State Level Committee

~~is empowered to clarify any un-addressed issues and remove any difficulties to facilitate~~ smooth functioning in implementation of these guidelines. The Directorate of Energy will be the nodal agency at state level and will keep a record of the LADF activities, amounts to be deposited by each project developer and manage the allocation of revenue generation from 1 % additional free power to the concerned LADC to be constituted as described hereafter. The amount to be deposited by each project developer will be kept in a single account in Directorate of Energy and the State Level Committee is empowered to utilize the interest generated from the amount deposited and the revenue generated by retaining two (2) paisa per unit as expenses of Directorate of Energy.

**5.5.2** State government will notify LADCs time to time.

## **5.6 FUNCTIONS, RESPONSIBILITIES OF THE LADC**

- a) Overall management, control and administration of LADF including documentation and maintenance of accounts.
- b) Scrutiny of the proposed schemes to ensure adherence to guidelines contained herein.
- c) Approval of shelf of schemes and finalization of Annual Action Plan (AAP) in respect of each hydro electric project and allotment of funds to executing agencies. Each scheme included in the shelf or AAP shall be only on the basis of recommendation of Gram Panchayat of the concerned PAA or PAZ as the case may be. The committee will not thrust any scheme from PAA/PAZ share into the shelf/AAP at its level and ensure no in-eligible scheme is sanctioned by it.
- d) Monitoring and supervision of implementation of schemes approved under LADF.
- e) Review the progress of all administrative and statutory clearances with a view to remove local hurdles, if any, and settle local issues to facilitate timely execution of the hydro power projects.
- f) Assessment of work shall be done as per the standard guidelines of Public Works, and Rural Development departments etc.
- g) Executive agency shall be Public Works, Rural Development, Jal. Shakti departments etc. or any other Government department/agency as decided by LADC.

## **5.7 INTIMATION ON AMOUNT OF CONTRIBUTION TO LADF**

The Directorate of Energy will intimate the concerned LADCs about the signing of IA and the tentative amount due from the project developer against LADF. This amount in turn will be intimated to the Gram Panchayats/Blocks/District during the first meeting of the concerned LADC, enabling the concerned body to prepare their shelf of schemes as per the allocation expected by each of them.

## **5.8 PARAMETERS FOR ALLOCATION OF FUNDS**

### **5.8.1 Pre Commissioning LADF:**

Allotment of funds for local area development works shall be made strictly in accordance with the following norms:

Sr. No.	Category of HEPs	Norms for allocation of LADF during the construction			
		Project Affected Area (PAA)	Project Affected Zone(PAZ)		
			Project Affected Panchayat(s)	Project Affected Block(s)	Project affected District(s)
1.	Up to 5 MW Capacity	70%	30%	-	-
2.	>5-100 MW Capacity	60%	20%	10%	10%
3.	> 100 MW Capacity	50%	20%	15%	15%

**5.8.1.1** Further allocation of funds amongst the panchayats in PAAs shall be determined on the basis of a formula that assigns weightage to the following parameters in respect of 50% of the funds proposed to be allocated for PAA at para 5.8.1 above:

- Extent of private land used for project components including submergence of land - 45%.
- Extent of land affected above underground components- 15%.
- Extent of land used for infrastructure-roads, colony, warehouses etc.)- 20%
- Affected stretch of river/stream on both banks in respect of diversion structure and power house- 20%

**Note:** These ratios will be finalized by the LADC Chairman in consultation with the project developer based on factual details and ground realities. In case the project involves families to be displaced and relocated somewhere else, funds shall also be allocated to the host Gram Panchayats in the ratio of number of PAFs displaced to total PAFs. Till the host Gram Panchayat is identified this amount shall not be distributed.

**5.8.1.2** The balance 50% of the funds to be allocated for PAA at para 5.8.1 above, shall be allocated on the basis of ratio of population of each concerned GP to the total population of the entire area in PAA as on 1<sup>st</sup> January of the year of allotment of the project.

**5.8.1.3** Funds amongst GPs in the PAZ shall be allocated as per ratio of population of each GP to the population of all GPs in the PAZ.

**5.8.1.4** Allocation of funds for schemes out of the amount kept for block or district level shall not be made for Panchayat Level Schemes. In other words, schemes out of these funds must result in benefits to the block or district as the case may be. These funds may be allocated to a road, water supply, education or health institution serving more than one GP or block or entire district and not to a scheme restricted to a GP area.

## **5.8.2 Post Commissioning LADF:**

**5.8.2.1** The State Government through the Directorate of Energy will provide revenue received from the 1% additional free power component for each project to the LADF. The amount so received shall be allotted by the LADC in the form of a cash transfer to all the PAFs, every year, during the entire life span of the project as below:

- 50% of the total amount of LADF will be divided amongst the Gram Panchayats in proportion to the land acquired in each Gram Panchayat for equal distribution among the PAFs.

b). Balance 50% of the total amount of LADF to be divided to all the families in PAA equally.

**5.8.2.2** If a Project faces stoppage of work on account of law and order problem or public agitation by the locals, the provision regarding post-commissioning LADF will not be applicable for such number of days immediately after commissioning of project as recommended by district authorities and approved by State Level Committee resulting in deprivation of the PAFs of this benefit.

**5.8.2.3** A mechanism to address the grievances arising out of disbursement and management of LADF is as follows:

The grievances would be addressed by the Sub Divisional Magistrate of the concerned area who would be designated as Grievance Officer. Any person who is aggrieved with the decision of the Grievance Officer can prefer an appeal before District Magistrate/ Additional District Magistrate of the concerned district, who will be designated as Redressal Officer. Any further appeal shall be with the Additional Chief Secretary/Principal Secretary (MPP & Power) to the GoHP, whose decision shall be final and binding.

## **5.9 PREPARATION OF SHELF OF SCHEMES**

**5.9.1** The Member Secretary, LADC will, after approval of the Chairman, inform the concerned Panchayat about the tentative amount that will be available for each Project Affected Panchayat in accordance with provisions in para 5.4.1 above.

**5.9.2** A comprehensive shelf of schemes for the entire amount would then be prepared by the concerned panchayat/block/district and approved by the LADC along with a yearly plan. The annual plan may be discussed again in the Gram Sabha/LADC every year and altered if required. The shelf so approved would then be sent to the Member Secretary of concerned LADC & nodal agency, Directorate of Energy.

**5.9.3** Eligibility of schemes for preparation of shelf of schemes shall be based on the following parameters:

- i) Facilities meant for a panchayat only will be considered as panchayat level schemes like cement concrete internal paths connecting streets of village and main roads, ropeway benefiting masses, street lights benefiting masses, sanitation, rain water harvesting for whole village or panchayat, construction of building for mahila mandal, community hall, school buildings, playground, sports complexes, panchayat bhawan, rain shelter, construction of crematorium bhawan, providing drinking water supply for village, irrigation scheme for village / panchayat, renovations/repair of any other public building / assets.
- ii) Facilities serving more than one panchayat will be considered as block level schemes e.g. school, cement concrete path, village link road, primary health centre etc.
- iii) Facilities for district level infrastructure like bus stand, hospital, college, training institutes, fire tenders, ambulances etc. or any other district level infrastructure as determined by LADC.

**5.10** The following schemes/activities will not be covered under LADF allocations:

- i) Kachha paths/Project roads.

- ii) ~~Purchase of any kind of vehicles associated with monitoring of the LADF activities.~~
- iii) Renovation/repairs/maintenance of individual houses (if compensation has been received or is being made available out of any other budget head).
- iv) Activities of recurring expenditure or allowance or grant to any individual.
- v) Deployment of manpower on regular, contract basis, daily wage basis.
- vi) Purchase of any consumable articles such as dresses for cultural activities, kitchen utensils for mahila mandal, communities, societies, transportation and travelling charges etc.

## **5.11 IMPLEMENTING AGENCY**

The implementing agency for sanctioned schemes can either be a Gram Panchayat or a Government department. The decision on choice of agency for panchayat level schemes shall lie with the Gram Panchayat. For schemes beyond panchayat level, the LADC shall decide the implementing agency.

## **5.12 EXECUTION AND MONITORING**

**5.12.1** The funds for sanctioned schemes would be released by the LADC to the implementing agency based on the progress of schemes/actual utilization/after receipt of the bills from the executing agency.

**5.12.2** The executing agency shall furnish accounts along with Utilization Certificate and Completion Certificate to the LADC.

**5.12.3** The progress of financial allocation and implementation of schemes shall be monitored regularly by LADC. Appropriate reporting arrangements will be made by the LADC to submit online information on a web based programme as to be specified by the State Level Committee.

**5.12.4** While a Government agency executing the scheme would have their own mechanism for mandatory inspections for assessment of works, the LADC may also use Engineering staff of any Government department for this purpose. LADC will be entirely responsible for quality and quantity of various works and suggest improvement required, if any.

**5.12.5** The LADCs will send annual report to Directorate of Energy on the prescribed performa devised by the Directorate of Energy.

## **5.13 MANAGEMENT OF FUNDS AND UTILIZATION OF INTEREST AMOUNT**

**5.13.1** The funds of LADF would be kept in a joint account in any scheduled bank. The deposits will be managed efficiently to secure best interest income. The account of LADC shall be operated jointly by the Chairman and Member Secretary of the concerned LADC. The LADF would be subject to audit and instructions of State Government as issued from time to time.

**5.13.2** Member Secretary shall be responsible for the maintenance of LADF accounts and preparation of resolutions and minutes of the LADC meetings. LADC shall meet at least twice a year at such time and venue as decided by the Chairman.

**5.13.3** The assets created under LADF shall belong to the institutions for which they are constructed or to local body as the case may be, which will be responsible for all operation and maintenance of such assets.

**5.13.4** The interest earned on the funds deposited in LADF will become part of LADF. The interest earned to the extent of 10% may be used by LADC to cover cost of organizing LADC meetings; monitoring, office expenses including purchase of furniture or to hire services of experts for quality assurance, dispute resolution, hiring vehicles for inspection of works by Chairman or Member Secretary. Directorate of Energy, however, will be competent to allow expenditure up to 25% of annual interest on case to case basis as per actual requirement.

**5.13.5** For managing LADF by LADC, the personnel will be hired on outsource basis with prior permission of the Directorate of Energy.

#### **5.14 ADJUSTMENT OF EXPENSES INCURRED BY DEVELOPERS UNDER LADF**

**5.14.1** No project developer will release / spend any funds directly to the local public or for public works on their demand.

**5.14.2** The expenditure incurred by the project developer on various activities executed on the demands of local villages / PAA / PAZ shall be liable for adjustment against the dues of LADF subject to:

- (i) The work / activity is completed / likely to be got completed within the amount eligible under the share of the concerned project affected village / block / zone / district inline with the norms fixed at Para 5.8 above.
- (ii) The work / activity should have public utility and duly verified and recommended by the Deputy Commissioner / Directorate of Energy for adjustment, provided that the project developer properly submits all relevant details including demand of Gram Sabha / Gram Panchayat in the shape of resolution passed by the concerned Gram Sabha / Gram Panchayat and that shall be acceptable to the LADC.
- (iii) In case the total expenditure incurred on such activities which are being executed on the public demand of PAA / villages, on completion of the work, exceeds the limit of share as defined at Para 5.8 above, the project developer shall pay the balance amount from own resources and the amount beyond the limit of respective share shall not be chargeable to LADF.

#### **5.15 FREE ELECTRICITY TO PROJECT AFFECTED FAMILIES**

**5.15.1** As per the National Hydro Power Policy- 2008, in respect of the projects commissioned after 31.03.2008, incentive in terms of 100 units of free electricity to all the eligible PAFs shall be provided for 10 years from the date of COD of respective Project.

**5.15.2** The project developer shall deposit an equivalent amount of 100 units of electricity to the PAFs as per the applicable subsidized tariff determined by HPERC from time to time, with concerned LADCs and the balance amount equivalent to the quantum of subsidy with Directorate of Energy. This shall be done annually.

#### **5.16 AUDIT**

The Directorate of Energy will shortlist a panel of auditors for carrying out the audit of LADF in respect of all the LADCs.

## CHAPTER VI SINGLE WINDOW CLEARANCE SYSTEM FOR ENERGY PROJECTS

- 6.0** A Single Window Clearance System for energy projects shall be introduced for ease of business to the project developers by providing a single touch point for all clearances at the State level, with a charter of time for all clearances aimed at reducing the gestation period of hydro, solar and other projects. The concerned departments which are to provide the clearances shall formulate the "improved processes" in order to reduce the hierarchical levels for examination and clearance of cases within the time lines provided in the charter. Wherever possible a mechanism of deemed clearance shall be introduced.

The clearances required from the State Government to be provided to the project developers include: Environmental Clearance, Forest Clearance, Consent to Establish, Mining Clearance, Catchment Area Treatment Plan, Land for Compensatory Afforestation, Rehabilitation and Resettlement (R&R) Plan, NOCs from Public Works, Jal Shakti, Wild Life, Fisheries and Revenue departments etc. However, it shall remain the responsibility of the project developer to submit applications after thoroughly checking the check list and providing supporting documents wherever asked for, to ensure that the applicant is not non-responsive. All the state agencies / departments shall endeavour to stick to the time lines and grant clearances expeditiously.

Any grievance of the project developer may be brought to the State Level Committee under the chairpersonship of Hon'ble Power Minister of Himachal Pradesh as per Annexure-V shall review the progress from time to time.

- 6.1** The applications for the above clearances and NOCs shall be made online on the portal, which shall be made operational within six months of the policy notification. It will be independent and hosted with Directorate of Energy, Government of Himachal Pradesh Portal.
- 6.2** Timelines for accordance of various NOCs / clearances will be as under:

Sr. No.	Department	Action/Timeline
1.	NOC of Jal Shakti, Public Works, Revenue, Fisheries and Wildlife Departments.	<ul style="list-style-type: none"> <li>➤ The project developer will apply at Single Window platform and the application shall be submitted to concerned departments for the necessary time bound action.</li> <li>➤ Stages will be defined with the timeline for the approval of the NOCs of the various departments.</li> <li>➤ For accordance of NOCs of various departments concerned Deputy Commissioner shall convene a meeting of all concerned departments on the basis of reports and shall ensure issuance of required approvals / NOCs within 30 days period in the form of Single Window Clearances.</li> <li>➤ If issues pertain to more than one department then joint inspection committee under the chairmanship of Sub-Divisional Magistrate will be constituted at sub-divisional level and it will be reviewed at the district level committee under the chairmanship of Deputy</li> </ul>
2.	NOC of Gram Panchayat.	

		Commissioner notified by the State Government.
3.	Panchayat NOCs	Gram Panchayat shall issue NOC or pass-reasoned order within one month of filing application directly with Gram Panchayat or through Single Window, as the case may be, failing which, concerned BDO will decide the same within 15 days. Gram Panchayat, if agreed shall file an appeal within 15 days before Deputy Commissioner who will decide the same within a month and the decision of Deputy Commissioner shall be final.
4.	Forest Right Act (FRA)	FRA Rights in all districts on pattern of District Chamba & Mandi will be settled on priority within a year so that FRA Certificate issuance can be smoothened.
5.	1. Environment Clearance 2. Forest Clearance 3. Consent to establish 4. Mining Clearance 5. R&R Plan 6. Any other issues / clearances.	Link of various departments shall be hosted on the Single Window Clearance System portal for making application. The check list for rendering application complete shall be shared on the portal. The timelines for various levels and categories for approvals shall be finalized after due consultations with the concerned departments for expeditious disposal.
6.	Department Level Issues	
	1. DoE	i. Technical Concurrence (TC) – 5 months ii. Revalidation of TC – 3 months iii. Approval of Construction schedule – 1 month iv. Essentiality Certificate (EC) – 15 days v. Letter of Comfort / Assurance – 15 days vi. Approval for capacity enhancement – 2 months vii. Approval for equity change / name change – 1 month viii. Signing of IA / SIA – 2 months ix. Domain Change – 3 months x. Permission for declaration of COD – 2 ½ months xi. Extension of SCOD – 6 months xii. Extension of other various milestones – 2 months.
	2. HPSEBL / HPPTCL	i. Confirmation of evacuation arrangement for grant of TC – 1 month ii. Signing of Connectivity Agreement – 3 months iii. Signing of Long Term Open Access Agreement (LTOA) – 3 months iv. Signing of Power Purchase Agreement (PPA) – 6 months v. Report on Power House design for COD – 15 days vi. Report on evacuation of power with respect to COD – 7 days



		<b>vii. Bills settlement – 1 month</b>
	<b>3. HPSLDC</b>	<b>i. NOC with respect to COD – 7 days</b> <b>ii. Settlement of various charges – 1 month</b> <b>iii. Any other issue – 1 month</b>
	<b>4. Chief Electrical Inspectorate</b>	<b>i. Report on electrical installation with respect to COD – 15 days</b> <b>ii. Any other electrical system safety report – 1 month</b>
	<b>5. HIMURJA</b>	<b>i. Report of safety up to 5 MW capacity – 1 month</b> <b>ii. Domain Change – 3 months</b> <b>iii. Essentiality Certificate (EC) – 15 days</b> <b>iv. Issuance of letter of comfort / Assurance – 15 days</b> <b>v. Approval for Capacity Enhancement – 2 months</b> <b>vi. Approval for Equity Change / Name Change – 1 month</b> <b>vii. Signing of IA / STA – 2 months</b> <b>viii. Extension of SCOD – 6 months</b> <b>ix. Extension of other various milestones – 2 months.</b>

**6.3** Services will be brought under Public Service Guarantee Act.

**6.4** Frame work for Single Window Mechanism

- i.** Developed IT platform with trained manpower.
- ii.** Assistance of consultants.
- iii.** IT / digital infrastructure.
- iv.** Nodal department / Officers.
- v.** Monthly review / review mechanism from top to bottom.
- vi.** District Level Committee.
- vii.** State Level Committee review.
- viii.** Earmarked funding / budget.
- ix.** Integration of all departments – single dashboard

## CHAPTER-VII TRANSMISSION

- 7.0 A robust transmission system is essentially required for preserving the system security. Himachal Pradesh is uniquely placed with regards to exporting power from the state in surplus period of the year and importing during deficit period catering to harsh winter demands.
- 7.1 The intra state transmission network of Himachal Pradesh comprising 66 KV and above, is operated by HPSEBL and HPPTCL. The transmission network of Himachal Pradesh (66 KV and above) comprises of 3288.37 circuit km of transmission lines and 7462.7 MVA substation transformation capacity of intra-state transmission system, 4705.38 circuit km of transmission lines and 3780 MVA substation transformation capacity of inter- state transmission system and 842 circuit km of transmission lines of BBMB transmission system. This network supports the evacuation of installed hydro power in state besides meeting the requirements of distribution sector.
- 7.2 Government of India has set the ambitious target of addition of 500 GW renewable power by year 2030. With the integration of renewable energy projects, balancing power is required to support the grid. The State Government has an ambition of harnessing additional 10,000 MW of Green Power by 2030, which will provide much needed balancing power to the Northern grid. To evacuate this power from remote generating stations to load centers, matching transmission system is required. In order to cater to the requirement of the transmission system, coordinated planning & execution of transmission system (66 kV & Above) is required for which the State Government has notified Himachal Pradesh Power Transmission Corporation (HPPTCL), the Government owned Company as the State Transmission Utility (STU) as per provisions of Electricity Act, 2003.
- 7.3 Consequent to Hydro Power Policy, 2006, HPPTCL had prepared basin wise Master Plan for the evacuation of power of various small & medium hydro projects of the state in 2011. The elements of Master Plan were taken up for execution with funding from Asian Development Bank (ADB) under Himachal Pradesh Clean Energy Transmission Investment Programme, KfW (A German Bank) under Green Energy Corridor-I and domestic funding institutions. The Master Plan is being executed with the concept of "One Valley One Corridor" to avoid mesh of transmission lines and minimizing environmental & social impacts of transmission projects. The plan caters to providing evacuation to hydro power projects in phased manner in all the river basins of the state. The transmission plan was designed to concentrate on evacuation of power from small hydro projects, which is mandated by the State Government to be purchased by HPSEBL to the maximum possible extent. 9 Substations with 2474 MVA capacity and 8 transmission lines of 254.6 Ckt kms. have been commissioned, 12 sub-stations with transformation capacity of 1414.5 MVA and 11 transmission lines with 504.6 Ckt kms are under construction and are expected to be completed by the year 2022.
- 7.4 Electricity Act, 2003 mandates introduction of open access in transmission for multi-lateral energy transactions. HPERC under the provisions of IEA, 2003 has notified requisite regulations for providing non-discriminatory open access for use of intra - state transmission system and has also approved detailed procedure for connectivity & open access. In accordance with these regulations, STU is providing open access in intrastate transmission system thereby paving way for multi-lateral energy transactions and bringing in competitiveness and efficiency in the power sector. The necessary system augmentation as and when required shall be carried out after Connectivity & open access agreement as per the approved procedure by HPERC. This ensures optimum utilization of existing transmission assets and augmentation of transmission system in sync with the requirement.

7.5 Keeping in view the requirement of power evacuation in line with the State Government's target for harnessing additional 10,000 MW of power potential by year 2030 and requirement of strengthening of intra-state transmission system, STU has prepared a Revised Integrated Transmission Master Plan 2021 for the State (Annexure-X). After consultation with various agencies and stakeholders to cater to requirements of state till 2030 and shall be continuously reviewed and updated to match with the requirements of beneficiaries. For evacuation of power 7 sub-stations and 7 transmission lines have been planned besides the evacuation plan for Chenab Valley towards Kishtwar & Ravi Basin. For intra-state system strengthening 9 sub-stations and 5 transmission lines have been planned.

## 7.6 Policy Initiatives

- i. The execution of revised Integrated Master Plan to be done in a phased manner by matching transmission system with generation and load requirements to facilitate unhindered evacuation of power to the load centers located within and/or outside the state.
- ii. A State level committee shall be constituted for review, updating and facilitation of above Integrated Transmission Plan on lines of National Committee on Transmission already in place.
- iii. The efforts shall be to facilitate utilization of the power generated in the state nearby generator periphery thereby minimizing the system losses and transformation requirements and shall cater to requirement of transferring power from surplus to supply deficit areas.
- iv. The power requirement of major industrial areas of Himachal Pradesh, which are adjacent to Punjab & Haryana borders, shall be catered by looping in to the High Capacity Power Corridors of CTU/STU built to export the power out of the state, thereby optimizing Right of Way (R.O.W.) and avoiding separate lines.
- v. In order to optimize the use of R.O.W. to increase power carrying capacity, the thrust shall be to either re-conductor the existing lines with higher capacity conductors or upgrade the existing corridors.
- vi. STU shall make all efforts to provide double sources of supply to each major EHV Substation thereby filling critical gap in providing continuous 24 x 7 power supply to all consumers in state.
- vii. In order to bring more efficiency in construction, operation and maintenance of transmission system, special focus shall be given on adoption of State of Art technologies as per the best industry practices. Accordingly, Joint Control Centre is being built up at Kunihar with its backup at Dehan (Palampur).
- viii. To align development of transmission system consistent with commercial principle and avoid underutilization of transmission system.
- ix. To facilitate evacuation of Solar Power from solar rich remote Kinnaur & Spiti valleys to load centers, State Government through STU shall provide support by actively taking up matter with CTU and central agencies for development of matching transmission system.
- x. Government of Himachal Pradesh shall encourage investment in transmission infrastructure in accordance with IEA, 2003 and policy guidelines of Government of India.

## CHAPTER-VIII DISTRIBUTION

### 8.0 GENERAL

8.1 Himachal Pradesh State Electricity Board Limited (HPSEBL) is the sole distribution entity of the state of Himachal Pradesh. Himachal Pradesh State Electricity Board (HPSEB) was constituted in 1971 and was entrusted with the responsibility of generation, transmission and distribution of electricity within the state in an efficient and economic manner. In the year 2010, the reforms in the power sector were initiated and HPSEB was reorganized. HPSEBL was primarily given the responsibility of distribution aspect of power, besides a part of generation, survey and investigation of new projects and maintenance of transmission networks constructed by erstwhile HPSEB.

8.2 Presently, the annual consumption of Himachal Pradesh is about 10000 MUs which is being met from various sources including around 2000 MUs from own generating stations of HPSEBL. However, 88% of total procurement comes from hydro sources, 9% from thermal/gas generation, 2% from solar generation and 1% from nuclear generation. The increase in demand of power has been observed to be around 4% since 2011. Typically, hydro power generation spanning a year provides peak generation of 100% to 110% of capacity during the summer/monsoon period. However, the normal generation in the winter months reduces to a range of 15 to 20% of the installed capacity. Normal demand of the state is 1400 MW, whereas, the peak demand being experienced is of the order of 1900 MW.

8.3 HPSEBL is rendering services to over 25 lakh consumers with an electrical infrastructure comprising over 1 lakh km HT/LT lines, 51 EHV sub-stations and 193 sub-stations of 33 kV. HPSEBL adopted SAUBHAGYA scheme for providing free electricity connections to the BPL consumers and with very nominal charges to other domestic consumers. The associated distribution infrastructure was provided under the Deen Dayal Upadhyay Gram Jyoti Yojana and Integrated Power Development Scheme (IPDS), GoI funded scheme. The State Government also launched Mukhyamantri Roshni Yojana for free electrification of households.

8.4 In 2014, HPSEBL was mandated to purchase power of projects up to 2 MW if the project developer so chooses provided the free power to the State Government is as per the Hydro Power Policy, 2006. This limit of 2 MW was later increased to 10 MW in May, 2018 and thereafter to 25 MW in October, 2018. The compulsory purchase of power up to 25 MW was mandated at generic levelled tariff to be determined by HPERC. The details of PPA signed and status is as under:-

Sr. No.	Details	No	MW
1.	PPA Signed with project developers at preferential tariff	130	508
	Projects commissioned	98	422
2	PPA Signed with project developers under REC Mechanism	18	110
	Projects Commissioned	14	93
3	Project developers approached HPSEBL for signing of PPAs under scheme of Amnesty offered by GoHP likely to be commissioned by 2025	66	333

8.5 Consequent upon the Solar Power Policy notified by the State Government in 2016, the details of PPAs signed with project developers is as under:-

Sr. No.	Details	No	MW
1	PPA Signed with project developers –solar power	86	61
	Projects commissioned-Solar	34	30
2	Promotion of Roof Top Solar power generation by HPSEBL		25

## 8.6 POLICY INITIATIVES

- i) Despite best of efforts, the efficient management of the most critical segment of electricity supply chain is a major challenge. The distribution system would be made capable of delivering 24X7 power supply to the consumers of the state. In urban and sub urban areas, HPSEBL shall install Ring Main System to provide alternate power supply route in case of interruption in supply.
- ii) In Rural areas, the distribution infrastructure would be appropriately and adequately strengthened by HPSEBL. Further, mini grid or off-grid solutions i.e. Solar Domes will also be provided in remote and difficult areas.
- iii) The HPERC shall take care and ensure that all the reasonable and legitimate costs are accounted for in the tariff such that the distribution utility becomes capable of financing the capital expenditure towards improving the quality of supply. The HPERC shall monitor on regular intervals, the performance parameters, specified by it, of the distribution utility to ensure quality power supply.
- iv) According to the HPERC Regulation, 2010 regarding Renewable Power Purchase Obligation (RPPO) and its compliance, HPSEBL is mandated to purchase a minimum percentage of renewable energy from Solar energy resource and Non solar sources to meet solar RPPO and non-solar RPPO. By virtue of these regulations, the RE generator has options available to him;
  - a) to sell power to HPSEBL at HPERC determined tariff or
  - b) to sell electricity generated and environmental attributes (RECs) separately under REC mechanism.
  - c) to sell renewable power through various instruments available in green energy market.

For meeting the non-solar RPPO, HPSEBL has sufficient long term arrangements with hydro generators and for solar RPPO, HPSEBL has tied up a capacity of 105.05 MW out of which aggregate capacity of 90.05 MW (including Rooftop solar power plant ) has already been commissioned. To meet the future solar obligations, HPSEBL shall make suitable long term and short term arrangements through solar power project developers at most competitive rates.

- v) With an aim of reducing T & D losses significantly, HPSEBL shall formulate plans to develop micro grids to be able to supply power in the far flung areas of the state from SHEPs and solar power projects. As per the provisions of National Smart Grid Mission (NSGM), HPSEBL has also envisaged the installation of at least 20 micro-grids ranging from 100 kW to 250 kW (or higher capacities) at various far flung locations by 2025 wherever the reliability of power and grid availability is a challenge.
- vi) Integrated planning shall be done by HPSEBL after proper demand forecast for optimum utilization of the asset in coordination and association with HPPTCL. The inter-state and intra-state transmission and distribution system will be planned in a harmonious and coordinated manner to avoid the stranded assets.

- vii) As of now the T & D losses of HPSEBL are around 12%. Primary distribution system i.e. 11 kV & 11/0.4 kV system has ideally the distribution loss of 3-4% whereas secondary system i.e. 440 V and below with all LT and service lines has losses to the tune of 7-8%. The High Voltage Distribution System (HVDS) would be planned to reduce the HT and LT ratio to 1:1 which presently is 1:2 after carrying out techno-economic analysis. The State Government has set a target of bringing down the T&D losses to single digit by 2024-25. HPSEBL shall move to the concept of Zero LT i.e. High Voltage Distribution System (HVDS) to target reliability of supply and reduction of losses in secondary distribution system. The major works besides HVDS like new express feeders, re-conductoring of overloaded feeders, augmentation of DTRs, change of overhead conductors with AB Cables/ Underground cables etc. would be executed to achieve the objective.
- viii) To reduce the O& M costs and to enhance the operational efficiency, Smart Grid would be implemented in selected towns. Based on the results, it would be further extended to other areas in a phased manner.
- ix) Retirement plan of aging, outdated and antique switchgears/accessories in EHV and HV sub-stations would be prepared for replacement with latest State of art Technology equipment(s) in a time bound manner. The automation of the sub-stations would be given major focus to switch over to unmanned sub-stations with control & monitoring through SCADA.
- x) HPSEBL shall achieve 100% metering of feeders and distribution transformers by December, 2022.
- xi) The work on installation of smart metering has been started in Shimla and Dharamshala smart cities and shall be completed in a time bound manner. The process of identification of total requirement of smart meters to be installed in the State has started. The smart prepaid meters would be rolled over in the entire state in a phased manner, however in first phase the high load consumers and Government connections would be taken up for implementation and would be completed before Dec, 2023.
- xii) The provisions of Consumer Rights Rules 2020 notified by GoI shall be implemented in entirety within a period of one year and all endeavor shall be made to make the electricity related services available to the consumers at their door steps, especially senior citizens.

## CHAPTER-IX GRID OPERATION

- 9.0** Grid operation has become an important issue in ensuring reliability and security of supply to consumers. The grid is expected to cater to a maximum demand of 225000 MW on all India basis by 2021-22 as per 19<sup>th</sup> Electric Power Survey. In view of large scale integration of the renewable resources of energy intermittent nature, grid operation would keep becoming more and more challenging each coming years. The HP grid catered maximum demand up to 2000 MW during the Feb 2020-21 which is likely to increase by 5% during FY: 2021-22.
- 9.1** State Government has declared HP State Load Despatch Centre (HPSLDC) as an independent authority as per the provisions of Electricity Act, 2003 in the year 2018 to discharge role and functions under Section 31 and 32 of the Act including economic despatch of electricity from generating station to load center online real time monitoring and control of electricity supply in the area of supply / state. The autonomy of system operation is ensured by providing its fees and charges through a regulatory mechanism so that it is not dependent on the Government. Towards this, HPERC has framed the regulations for levy and collection of fees and charges by HPSLDC through tariff framework in the State. As per Electricity Act and subsequent notifications the functioning of HPSLDC is required to be ring fenced and completely independent. Technical up-gradation of HPSLDC is necessary to ensure availability of real time data and requisite analytical tools.
- 9.2** The grid operations in the State are being looked after by HPSLDC at inter-state and intra-state level in the state & load despatching by maintaining the frequency and voltage within reasonable limits in-coordination with Regional Load Despatch Centre and DISCOM's Area Load Despatch Centre(ALDC) to maintain the safety and security of the grid. However, ALDC under DISCOM shall carry out the relevant operating directives issued by the HPSLDC to the DISCOM and to assist HPSLDC for safety & security of concerned network.
- 9.3** The system operators have to be equipped and upgraded with State of art technologies with backup control centre to ensure reliability, safety and security of supply with the load variations and variations of intermittent generation, causing fluctuating active and reactive power injection and drawl consequent stability implication. HPSLDC would require ancillary service for active and reactive power balancing, black start services etc. HPERC shall introduce regulation mechanism for ancillary services in the form of battery backup or other means of about 250 - 300 MW or appropriate capacity as needed, to be installed nearer to load areas and to be regulated by HPSLDC.
- 9.4** Protection system mal-operation is one of the leading factors for tripping of the grid elements. An independent Protection Committee shall be asked to take up protection audit at regular intervals to minimize such tripping in the state. The State shall encourage the implementation of schemes such as Automatic Demand Management System (ADMS) and scheme for intra-state deviation settlement, to enhance the security and reliability of the grid. Towards this, HPSLDC is already in the process of implementation of Automatic Demand Management System (ADMS) in the State.
- 9.5** Various measures are required for dealing with the variability of generation of intermittent type of renewable energy sources like expanding of the balancing areas, combined operation of renewable energy sources with conventional generation / storage system and development of market for ancillary services. Further, Deviation Settlement Mechanism (DSM) for inadvertent exchanges and real time markets may need to evolve continuously depending on emerging requirements. Towards this, HPERC has framed DSMs regulations during 2018 and implemented by HPSLDC in the state. To give the effect to these regulations, Government of

India Scheme i.e. SAMAST (Scheduling, Accounting, Metering and Settlement of Transaction in Electricity) in the state has been initiated by HPSLDC to provide all kinds of functions such as scheduling, billing, accounting, settlement of transactions and keeping/maintaining ledgers thereof etc. in respect of exchange / transactions of electrical energy by the various entities in open access to / from the grid i.e. open access customers, distribution licensees (DISCOM), State Government (DoE) and State Sector generating stations, IPPs/ stakeholders in the state.

9.6 With the rapid expansion of the grid to meet the requirements of electric power of all consumers along with integration of renewable sources of energy to the grid, reliability of the grid is becoming a major issue. HPSLDC shall carry out regular studies to assess transfer capability for ensuring reliability and security in the respective control area of the state.

9.7 Forecasting and scheduling of power shall be made mandatory by the HPSLDC with specified margin of error beyond which deviation charges would become applicable. Till HPERC brings out these standards, the CERC standards shall apply by default to help the HPSLDC. The schedule shall be sent by the stakeholders to HPSLDC through online mode.

9.8 SLDC shall make information of Real Time System operation, as specified by the CERC/HPERC, available in public domain through its web-site. Towards this, HPSLDC has provided website <https://hpslhc.com/> in public domain to facilitate the State Entities in HP.

9.9 HPSLDC shall ensure necessary communication and data exchange and supervision/control of the grid under normal and abnormal conditions for which reliable and efficient speech and data communication systems shall be provided by all the users in the state in line with Regulation 4.10.1 of Himachal Pradesh Electricity Grid Code and subsequent amendments to facilitate the same.

9.10 It shall be mandatory for all the generators to facilitate transfer of real time energy data up to the point of interconnection through appropriate media. Beyond the point of interconnection, such communication system shall be developed by STU/DISCOM, as the case may be. All the stakeholders will put in position the communication system before December, 2023. HPSLDC and DoE will ensure the setting up of necessary infrastructure for usage of this data for effective monitoring and control.

9.11 The State Government shall make sure that the generating stations located in the state and bulk power customers are equipped with Availability Based Tariff (ABT) meters with 15 min. /5 min. time block reading capability so as to reduce the market risks, improve grid discipline and optimum utilization of resources.

9.12 HPSLDC shall be modernized to meet the future requirements and personnel shall be provided adequate training opportunities for acquiring necessary skill to efficiently manage the HPSLDC.



## **CHAPTER-X**

### **HIMACHAL PRADESH ELECTRICITY REGULATORY COMMISSION**

- 10.0** The Himachal Pradesh Electricity Regulatory Commission (HPERC) is a statutory organization established on 30.12.2000 under the Electricity Regulatory Commission Act, 1998 (14 of 1998) and started functioning from 6<sup>th</sup> January, 2001. As per Section 82 of the Electricity Act 2003, the Electricity Regulatory Commission established under the Act of 1998 shall be the State Commission for the purpose of the Act of 2003.
- 10.1** In the changing scenario in power sector and with emerging regulatory paradigm, the HPERC has a very significant role to play. The functions to be discharged by the HPERC have been specified under Section 86 of the Electricity Act, 2003.
- 10.2** The National Electricity Policy has set the goal of adding new generation capacity and enhancing per capita availability of electricity per year and to not only eliminate energy and peaking shortages but to also have a spinning reserve as specified by the CEA. Development of the power sector has also to meet the challenge of providing access for affordable electricity to all households in the next five years.
- 10.3** It is essential to promote investments in the power sector by providing appropriate return on investment. It is equally necessary to ensure availability of electricity to different categories of consumers at reasonable rates for achieving the objectives of rapid economic development of the State and improvement in the living standards of the people of the state.
- 10.4** The tariff for supply, generation, transmission, distribution and wheeling of electricity, wholesale, bulk as the case may be are being determined by the State Commission guided by section 61 of the Electricity Act, 2003, the National Electricity Policy, the National Tariff Policy, Tariff Regulations notified by it and the principles and methodologies specified by the CERC. Now the State Commission has to move towards the cost reflective based tariff regime, reduction of cross subsidies, rationalization of tariff structure of various consumer categories and fixation of tariff for prepaid metering.
- 10.5** The electricity purchase and procurement process of distribution licensee, including the price at which electricity is to be procured from the generating companies or licensees or other sources through agreements for purchase of power for distribution licensee is being regulated. The Commission also endeavors to strike a balance between conflicting interests of various stakeholders, provide support to the State Hydro Power Policy, State Solar Power Policy, ensure 24X7 quality power supply to the consumers at reasonable rates, promote transparency, consistency & predictability in regulatory approaches across its jurisdictions & minimize perceptions of regulatory risks, evolving a dynamic & robust electricity infrastructure for better consumers services & power transmission.
- 10.6** With a mandate of providing 24X7 reliable quality power supply to the state consumers at affordable price with 100% accessibility, the Commission shall strive for the implementation of the Electricity (Right of Consumers) Rules, 2020 prescribed by the Central Government.
- 10.7** The electricity generation from waste to energy plants in the state has to be procured by the distribution licensee at the tariff determined by the Commission under Section 62 of the Electricity Act, 2003 in line with the provision made in the Tariff Policy.
- 10.8** Renewable energy sources of wind and solar power are must run plants, the option of two part tariff mechanism particularly in case of medium/long term procurement with hybrid operation of renewable with conventional generation may be considered.

- 10.9** Apart from small hydro and solar power generation including Municipal Solid Waste (MSW) power projects (Refused Derived Fuel (RDF) based projects), the Commission endeavor to facilitate the generation of wind power plant, Biomass projects based on Rankine cycle technology, Non-fossil fuel based co-generation projects, solar thermal power generation, Biomass gasifier based power projects, Biomass based power projects in the state.
- 10.10** State distribution licensee shall identify the distribution network to be strengthened for setting EV charging infrastructure and get it approved from the Commission, who would assign such approval on priority. Commission may allow the aggregators to aggregate demand of several Public Charging Stations (PCSs) by purchasing renewable energy through open access.
- 10.11** A regulatory framework is to be developed for determination of adequate reserve at state level in line with primary, secondary and tertiary reserves identified by CEA for national, regional and state levels to meet the demand at all times even with planned outage, tripping of generating units, variability of generation and fluctuation of load in order to maintain frequency at nominal value of 50 Hz.
- 10.12** In the spirit of National Energy Policy, the Commission shall adopt regulatory process consistent with the policy of gradually moving towards Light Touch Regulation, to be evolved. As good share of power starts being procured on competitive basis, the focus of Commission would shift to limited tariff determination, where Commission should follow performance based cost of service regulations with multi-year tariff as laid down in the National Tariff Policy. The Commission shall ensure compliance to guidelines issued by Central Government under Section 63 of Electricity Act, 2003, where power is procured or transmission pricing is discovered as per such guidelines. In such cases, disputes or claims remaining unresolved would be referred to the appropriate Commission.
- 10.13** The State Commission shall provide for purchase of power on competitive basis either from Power Exchange or through competitive bidding. The State Commission shall focus more on emerging tasks such as market monitoring and surveillance, ensuring resource adequacy, balancing, demand response etc. and incentivizing Energy Efficiency, Demand Side Management and Smart Grid.
- 10.14** The distribution licensee, captive power users and open access consumers are mandated to comply RPPO either by procuring a prescribed quantum of electricity generated from renewable energy sources or through green market or purchasing Renewable Energy certificates. The distribution licensee is also obligated to purchase a certain percent of hydro power from large hydro power station to comply with Hydro Purchase Obligation (HPO).
- 10.15** With the development of electricity market having the provisions towards ancillary services, intra-day and real time electricity markets shall be of relevance towards bringing pumped hydro electric storage as ancillary service.

## CHAPTER-XI

### CHARGING INFRASTRUCTURE FOR ELECTRIC VEHICLES

**11.0** The electric mobility is the buzz word inspired by environmental and climate change concerns. Government of India has launched National Electric Mobility Mission Plan 2020 to promote electric mobility. In the year 2015, Faster Adoption and Manufacturing of Electric Mobility policy was initiated. However, the challenge to faster adoption of electric mobility is lack of Charging Infrastructure.

**11.1** To address the issue of deteriorating air quality of fragile hill ecology of the State due to vehicular growth more than national average, it is important to use cleaner fuels in longer run. Since the state is energy surplus and 90 percent of the power generation is from hydropower, electric mobility has potential to be safe, energy-efficient, eco-friendly and sustainable mode of transport.

**11.2** The State Government shall plan to strategize to promote demand for Electric Vehicles (EVs) through the provision of fiscal and non-fiscal incentives, promote dedicated infrastructure for charging of EVs through the provision of capital subsidies, mandate the use of EVs at the institutional level, starting with public transport and government entities and establish a state EV fund to ensure the effective funding for implementation of the policy.

EV Charging Infrastructure envisages three types of charging facilities, viz. domestic user facility (individual), public charging facility (government facilities, bus stands, public parking and railway stations etc.) and commercial charging facility (roadside, malls, parking stations, fuel stations etc.). There shall also be a number of Direct Current (DC) fast charging stations as well as swapping stations for range extension batteries established in strategic locations in the cities and along the national highways & state highways. It would also be possible to provide the public the list and geographic location of all available swapping stations as a mobile app accessible to all.

**11.3** HPSEBL is the State Designated Agency for setting up charging infrastructure.

**11.4** Depots, bus terminals of HRTC and bus stops shall have charging stations and public parking spaces shall be mandated to have charging stations and all petrol pumps will be mandated to have charging stations & battery banks. At least 1 charging station/ point within every 1 x 1 km grid in three model cities in Shimla, Baddi & Dharamshala, at least 1 charging station (on each side) every 25 km on state highways and at least 1 charging point (on each side) every 50 km on busy national highways in the State is being planned.

**11.5** Charging infrastructure shall be classified as normal and high power charging as per National Standards. Charge point operators and e-mobility service providers shall be promoted and incentivized to set up, manage and operate a network of EV Charging points for semi public or public use.

**11.6** Every public charging station shall have the following infrastructure:

- i) An exclusive transformer with all related substation equipment including safety appliances, if required.
- ii) 33/11 kv line/ cables with associated equipment including line termination etc., if required.
- iii) Appropriate civil works.
- iv) Appropriate cabling and electrical works ensuring safety.
- v) Adequate space for charging and entry/ exit of vehicles.

- vi) Any one or more chargers or any combination of chargers (Fast charging and Slow/moderate chargers).
- vii) DG Set/Solar Power with battery storage to provide stand by charging power in case of emergency.

**11.7** The State Government shall consider fixation of preferential tariff for different users through HPERC by designing Time of Day (ToD) tariff for EV users.

- i) Domestic users.
- ii) Commercial charging station.
- iii) Public charging facilities put up by State or Central Government Utilities.

**11.8** The State Government may introduce a provision to allow injecting power back to the grid from the EV batteries when the grid requires the same, when these vehicles are parked and connected to the charging points. The State Regulatory Commission shall fix the tariff and rules for the energy injection back into grid as well, while fixing tariff and rules for charging the EVs.

**11.9** HPSEBL may create single window system to process expeditious interconnection and installation permissions and inter-operability through solutions like open database and flexibility on charger specifications.

**11.10** The State Government may plan reserving a percentage of parking slots for EVs with charging infrastructure in high volume parking spaces (more than 50 spots).

**11.11** Use of solar / hybrid energy for charging shall be encouraged. Aggregators may be allowed to aggregate demand of several point charging stations to purchase renewable energy using open access.

## CHAPTER XII ENERGY MANAGEMENT

**12.0** The Electricity Act, 2003 recognizes trading as a distinct licensed activity. As per the Act, National Load Despatch Centre (NLDC), Regional Load Despatch Centre (RLDC), State Load Despatch Centre (SLDC), Central Transmission Utility (CTU), State Transmission Utility (STU) and transmission licensees cannot engage in trading of electricity. However, any Company or Corporate or Association or individual that intends to do sale/purchase of electricity and meets the eligibility criteria determined by Central Electricity Regulatory Commission (CERC), can be granted a trading license by CERC. Prior to commencement of Availability Based Tariff (ABT) that came into force in the year 2002-03, trading was through bilateral contracts entered into between a seller and a buyer. Thereafter need was felt for an organized power market to enable price discovery in a transparent manner involving more and more sellers and buyers. Therefore, in 2004, open access was introduced and in 2008 concept of multiple power exchanges was introduced. The power exchanges provide several options for trading like Day Ahead Market (DAM), Real Time Market (RTM) & Term Ahead Market (TAM).

**12.1** Himachal Pradesh is surplus in power as State has taken lot of steps on ground for establishing and commissioning of the hydro projects. Energy availability with its three entities, i.e., HPSEBL, HPPCL and DoE is detailed as below:

**Table 1: Energy Availability with various state entities in HP**

Sr. No.	Utility	Quantum (In MW)	Remarks
1	HPSEBL	2599 MW	i) State equity power in SJVNL-438 MW (Nathpa Jhakri-330 MW & Rampur 108 MW). ii) State's share of royalty power- 152 MW (Power from the 67 hydro electric projects which are directly connected to the HPSEBL System. These Powers are also included in the HPSEBL.
2	DoE	748 MW <sup>^</sup>	14 hydro electric project's State share of royalty power.
3	HPPCL	245 MW	Total 3 hydro electric projects (Kashang, Sainj, Sawra Kuddu) {excluding 12% share of royalty power (which is already included in the share of DoE above) & 1 % LADF} & One solar 5 MW Berra Dol project.
<b>Total</b>		<b>3592 MW*</b>	

\* Hydro Power - 3275 MW, Nuclear Power- 29 MW, Solar Power - 59 MW, Thermal Power - 229 MW

**12.2 Different entities in State for sale/purchase of power**

**12.2.1 Himachal Pradesh State Electricity Board Limited (HPSEBL)**

HPSEBL is the state distribution company (DISCOM) and is responsible to meet the state's load demand. As per the existing energy portfolio, HPSEBL is power surplus in summer/monsoon months and deficit in winter months. To cater to the power supply in the state and keeping in view the market scenario i.e., hydro generation trends, analysis of discovered price on power exchanges, returns on power banking with other states/utilities,

market developments, etc. HPSEBL is currently banking the surplus power in the summer/monsoon months with other utilities through tenders and utilizes banked power in the hydro's lean season i.e., during winter months. HPSEBL sells Renewable Energy (RE) power only through tenders as per availability of quantum generated and after it purchases the power in winter months. In case of day ahead shortage / surplus, HPSEBL purchases / sells the power through Power Exchanges. HPSEBL is constantly innovating in adjusting its strategies in accordance with the changing market regulations and energy mix. HPSEBL is also exercising cross border power trading option.

#### **12.2.2 Directorate of Energy (DoE)**

Currently, Government of Himachal Pradesh, has a share from Royalty and Equity power from hydro, aggregating to 1338 MW in various Central Sector, Joint Sector, State Sector and Private Sector projects executed in the State of Himachal Pradesh. DoE is responsible for the management of the state's share of Royalty & Equity Power. Currently, of 1338 MW, capacity aggregating to 748 MW is being traded in open market through bilateral agreements and power exchanges; 152 MW is being allocated to HPSEBL at the tariff determined by HPERC; and balance 438 MW of the State's equity share of power capacity from SJVN Ltd. projects (Nathpa Jhakri & Rampur Hydro Power Stations) is being allocated to HPSEBL. Equity power (NJHPS & RHPS), energy and payments are being settled directly between HPSEBL and SJVN Ltd.

DoE sells the power in bilateral mode through Discovery of Efficient Electricity Price (DEEP) portal having electronic-Reverse Auction (e-RA) keeping in view the market scenario for the period from May to September from out of available Round the Clock (RTC) power from hydro and balance available power is being sold at Power Exchanges. Non-RTC power (due to lean water flows in hydro projects) from October to April is sold in power exchanges and to HPSEBL as per HPERC determined tariff. As DoE handles the share of royalty power with no scheduling rights on the generation, it poses a challenge in energy trading especially in making long term commitments and availing the benefit of differential market rates during odd hours. The share of royalty power will go up in upcoming decade with increasing installation of hydropower in the state (beyond meeting the state demand). Given this, DoE is planning the measures as under:

- i. Evaluating options to develop innovative models like virtual power plants connected with flexible assets (like other Pumped Storage Project and / or Battery Energy Storage Solutions) to overcome the issues posed due to uncertainty of availability of royalty power and to avail the benefit of such power optimally. This will allow the state to pass on the benefits to the consumer.
- ii. Evaluating proposal to set up a trading desk that can efficiently handle the power trading being done by the state.
- iii. Exploring the possibilities to have a strategy to allow coordinated Despatch of power from all hydro-power projects in the state. This will facilitate optimal use of hydro power as a peaking resource facilitating energy transition in India.

#### **12.2.3 Himachal Pradesh Power Corporation Ltd. (HPPCL)**

HPPCL is the State Generation Company having three commissioned HEPs with an aggregate capacity of 276 MW while HEPs of 698 MW capacity are under implementation. HPPCL has not executed any PPA with HPSEBL as the state DISCOM already has sufficient power to cater to the state's demand. HPPCL is involved in the sale of power with capacity aggregating to 240 MW (after excluding State's share of Royalty 36 MW) in bilateral mode or through

DEEP portal for the period May to September and balance available power is being sold at power exchanges. Non-RTC power from October to April is sold in Power Exchanges. HPPCL's hydro projects have 3-4 hours of storage capacity with scheduling rights on generation, which allows it to manage the scheduling of power generated more efficiently. Further, HPPCL also sells power from its Solar Power Plant at Berra Dol having a capacity of 5 MW to HPSEBL at regulator determined tariff. In this context, HPPCL will endeavor to:

1. Develop innovative power trading products,
2. Developing hybrid PPA (short term, medium term, long term) which can include:
  - a. Capacities tied partly in PPA and partly merchant power sale (peak, off peak with seasonal variations);
  - b. Hydro bundled with other renewable and conventional power generation sources;
  - c. Mix of both bulk and retail consumers
  - d. Any other possible combinations.

### **12.3 Options available for Sale/Purchase of Power in India and in Himachal Pradesh.**

Various entities of State Government or Single Entity proposed shall take recourse to various means of trading power depending upon availability of stable power, market trends, demand etc. The recourse to various modes listed below shall be taken after due diligence.

#### **12.3.1 Bilateral power purchase agreement on Long/Medium/Short Term Basis**

The power markets are available in India for sale/purchase of power i.e., long term, medium term, short term, and balancing power markets. These all co-exist. The PPA signed by parties on long/medium term basis are approved by the concerned Regulators. Bilateral agreements between DISCOMs and generators are taken up through DEEP Portal mostly.

##### **12.3.1.1 Discovery of Efficient Electricity Price (DEEP) Portal**

DEEP is an e-Bidding and e-RA portal for procurement of short/medium term power by DISCOMs. The portal is an initiative of the Ministry of Power, GoI with the objective to introduce uniformity and transparency in power procurement by the DISCOMs and at the same time promote competition in electricity sector. Ministry of Power vide its notification dated 30.03.2016 has made mandatory for utilities to buy power through tenders on National e-Bidding Portal and the bidders must compete in the Reverse Auction. Upon inclusion of e-RA, the lowest bidder is issued a Letter of Intent (LoI) on buyer's discretion. The whole power market is now buyer's driven which has led to lower tariffs.

At present DEEP e-bidding portal, does not have a provision for sellers to float the tenders. Therefore, to ensure tie-up of surplus power with HPSEBL, it floats open tender for sale but the response is not always adequate because most of the purchasers buy power through DEEP portal only.

During May to September, DoE and HPPCL participate (to sell power) in the buy-tenders (for procurement of power) floated by various utilities on DEEP portal. During lean season (winter months), HPSEBL invites buy-tender (for procurement of power) on DEEP Portal as per its requirement.

### **12.3.2 Power Exchanges**

Indian Power Exchanges are electronic system-based power trading exchanges, regulated by CERC. Two power exchanges in India are IEX-Indian Energy Exchange (started its operations on June 2008) and PXIL- Power Exchange India Ltd. (started its operations on October 2008). Power Exchanges pioneered the development of power trading in India and provide electronic platforms to the various participants in power market, comprising of DISCOMS, project developers, power traders and open access consumers (both industrial & commercial). These exchanges have launched a range of products and are broadly classified as:

- i. Day-Ahead-Market (DAM) & Green Day Ahead Market (G-DAM).
- ii. Real-Time-Market (RTM)
- iii. Term-Ahead-Market (TAM) and Green-Term Ahead Market (G-TAM)
- iv. Renewable Energy Certificates (REC)

DoE, HPPCL and HPSEBL trade their power in DAM and RTM market. Further, HPSEBL also receives REC against available renewable energy generation when this renewable energy is not sold under the Bilateral Mode. These RECs are traded in the Power Exchanges.

### **12.4 Proposed Energy Market Developments:-**

- i. Market Based Economic Despatch (MBED).
- ii. Renewable/Hydro/Green Hydrogen Purchase Obligation Trajectory (RPO) to be made mandatory.
- iii. Electricity Rules 2020 (Rights of Consumers).
- iv. CERC regulation (Sharing of Inter State Transmission Charges and Losses) 2020.
- v. Green open access product for retail consumers through traders/directly.
- vi. General Network Access (GNA) guidelines enabling efficient usage of infrastructure.
- vii. Stringent Deviation Settlement Mechanism linked to ancillary services and related matters.

In the fast-changing scenario of energy market, challenges arise for the sale and purchase of the energy and management of Deviation Settlement Mechanism (DSM) / Unscheduled Interchange (UI), different charges like Long Term Open Access (LTOA), Short Term Open Access (STOA), Trading Margins and miscellaneous charges etc. These can be handled better through pooling / sharing the resources like energy, infrastructure, man power etc amongst the various entities within the state. For the state, this can be achieved by common energy management through a Single Entity as being followed by other states.

### **12.5 Proposal of Energy management in the State through a Single Entity:**

Presently DoE, HPPCL and HPSEBL are managing their power independently in the open market through Bilateral & Power Exchanges. All the three entities have surplus power in summer / monsoon months while HPSEBL is in shortage of power during winter months. HPSEBL manage shortage in winter months through banking / purchase from bilateral / power exchange, while DoE and HPPCL are involved only in trading of Non - RTC power in exchange. Directorate of Energy and HPPCL manage their deficit of power during forced outage/Real time schedule through RTM mode while HPSEBL manages through RTM, Un-Requisite Surplus (URS) and regulate its plants at flexible load.

However, due to an increase in open access transmission charges since 2020, winter trading in exchange is not economical for DoE & HPPCL. Given this, the State Government



accordingly proposes to set up a mechanism for optimization of energy management through a Single Entity. This will diligently manage the power of these entities without affecting the interest of individual entity. The Single Entity will settle the modalities between the entities before starting the power transaction at common platform.

As per IEX data FY 2021-22 traded volumes during June, July & August in DAM was 4316 MUs, 4247 MUs & 6660 MUs respectively while during this period State Government (DoE, HPSEBL & HPPCL) extra power was approximately 833 MUs, 1055 MUs, 1049 MUs respectively. So the State contributed around 15-20 % share of energy traded in IEX. As per experience through trader or directly, the State is like price receiver in exchanges. The handling of collective volume by single entity will give better bargaining power since all three entities are presently quoting separate rates.

#### **12.5.1 Roles And Responsibilities of Single Entity:-**

##### **I. General:**

- i. Surplus power will be traded for revenue maximizing and shortage of energy will be addressed through procurement / internal management of power.
- ii. All the decisions regarding power purchase / sale, power requirement / disposal will be taken through single entity based on due diligence.
- iii. Single entity can secure services (short/long term as deemed) of battery storage / large scale entities with adequate demand response capabilities for balanced portfolio, energy arbitrage, peak management and as virtual pump storage.
- iv. State will be better prepared for the challenging trading scenarios like MBEDs, Future & Options markets.
- v. Optimum utilization of man power and resources will be ensured.
- vi. With the use of rapidly changing technologies and introduction of algorithms and Artificial Intelligence in system and energy management, revenue optimization will be ensured.
- vii. With global warming, changing climate, weather forecasting & energy forecasting is becoming challenging, so common resources can be better utilized by better management. Single Entity will help in energy forecasting for all the hydro and other renewable energy projects so that State could be better prepared for meeting future needs.
- viii. It will help all the stakeholders by optimization of resources and will optimize revenues / finances.

##### **II. DISCOM:**

- i. All the power purchase/sale agreements, billing, payments, DSM/UI, LTOA/STOA charges and other charges settlement etc. will be handled by the single entity.
- ii. Load management by considering supply schedule & demand of the state on yearly basis/day ahead basis/real time basis along with load forecasting of energy can be managed more efficiently.
- iii. Every year tenders are floated on DEEP portal by the DISCOMS from all over India for various volumes of power on RTC Basis on medium/short term basis. This entity may participate in these tenders in optimum way.
- iv. In the light of Consumer Rights Rules, 2020, this (single entity) will help DISCOM in better supply/demand management. Single Entity will help in synchronization of the DISCOM load with all generators.

- v. Promotion of the electrical energy usage like electric vehicle infrastructure, induction heating/cooking so we can move towards total electrification of life.
- vi. Provision for Independent agencies like Distribution System Operators (DSO) which will be knowledge based Organization will explored.

### III. Generation:

- i. Hydroelectric projects with pondage of 3-4 hours reservoir/peaking capacity will also be useful to the state during sudden change in power demand, as these plants can be operated at flexible load as per grid requirement which may further result into reduction in DSM/UI charges.

### IV. Transmission:

- i. Optimum use of transmission network shall be ensured.
- ii. Due to no PPA of HPPCL, there is no clarity on the off-takers, HPPCL is unable to finalize its transmission corridors for evacuation of power, whereas LTA Agreement with HPPTCL has been signed for most of the HPPCL projects.
- iii. Strong Transmission network will enable access to Indian Energy Market.

### 12.5.2 Policy support measures for the Single Entity Model:

- i. **Inter-state point of connection charge:** The inter-state transmission policy in 2020 be revisited to streamline the allocation of transmission costs to certain states, including HP that are bearing a disproportionately high share of these costs without any amelioration to capacity for export/import. This has a significant bearing on trader (both export and import) of power for these states and a hydro-rich state like HP that has surplus power during summer peak months is particularly affected having implications for the regional/national grid;
- ii. **Inter-state transfer capacity:** Although the state has significant potential for adding clean power that would eventually come under the purview of the Single Entity to trade these facilities, a commensurate increase in inter-state transfer capacity is pivotal. An economic transmission development framework needs to be prepared and put in place for expansion of the interconnection capacity so that the generation capacity can be utilized to its full potential. This will require bringing any intra-state transmission upgrades needed in tandem with CERC's 2018 Regulation on "Planning, Coordination and Development of Economic and Efficient inter-state transmission system by Central Transmission Utility and other related matters";
- iii. **Generation planning:** The entire portfolio of generation including incumbent state-owned hydro and non-hydro, central sector allocations and IPPs as well as planned capacity in all of these categories will require careful planning that will need to be conducted to ensure a least-cost development of the portfolio. This will require inter alia considerations of state power system reliability, security criteria and policies including DISCOM load obligations, maintenance policies and any limits on import and export. The planning task also be shaped by ensuing market changes including introduction of a MBED regime, ancillary services market and how these in turn influence design and capacity considerations of hydro and non-hydro projects.
- iv. **Policies governing contract portfolio including market exposure:** One of the functions that the Single Entity will need to develop relates to the "Trading and Risk Management" of the portfolio. This would in essence cover the mix of long-term, medium-term, short-

term, and spot (DAM and RTM) exposure of the generation portfolio. Each of these segments has its own pros and cons that will need to be balanced to form a portfolio of contracts and spot market sale/buy strategy that meet the objectives in the trading and risk management framework. There will be a myriad of factors that range from fixed cost recovery to dry year risk and spot price volatility risks. The policy on market exposure should govern how various form of contracts should develop a rolling forward basis to balance these requirements and risk considerations.

- v. **Policies governing Despatch of generation:** Finally, despatch of the single entity portfolio through ahead of and on the day/hour through market and non-market avenues for energy as well as ancillary services will need to bring to bear all the aforementioned policies and consideration. If part of the capacity is offered on the energy market, for instance, the bids need to reflect the contract portfolio and risk creation adopted by the entity. The rest of the capacity will also need to be scheduled to meet contractual obligations including that for any ancillary services. Support prices and revenue from the portfolio need to drive the operation of the assets and in turn determine new assets that need to be created overtime. Firm capacity, storage, frequency and voltage control services inter alia are going to be important attributes as the rest of the country increasingly sees penetration of solar and wind over the coming years at an unprecedented pace. Firm capacity contracts will earn a premium, storage even if for a few hours will earn a significant premium during evening peak and all ancillary services price will also be rendered reasonable value in future. Despatch of generation from the state through the single entity may recognize all of these value proportions collectively across all the assets.

## **CHAPTER XIII**

### **ENERGY CONSERVATION, ENERGY EFFICIENCY AND ENERGY CONSERVATION BUILDING CODE**

**13.0** Energy efficiency is crucial to country's goal to provide its people with reliable, affordable, secure and sustainable access to energy. Strong energy efficiency policies are vital to achieving key energy policy goals and "multiple benefits" of energy efficiency such as reducing energy bills, addressing climate change and air pollution, improving energy security, and increasing energy access. A number of policies and programs aimed at conserving energy, improving energy efficiency and managing energy demand have been implemented in the country in recent years. Energy efficiency also includes energy conservation and Demand Side Management (DSM). Potential saving because of energy efficiency has been estimated at 15% to 30% of the total energy consumption in different sectors such as agriculture, residential, commercial and industry. A number of policies and programs to increase India's energy efficiency have been implemented in recent years.

**13.1** Government of India enacted Energy Conservation Act in 2001 followed by setting up of Bureau of Energy Efficiency (BEE) in 2002 to assist in developing policies and strategies emphasizing self regulation and market principles. The functions mainly included specifying norms for processes and energy conservation standards for equipment/ appliances, labeling them & ensuring their availability, reviewing energy intensive industries, directing to get conducted energy audit by accredited energy auditor at specified time intervals, prescribing energy conservation building code for efficient use of energy and its conservation etc. BEE covered spectrum of sectors for implementation of energy conservation activities spreading across Heavy, Medium and Small Industries, Residential & Commercial buildings, Transport, Construction, Cement, Textiles, Chemical, Steel, Hospitals, Malls & schools, street lighting and agricultural water pumps, showcasing of model energy efficient villages. BEE is the Nodal agency for implementing such policies and programmes and also channelizes the Multilateral and Bilateral Funding at central and state level for this purpose.

#### **13.2 Creation of SDA**

**13.2.1** In 2010, BEE has nominated Directorate of Energy as a State Designated Agency (SDA) for implementation of different schemes of Ministry of Power, Government of India and State Government in the State. This agency will act as dedicated State Energy Efficiency Agency (SEEA) similar to BEE at GoI level.

**13.2.2** BEE provides financial assistance to SDAs in two major components in order to build and strengthen the institutional and financial capacities and capabilities for undertaking energy efficiency activities in the state, as mentioned below:

- Providing financial assistance to SDA to coordinate, regulate and enforce efficient use of energy and its conservation.
- Contribution to State Energy Conservation Fund (SECF).

**13.3** The SDA Himachal Pradesh has SECF supported by BEE and State Government. Mandate of SECF is to design and promote State's specific energy conservation programmes as under:-

- i. Energy efficiency improvement projects related to Energy Conservation, to conduct Energy Audit and manage Energy Efficiency projects of Consumers.
- ii. To organize demonstration project or Pilot Projects on Energy Conservation, improving energy efficiency of equipments, appliances and process systems.

- iii. To promote research and development in the field of Energy Conservation and to promote the use of energy and efficient process for the equipments, devices and systems.
- iv. To provide matching grant whenever required to the centrally sponsored schemes and BEE schemes & programmes implemented in the State.
- v. To meet the expenses incurred by the SDA for implementing the provision for training of designated personnel and engaging specialists for efficient use of energy and its conservation as well as developing energy resources of state as necessitated from time to time and meeting any expenditure for development of fund.
- vi. The State constituted SECF rules during 2011 for the management of the fund. Further, the SDA executed the various BEE schemes/ programs through approved Annual Action Plan.
- vii. To encourage concerned agencies in the State to replicate successfully demonstrated Energy Efficiency technologies / projects on large scale.

### **13.4 Energy Efficiency Flagship Programmes and its implementation by SDA Himachal Pradesh**

#### **13.4.1 State Partnership for Energy Efficiency Demonstrations (SPEED)**

Under this Scheme of BEE, the project of 100 Government Schools in the state and Himachal Pradesh University for retrofitting of inefficient equipments has been completed. The SDA has vision for capacity building of youth/students in the state in terms of energy conservation. Formation of energy clubs in schools/universities is in process.

#### **13.4.2 Model Energy Efficient Village Campaign**

Under this scheme of BEE, villages are considered for retrofitting of inefficient street lights and energy efficient pumps for making model villages along with other initiatives of other departments such as Rural Development; Public Works and Jal Shakti and HPSEBL. SDA selects the villages in rural areas for demonstration purpose to promote the use of energy efficient equipments especially in rural areas.

#### **13.4.3 Energy Conservation Building Code**

- i. Development of Energy Conservation Building Code (ECBC 2017) at state level as per Energy Conservation Act 2001; for commercial buildings.
- ii. Amendment of National Energy Conservation Building Code to suit regional and local climatic conditions of state.
- iii. ECBC Cell was established in the year 2017 in SDA, Himachal Pradesh for the preparation of State specific ECBC and implementation of energy efficiency in buildings sector in the State.
- iv. SDA, Himachal Pradesh has supported in passing of legislation at state level for making compliance process mandatory for commercial buildings.
- v. State has notified the Energy Conservation Building Code & Rules 2018 with state specific amendments in National Energy Conservation Building Code -2017 suiting local climatic conditions for commercial buildings having built up area of 750 sq m. or more.
- vi. 23 ECBC compliance demonstration building projects have been taken up by SDA & recommendation reports have been communicated to concerned stakeholder-departments for ECBC implementation.

- vii) Inclusion of energy efficient materials in HPPWD Schedule of rates is completed.
- viii) 39 capacity building training programs have been conducted across the state to spread awareness & to train relevant stakeholders on HPECBC- 2018.
- ix) Hand holding support has been provided to development authorities in making Energy efficient buildings as per HPECBC-2018.
- x) Capacity Building Programmes for relevant stakeholder departments to sensitize them on energy efficiency for long term impact on National energy efficiency goals as per National Mission on Enhanced Energy Efficiency. The stake holder departments such as HPPWD, HIMUDA, TCP and ULBs/UDs etc. through which this energy conservation code is to be implemented have been imparted training.
- xi) GoI launched ECO Niwas Samhita 2018 (ECBC-R Part-1) in 2018 to push for energy efficiency in the residential sector, aiming at promoting design and thermal comforts of homes including apartments and townships.
- xii) SDA is in process to make state specific amendment in ECO Niwas Samhita 2018 (ECBC-R Part -1) with respect to residential buildings having Plot area  $\geq 500$  square meter and its notification for implementation in the state.
- xiii) Energy efficiency label for residential buildings is a vertical of Part-2 of Residential Energy Conservation Building Code and aims to provide a bench mark to compare one home over the other on the energy efficiency standards so as to create a consumer driven market transformation solution for energy efficiency in the housing sector. With the implementation of energy efficiency label for residential buildings, energy saving is estimated to be up to 40% over traditional houses with annual saving of 90 billion units by the year 2030.

#### 13.4.4 Perform Achieve & Trade (PAT)

- i) Under the National Mission of Enhanced Energy Efficiency (NMEEE) of Government of India, the Perform, Achieve & Trade (PAT) scheme is employed at national and state level to reduce carbon footprints in the large scale industries.
- ii) SDA Himachal Pradesh has taken up various activities under this scheme as under:
  - a) The SDA has executed PAT scheme in the state in Cement, Textile & Paper & Pulp Sector successfully.
  - b) Under PAT Cycle-I, nine Large Scale Industries (Designated Consumers) in the field of Cement & Textile have achieved their targets and saved 20657 tonnes of oil equivalent energy as of now.
  - c) Under PAT Cycle-II 13 Designated Consumers in the state are covered.

The targets of specific energy consumption for such consumers are fixed by GoI and based on that consumers have to meet the target and comply with the set target.

### **13.4.5 Demand Side Management (DSM) Scheme**

- i) DSM is a flagship programme of the BEE, DSM is established as one of the important tools to reduce demand at the peak hours for deferred investment towards achieving peak load requirement, energy conservation and saving in cost of power. The Standard & Labelling programme for appliances and equipment was launched for 21 equipment/appliances, i.e. Room Air Conditioners, Tubular Fluorescent Tube Lights, Frost Free Refrigerators, Distribution Transformers, Induction Motors, Direct cool Refrigerators, Electric storage type geysers, Ceiling fans, Colour TVs, Agricultural Pump Sets, LPG Stoves, Washing Machine, Laptops, Ballast (electromagnetic and electronic), Pedestal ACs, Office automation products, Diesel Generating sets & Diesel Pump Sets, under DSM scheme.

**13.5** The State Government has notified mandatory use of BEE Star labelled (with minimum star rating) Motor Pumps, ISI / BIS, Market Power Capacitor, Foot / reflex valves in agriculture sector. Agriculture DSM has several benefits to offer as reduction in overall demand, improving efficiency of water extraction through pump sets and reducing subsidy burden of State Governments. municipal demand refers to consumption of electricity by street lights, ground water extraction/pumping, sewage treatment, public buildings etc. The DSM scheme is being regulated at state level by SDA, Himachal Pradesh.

**13.6** A large scale bulk procurement programme for LED bulbs called UJALA Scheme has been conducted by public sector company Energy Efficiency Services Ltd (EESL) at national level.

**13.7** Bachat Lamp Yojna programme is another step towards realizing the vision of an energy surplus India. The objective of this scheme was to target replacement of 400 million inefficient incandescent bulbs with Compact Fluorescent Lamps (CFLs) by leveraging the sale. The funds for this scheme was provided by the Clean Development Mechanism (CDM), a carbon trading scheme established under Kyoto Protocol.

### **13.8 Small and Medium Scale Enterprises (SME)**

- i. The SDA vide notification No.2526-53 dated 22/06/2015 has launched an incentive scheme for promotion of the energy conservation and efficiency in all the Small, Medium Enterprises (SMEs) of the state having connected load more than 100 KW to conduct energy audit with the help of an empanelled and accredited Energy Auditor with SDA/BEE and 6 SMEs have responded in this scheme.
- ii. The awareness workshops have been conducted in Industrial Clusters of Himachal Pradesh in Kala Amb (Sirmaur) ; Parwanoo (Solan) ; Baddi Barotiwala (Solan) and Una.

### **13.9 National Programme on Energy Efficiency and Technology Up-gradation of MSMEs**

The BEE has prepared twelve inspirational videos of successful Entrepreneurs in Internet of Things in SMEs; Installation of Solar Thermal in steam generation; Air pre-heater; Compressed Air Control System; Economization in Boiler; Energy Conservation in Compressed Air Line Ring Main; Pre-heating kiln for raw material pre-heating; Real-time monitoring system; Energy Efficient vacuum pumps; Heat recovery system; PLC based Automation and Control and back pressure micro turbines for power. These videos have been shared with departments of the state and stakeholder industries and associations during December, 2019. This initiative will encourage all such SMEs/MSMEs to mitigate the demand by replacing the inefficient equipments with the star label equipments.

### 13.10 Tasks being taken up under SDA

- i. To conduct an Energy Audit of HPMC food plant at Parwanoo and Jarol.
- ii. To promote E-Autos, IIT Mandi has shown interest in this field and is doing R&D work in this regard.
- iii. To include ECBC provision in TCP bylaws through Town & Country Planning Department for effective enforcement of HP ECBC 2018 in the State.
- iv. To make State specific amendment in ECO-Niwas Samhita 2018 of GoI (Building Code for Residential Building having plot area  $\geq 500 \text{ m}^2$ ) aiming to promote design and construction of homes including apartments and townships to give the benefits of energy efficiency to the occupants and its notification for implementation in the state.
- v. Capacity Building of relevant stakeholder departments of the state regarding implementation of ECO Niwas Samhita & ECBC.
- vi. Demonstration building projects to be taken up from stakeholder departments to make them ECBC & ENS compliant.
- vii. Establishment / support to start labeling agency for energy efficiency, energy auditing of DISCOM, DoE & HPPCL.

### 13.11 Areas being covered under SDA:

- i. To promote the use of E- Vehicles in the state.
- ii. Energy Auditing of existing government buildings having built up area  $\geq 750 \text{ m}^2$  to come up with report towards reduction of energy losses and make them energy efficient structure with the active (physical & financial) participation of stakeholder department.
- iii. Construction of a Net- Zero / Super ECBC demonstration building at Shimla with state of art technologies.
- iv. To associate with technical universities for making ECBC & ENS as a part of curriculum for students of relevant stream.
- v. Capacity Building and encouragement of stakeholder department officers, private architects and engineers of the state for upgrading their skills to qualify as Certified Building Energy Auditor from BEE.

### 13.12 Vision

- i. The state has large hydro potential in the state. The solar power projects have also started to come up. The State Government can save energy without installation of additional capacity. The large share of energy conservation in the state is going to be catered through building sector. The optimum utilization in these sectors with improved star rating of energy efficient technology may improve profile of the state. The targets may be set for conversion of conventional vehicles with electric application to reduce the hydro carbon bill of state considerably. As of now, 15% target has been set by the state for electric vehicles till 2025. This may be increased up to 50% till 2030. The electricity application is going to increase at least three folds as compared to present scenario. The emphasis will be on how to reduce



the consumption of energy in micro, small, medium and large enterprises in the industrial clusters of the state with the application of improved energy efficiency measures in software application and processes. The emphasis is also needed to rope in the youth at school, college and university level by involving teachers and R&D activities. The financing mechanism to fund the energy conservation projects of the individuals, groups and institutions will play main role in this sector.

- ii. The emphasis is to strengthen the structure of SDA by deploying experienced professionals to achieve the national objective for energy efficiency in various sectors of economy, quality and efficient services and to evaluate various indicators and objectives such as: relevance, effectiveness, efficiency, impact and sustainability of various schemes and policies.

**CHAPTER - XIV**  
**SAFETY & QUALITY ASPECTS OF HYDRO ELECTRIC PROJECTS,**  
**DAM SAFETY, DISASTER MANAGEMENT & RISK REDUCTION**

**14.0 Safety & Quality aspects of Hydro Electric Projects & Dam Safety**

**14.1** An Authority for Hydro Electric Project Safety, Quality Control & Water Management at Directorate of Energy, Government of Himachal Pradesh was constituted by the State Government Notification No. MPP-B(91)-1/2013 dated 05.08.2013.

**14.2** This Authority has been entrusted with roles and responsibilities for developing monitoring mechanism for the safety, quality control, management of water flows of HEPs, ensuring long term generation capacity and residual life of hydro projects in state.

**14.3** The Authority shall visit the project sites, after studying and analyzing the information supplied by the project developer preferably on a quarterly basis during construction stage, for inspection in respect of quality, safety, environment management, e-flow, emergency preparedness, regulatory environment to ensure project developers accountability at site, inter-project disputes if any.

**14.3.1** During construction of the project, if the inspection team so deputed by DoE notices any deviation in relation to the approved norms including the size and location of various components such as Diversion Structure, Water Conductor System, Penstock, Power House, Electro-Mechanical installations etc., a report shall be sought from the project developer to explain the reasons of such deviation. The inspection team shall examine the report so received and analyse each deviation noticed and clearly determine the reasons thereof including the compelling circumstances, such as geological surprises, designs constraints, environmental and local issues etc., if any, and make a comprehensive report.

The deviations undertaken without any compelling reasons or with mala-fide intentions shall invite levy of penalty to be computed by DoE in each case subject to maximum of the cost in proportion to the deviation of the respective components apart from imposing appropriate cost on the project developer in consonance with the adverse impacts on social or community infrastructure.

Provided where the deviation is such that it affects or encroaches upon the domain of the upstream or downstream projects in any manner, the State Government may cancel the allotment of project after affording the opportunity of being heard,

Provided further that State Government may, depending upon the circumstances of each case, direct the project developer to restrict to particular domain apart from levying penalty as laid down in the preceding Para.

**14.3.1** If at any stage it comes to the notice of any authority of the State Government that the project is being run beyond 10% or the prescribed limit of the rated capacity laid down, entire such energy generated beyond such limit shall be liable to be forfeited in favour of State Government. It will be mandatory for the HPSLDC to report such deviation to DoE. DoE will take further steps to manage the forfeited energy and issue further direction to HPSLDC and developer as the circumstances demand and to ensure that safety of the hydro power project is not compromised in any manner.

**14.4** The Authority shall visit the power stations during O&M stage for annual quality, safety audit and Dam Safety audit required under the CWC guidelines.

**14.5** The Authority shall conduct the mandatory inspections of commissioned Projects to ensure long term generation capacity and residual life of hydro power projects during 10<sup>th</sup>, 20<sup>th</sup>, 30<sup>th</sup>, 35<sup>th</sup> and 40<sup>th</sup> years of operation.

**14.6** The project developer shall be bound to adhere to the compliances as recommended by the Authority within stipulated time period failing which following actions shall be taken.

a) If such inspection finds that the project capacity or life is being undermined by inadequate maintenance and there is severe threat to property and life, the Authority will seek remedial measures from the project developer. If remedial measures are not complied in stipulated time then Authority shall take action against the project as per the norms prescribed.

b) In case, any violation is reported as per the Disaster Management Act, 2005, the Authority shall forward the case to concerned DDMA & SDMA for taking appropriate action under Disaster Management Act, 2005.

c) If life of the project is compromised then action as per the relevant provisions of this policy will be taken.

**14.7** The Authority is entrusted with the responsibility of acting as Dam Safety Cell to carry out Dam Safety programme in accordance with standards / guidelines laid down by Dam Safety Organization of Central Water Commission (CWC) and recommendations of Dam Safety Monitoring Directorate, CWC, Government of India.

**14.8** Directorate of Energy is also the Dam Safety Organization (DSO) of the State. Himachal Pradesh was nominated as 30<sup>th</sup> member of National Committee on Dam Safety (NCDS) in the year 2015. Being DSO, the annual Dam Safety Audits of all these Dams after the Pre & Post Monsoon safety inspections / audits by respective dam authorities through their Dam Safety Committee are ensured. Implementation of latest guidelines and updated manual is also ensured by DSO from all dam authorities.

**14.9** A Dam Safety cell will be created under DoE to be headed by Chief Engineer (Civil) for time bound implementation of Dam Safety Programme covering various aspects in accordance with standard guidelines as specified by Dam Safety Organisation of CWC and will carry out all such programmes as specified by National Committee on Dam Safety (NCDS) from time to time. This cell will also be entrusted, the responsibility of safety audit of various Hydro-electric Projects commissioned or under implementation in the State.

**14.10 Disaster Management and Risk Reduction:**

**14.10.1** Disaster Management and Emergency Preparedness Plans are necessary to be prepared and implemented in respect of hydro power projects to counter the emergency situations threatening dam safety and planned expeditious & effective response in the situation including advance warning system. The aspects of disaster risk reduction include; disaster mitigation, early warning, disaster preparedness, recovery and support to livelihood.

**14.10.2** Any slight disruption in operation of energy pushes life out of gear and halts most of economic activity. A robust risk guard system is needed to be in place to minimize if not eliminate the risk of disruption due to human error / sabotage, operational hazards, cyber security necessitated because of increasing technological interventions, and natural disasters etc.

In order to manage risk aiming to obviate disruption suitable measures for reduction of risks due to disasters are necessary to be in-built into planning, design, construction and operations of power supply chain by following the guidelines issued by Government of India in this regard. If at all a disruption is caused, system needs to respond quickly to manage disaster or crisis for recovery within shortest possible time.

**14.10.3** Micro-grids with distributed generation from solar, wind or small hydro projects are to be used to supply electricity in remote areas having no access to main grid to improve reliability and disaster risk reduction. State is envisaging micro-grids with capacities ranging from 100 kW to 250 kW (or higher capacities) in its upcoming schemes and also exploring to ensure that system of micro-grids is also implemented in the important installations such as hospitals, communication centers, utility centers etc. where the supply of power is of paramount importance.

**14.10.4** The State Distribution Utility will also explore the possible islanding of distribution system into multiple micro-grids having distributed generation during snapping of communication and damage to infrastructure due to natural disasters. The distribution system strengthening in urban areas by installing Ring Main System of power supply to provide an alternate route if any interruption from one feeder is experienced.

**14.10.5** The operation and integration of different sources of energy, transmission of energy from plants, grid operation and distribution network is to be carefully planned and executed to mitigate all perceivable disruption risks. Besides the above, the capacity addition as planned, is to be delivered making it imperative to avoid and minimize disruptions during the construction of projects, transmission and distribution networks. It is utmost necessary in difficult geological and topographical conditions of Himachal Pradesh.

**Guidelines for ensuring presumptive measures in respect of above aspects in HEPs:-**

- a) The project developer shall submit the quarterly reports on quality and safety measures undertaken / adopted, supported with documentary proofs in the form of photographs, videography and test reports etc. for the physical and financial progress achieved both as hard and soft copies.
- b) At the start of construction, the project developer shall submit the documents on Quality plan and Safety measures to be adopted at site indicating the procedure, organization charts depicting the hierarchy of personnel deployed for Safety, QA and QC with their designated role both internal and an independent third party. The third party inclusion is particularly required in respect of hydro-mechanical components (Gates, Hoisting Arrangement etc.), Steel Liner & Penstock w.r.t. Ultra-Sonic/ Radiographic, DPT (Dye Penetration Test), Spectroscopy and Hardness Test etc. and for Electro-mechanical components. Important design parameters/specifications for civil works shall also be submitted.
- c) The project developer shall submit the inventory of hydro mechanical and electromechanical equipment with manufacturer manuals indicating the specifications to be followed strictly during construction, Operation & Maintenance stage.
- d) The project developer shall maintain the assets of the project in a condition that would ensure rated efficiency of the project and residual life of civil, mechanical and electro-mechanical components at any point of time.

- e) Every large dam authority will constitute a Dam Safety Committee for their respective dam. The pre & post monsoon safety inspection/ audits shall mandatorily be conducted by respective dam authorities through their Dam Safety Committee as per set CWC norms and format.
- f) Based on pre & post monsoon report of each large dam, DSO Himachal shall conduct annual dam safety audit of each dam.
- g) Every large dam authority shall prepare and regularly update Disaster Management Plan (DMP) in accordance with the latest format and parameters of National Disaster Management Authority (NDMA) & CWC for its implementation by taking into consideration the different flood eventualities, cloud bursts, Glacial Lake Outburst Flood (GLOF) or any kind of natural calamity at various stages of construction and operation of a project and their mitigation measures.
- h) Every large dam authority shall install advance warning and forecasting system and their installation will be mandatory.
- i) Each dam authority shall regularly update required mandatory data/information on SDMA web portal of dam / reservoir status with regard to dam detail & information of dam safety parameters. Dam authorities will continuously be updating DDMA and other local stakeholders.
- j) Registration on DHARMA web portal is mandatory for all large dam authorities with association of DSO Himachal and updation and information sharing will accordingly be taken up by each dam authority.
- k) Installation of Early Warning System (EWS) shall be mandatory in all the large Hydro Electric Projects and for HEPs at higher altitude.

## **CHAPTER-XV**

### **SOCIO-ENVIRONMENT MANAGEMENT**

**15.0** Himachal Pradesh is blessed to be dwelling in the lap of nature and enjoy the bounties bestowed. All the power needs of the state are planned and being fulfilled through natural renewable resources. The developmental needs of the state are addressed through sustainable processes in complete harmony with nature and risks and impacts are anticipated at larger basin level context beyond impact area of a single project. Management and mitigation measures are adopted proportionate to risks in and mitigation measures are taken that are consistent with national laws and acceptable Good International Industrial Practices (GIIPs) to practices restoring and maintain environmental serenity.

**15.1** Himachal Pradesh has Environmental and Social Management system for hydro projects which consist of well laid policies, systems, procedures, and capacity for assessing, managing, and monitoring risks and impacts while being proportionate to risks achieving larger mandate of sustainable power generation. Himachal Pradesh was the first State to address basin level planning concept in hydro-sector and release of environmental flows throughout the year in the downstream of diversion structures of the hydro electric projects to address eco-system services issues concerning riparian rights, drinking water, health, aquatic life, wildlife, fisheries, honor the sensitive religious rites on the river banks.

**15.2** Cumulative Impact Assessment (CIA) and Carrying Capacity Studies (CCS) have been conducted for 3 major river basins out of five river basins and e-flow have been notified by MoEF&CC, GoI. The project developers need to follow the norms notified by the GoI from time to time in this regard and concerning the free flow river regime in between two cascading hydro projects.

**15.3** The project developer shall provide necessary arrangement/ mechanism in the civil structure including discharge measurement system for the release of laid down minimum flow immediately downstream of the diversion structure.

**15.4** The project developer shall be required to follow environmental related guidelines concerning disposal of excavated muck at designated dumping sites. In Himachal Pradesh, because of the peculiar topography, the availability of land is scarce to have dumping sites, the project developer shall utilize such material for the project after following all the prevailing guidelines, as may be found suitable for construction and the remaining material shall be managed as per norms.

**15.5** There are some streams, portion of river and in between stretches which have been restricted for hydro development on account of social & environment concern. Potential approximately 3500 to 4000 MW has been foregone on the environmental and social concerns in the state.

**15.6** The policy for the disposal of solar photo voltaic panels and storage batteries shall be formulated for disposal of the waste generated.

**15.7** The land usage for the project development shall be optimized.

**15.8 Mitigation measures:**

- i) Acts/ regulations governing the EIAs & mitigation of adverse environmental impacts-

- a) Forest Conservation Act, 1980 (amended in 1988), Rules and Guidelines amended from time to time.
- b) Environmental Protection Act, 1986- with its environmental (protection) rules 1986 and as amended from time to time.
- c) Environment Impact Assessment notification 1994 and as amended from time to time.
- ii) Strict compliance of above Act and other related norms for Wild life Sanctuary and other protected/ restricted Areas shall be ensured.
- iii) CAT plan @ 1.5% or as notified by the competent authority from time to time for all projects having capacity above 10 MW & CAMPA implication.
- iv) Adequate environment flow release downstream of diversion structure. Online monitoring of e-flow releases.
- v) LADF implementation in project affected areas.
- vi) CIA and CCS studies at basin level for Satluj, Beas & Chenab stand completed and in progress for Yamuna & Ravi basin.
- vii) EIA, EMP approval from MoEF & CC, GoI and implementation of approved EMP for project  $\geq 25$  MW.
- viii) White category projects i.e. up to 25 MW capacity to undergo consent mechanism/under water/air Acts.
- ix) Implementation of R&R plan in project area.
- x) Alternate mechanism like fish ladder provision in the dam bodies for free fish movement.
- xi) Sample testing at regular intervals by the state authorized agencies with respect to air, sound, water etc. during construction & generation stage.

#### 15.9 Way forward and Vision:

- i) Going for adoption of world's best available practices viz: HSAP (Hydropower Sustainability Assessment Protocol / HST (Hydropower sustainability tools) for evaluation of existing projects towards their up gradation and implementation in ongoing / under construction projects .
- ii) Promotion of clean & green energy and so the mitigation of the intermittence of solar / wind energy.
- iii) Community participation and ownership towards implementation and monitoring of mitigation measures. Formulation of communication strategy/protocol. Growing recognition that hydro is actually a major instrument in the fight against climate change.

- iv) ~~Emphasis on sectoral EIAs so that they become more efficient decision making tool.~~  
Implementation of the recommendation of basin level approved CIA & CC studies reports.
- v) Development and implementation of catchment area MIS to align with Basin MIS and forest MIS to track catchment health.
- vi) Documentation of best available practices adopted with respect to environment protection & mitigation by some project and sensitization & knowledge sharing of same with other developers in the state and also to integrate traditional ecological knowledge to adopted practices.
- vii) Basin level approach will be adopted for developing planning, monitoring framework to mainstream project specific decision-making system on e-flow regulations and also come out with water depth calculations that will consider detailed baseline surveys of biodiversity including critical migratory fish species and water needs downstream.
- viii) A policy on effective inter-departmental co-ordination with regulatory and research departments of the State Government.
- ix) In the State, Project designs & operations shall adapt to the expected climate change. Structural design of dams and other infrastructure shall also be in tune with the changing climate scenario.
- x) Estimation of GHG emissions formalizing short- and long-lived climate pollutants, including greenhouse gases and black carbon including carbon sequestration with existing available sink and as developed through catchment area treatment plans and compensatory afforestation plans designed to achieve net gain.
- xi) In Himachal Pradesh, electricity is primarily generated from Hydroelectric Projects which help in reduction of emission of "Green House Gases". The developer shall carryout development of the Project(s) in such a manner that these qualify for carbon credits at the National / International levels. The Directorate of Energy will act as Nodal Agency for handholding the developers for getting the benefit of carbon credits and other related matters.



## **CHAPTER-XVI**

### **HYDRO TOURISM**

**16.0** Hydro Tourism relates to the visit of hydro electric projects as monumental structures and presenting water sports activities besides the study of socio-economic-environmental impacts on the surrounding area. The flora, fauna and aquatic life developing due to the dam created reservoirs/ lakes, scenic locations, boating and water sports activities, ornithology and influx of migratory birds may present several tourist interest activities at hydro power project sites. Bhakra Dam reservoir known as Govind Sagar, Pong Dam Lake as Maharana Pratap Sagar, Kol Dam reservoir, Larji reservoir, Chamera - I reservoir and many more to come as storage projects gain importance in future have a lot of tourism potential, besides seeing the gigantic structures of the mega projects, offer a huge potential of tourism.

**16.1** Boating, swimming, surfing and water skiing shall be developed at various sites along with the infrastructure for boarding and lodging to attract tourists. Tourism Department of Himachal Pradesh has developed Water Sports Complex in Bilaspur is in an endeavour to be replicated at other potential locations as well. Inland Waterways Authority of India has identified 3 waterways on river Beas, Ravi and Satluj which once operational would offer more of tourism hotspots.

**16.2** The initiative of Govt. of Himachal Pradesh "Nai Raahein Nai Manzilein" is aiming to focus on Hydro Tourism Development in the state. The attractions it proposes to add are Watch Towers, development of Picnic Spots, House Boat accommodation, Shikara rides, camping and water sports, trekking expeditions (project developer in collaboration with domain experts) and ice skating at project locations and the reservoir created Lakes at the hydro project locations. The induction of sea planes for tourist attraction will also be prioritized. Chamera and Larji reservoirs are also on the road map of Government of Himachal Pradesh for tourist destination development.

**16.3** Infrastructure at such potential sites shall be made in such a manner to cater to tourism demands also once the construction is over and operation of project starts, as additional revenue and employment generation after due approval from Government of Himachal Pradesh.

**16.4** The Government of Himachal Pradesh shall make a provision for grant of permission of change of land use under section 118 of Tenancy and Land Reform Act, from project facilities to tourism purposes after project commissioning, while the permission shall hold good for the agreement period and transfer of rights after its expiry.

## **CHAPTER-XVII**

### **SKILL BUILDING AND HUMAN RESOURCE DEVELOPMENT**

- 17.0** The energy environment in the country is changing rapidly with the thrust on clean and green resources of power such as solar and wind, claiming a lion's share in the new capacity additions and throwing challenges of management of an energy mix not handled before with inherent characteristics of intermittence and need for storage and balancing among other ancillary services. The demand and capacity addition are both in the growth trajectory. The growth of capacity addition is posing a challenge of quality manpower for the development of generation & transmission projects, skills to manage the operations & maintenance, up-gradation of infrastructure, technological interventions in all areas from construction to distribution of reliable quality power.
- 17.1** Change of power scenario and new challenges require constant skill up-gradation, skill multiplication and trainings for the existing manpower deployed and new deployment with additional required skill sets. The training infrastructure in the field of power distribution, regulation, trading and power markets needs to be strengthened. Adequacy of manpower is another challenge of sorts.
- 17.2** Skill-building of the deployed manpower in the sector is responsible for capacity building of the institutions. Specialized training programmes will be organized covering all facets of the sector in the form of on the job training and refresher courses. The state utilities will be encouraged to undertake review of roles and functional skill sets of personnel to align with new and emerging requirements. The state utilities shall be mandated to spend at least 2.5% of the salary budget towards training in line with the recommendations of National Training Policy of 2012.
- 17.3** The energy sector projects have both long gestation period and project life to sustain. The projects therefore shall go beyond the training and skill up-gradation needs of the manpower deployed but target the manpower available in surrounding areas of projects to constantly improve their employability and ensure adequacy of skills needed.
- 17.4** Since the Hydro Engineering College, Bilaspur has started functioning, the State Government will constitute an inter-institutional group to assess the skill gaps and design appropriate module for training of manpower in various organizations, which will be imparted through the Hydro Engineering College. The State Government will also act for making the courses tailor made as per specific industry requirement and maintaining education-industry interface by drawing faculty from the State/Central/ Private Developer operating in the State.
- 17.5** Skill gap analysis will also be carried out in other areas such as Solar, Wind, Biomass, Pump Storage Projects and Hydrogen Energy etc. and appropriate courses or modules will be designed and wherever required will be imparted through existing Engineering Colleges / Polytechnics / ITIs or such institutions or boards etc. and will be requested to appropriately redesign the existing courses.

## CHAPTER-XVIII

### MAKE IN INDIA INITIATIVE AND AATAMNIRBHAR BHARAT ABHIYAN

- 18.0** **Make in India** is a major national programme of Government of India designed to facilitate investment, foster innovation, enhance skill development, protect intellectual property and build best in class manufacturing infrastructure in the country. The primary objective of this initiative is to attract investments from across the globe and strengthen India's manufacturing sector. It is being led by the Department for Promotion of Industry and Internal Trade (DPIIT), Ministry of Commerce and Industry, Government of India. The Make in India programme aims at utilizing the existing Indian talent base, creating additional employment opportunities and empowering secondary and tertiary sector. The programme also aims at improving India's rank on the Ease of Doing Business index by eliminating the unnecessary laws and regulations, making bureaucratic processes easier, making the Government more transparent, responsive and accountable.
- 18.1** The focus of Make in India programme is on 25 sectors, including renewable energy. India's renewable energy potential is vast and largely untapped. India's solar energy potential was estimated to be greater than 750 Giga-Watt (GW) and wind energy potential was pegged at 302 GW. India pledged that it will derive at least 40% of its energy needs from renewable sources by 2030.
- 18.2** There has been substantial FDI equity inflow in the non-conventional energy sector. The International Finance Corporation (IFC), the World Bank's private sector division, is assisting to set up solar projects. The World Bank Group (WBG) is helping India deliver on its plans with liberal lending. The WBG is also backing the India-led International Solar Alliance (ISA) which aims to promote solar use globally by mobilizing \$1 trillion in investments by 2030. The World Bank has approved loan to support the Government of India's Grid Connected Rooftop Solar program. The project draws funds together from the Bank, as well as from the Clean Technology Fund of the Climate Investment Funds (CIF), and will mobilize additional funding from public and private investors. IFC was one of the earliest financiers of wind and solar power in India and helped develop the country's first grid-connected solar power project.
- 18.3** Aatmanirbhar Bharat Abhiyan aims at becoming a self reliant economy. Five pillars of the Abhiyan are Economy- quantum jumps instead of increments, Infrastructure- modern India, System- technology driven, Vibrant Demography- current demography of India and Demand- full utilization of power of demand and supply.
- 18.4** Ministry of Power, Government of India is taking measures for promoting manufacturing of goods and services in India related to generation, transmission and distribution segments. Government has directed to give purchase preference to local manufacturers / suppliers applicable also in respect of funding of capital equipment by Power Finance Corporation of India and REC Limited. All equipment, materials, parts, items required in the power sector which are domestically manufactured with sufficient domestic capacity are to be procured necessarily from domestic manufactures. Where domestic capacity is not available indigenization of vendors is to be promoted. Testing of imported power equipment for cyber security has been made mandatory.
- 18.5** State shall make it mandatory to get testing carried out for any power equipment imported by a Project Developer and encourage vendor development for any imported machinery or parts thereof indigenously.

## ANNEXURE-I

### CRITERIA FOR QUALIFICATION FOR HEPs ABOVE 5 MW

For qualification total 100 marks will be taken under the financial, technical strengths along with the upfront premium quoted. Minimum 25% marks in Financial & Technical Strengths are mandatory for qualification. Following is the qualification matrix:-

#### 1. Financial strength

40 marks

Net worth

$20 \times x$ ; ( $x = y$  where net worth is  $y$  times of equity.  
Here,  $y$  can be 0.5, 0.75, 1.0, 1.25, 1.5, 1.75 and 2.0  
as per the different blocks of the worth.)

#### 2. Technical strength

30 marks

- i. Project development experience in the Hydro Sector.

$30 \times x \times z$ ; (Where  $x = y$  where  $y$  is project implementation factor. Factor can be calculated as number of projects implemented Vs allotted projects.

OR

$$y = \frac{\text{number of projects implemented}}{\text{total projects allotted}}$$

Where,  $z = n/25$ ; where  $n$  = total commissioned projects capacity by developer.

- ii. Project developers who doesn't have any presence in Hydro Sector.

$30 \times x \times z$ ; ( $x = y$  where net worth is  $y$  times of equity.  
Here,  $y$  can be 1/5, 2/5, 3/5, 4/5, 1.0 as per the equity ÷ net worth.)

here,  $z = \text{cash reserves} \div \text{equity}$

#### Note:

Developer shall have to tie up (either Joint Venture / Consortium / Project Management Consultancy (PMC) agreement) with technical firm which has good track record and strength in hydro project implementation.

#### 3. Financial bid on upfront premium basis

30 marks

Quote of upfront premium

$30 \times x$ ; (Where,  $x = \text{upfront premium quoted by developer} \div \text{highest upfront premium quoted}$ )

## **ANNEXURE-II**

### **CHECK LIST FOR PREPARATION OF DETAILED PROJECT REPORTS (DPRs) OF HEPs BASED UPON CEA/CWC GUIDELINES**

**DPR Should Cover following Chapters**

**PART-I : GENERAL AND DESIGN ASPECTS**

**CHAPTER-I : INTRODUCTION**

Proposal of project

**CHAPTER-II : SURVEY AND INVESTIGATIONS**

**CHAPTER-III : HYDROLOGY**

The discharge data of the khad/nallah covering minimum two lean seasons and one monsoon season measured by the IPP.

**CHAPTER-IV : POWER POTENTIAL & OPTIMISATION STUDIES**

**CHAPTER-V : GEOLOGY**

**CHAPTER-VI : CIVIL ENGINEERING STRUCTURES**

**CHAPTER-VII : POWER PLANT AND TRANSMISSION**

**CHAPTER-VIII : COMMUNICATION AND CONSTRUCTION FACILITIES**

**CHAPTER-IX : CONSTRUCTION MATERIALS**

**CHAPTER-X : CONSTRUCTION METHODOLOGY**

**CHAPTER-XI : ENVIRONMENT AND ECOLOGY**

**PART-II : COST ESTIMATE AND FINANCIAL ANALYSIS**

**CHAPTER-XII : ANALYSIS OF RATES FOR PRINCIPAL ITEMS OF CIVIL WORKS AND MACHINERY:**

**CHAPTER-XIII : COST ESTIMATE**

**CHAPTER-XIV : FINANCIAL EVALUATION**

**PART-III : DRAWINGS**

Copy of Layout drawings, X sections of the scheme covering all civil components and Electro-mechanical components.

### **GUIDELINES FOR PREPARATION OF DETAILED PROJECT REPORTS (DPRs) OF SHPs BASED UPON CEA/CWC GUIDELINES**

**PART-I : GENERAL AND DESIGN ASPECTS**

**CHAPTER-I : INTRODUCTION**

This chapter shall include an outline of the project, salient features, Govt. policies and incentives offered for private Sector participation, Profile of the firm and consultant, technical profile of the project, its objectives and justification/need etc.

**CHAPTER-II : SURVEY AND INVESTIGATIONS**

The details of Topographical surveys, Reconnaissance, Hydrological and Meteorological surveys reports, Geologist Investigations, Local area load requirement survey and Power evacuation surveys carried out by the promoter be given.

### **CHAPTER-III : HYDROLOGY**

The following details must be incorporated in this chapter besides other available data:-

- i) The discharge data of the khad/nallah covering minimum two lean seasons and one monsoon season measured by the IPP.
- ii) Minimum 8 to 10 years long series of discharge data derived by co-relation and regression analysis with the adjoining similar catchment khad/nallah to arrive at 75% dependable year.
- iii) 75% dependable year and its discharges and flow duration curve.
- iv) Water requirement for irrigation and other riparian rights.
- v) Design flood including calculation of arriving at figure of the design flood discharge.
- vi) HFL at weir site.
- vii) HFL of Power House site.

### **CHAPTER-IV : POWER POTENTIAL & OPTIMISATION STUDIES**

The following details must be incorporated in this chapter:-

- i) Net head calculation.
- ii) Power studies on the basis of 75% dependable year discharges after considering/deducting sacrificial discharges as per prevailing policy guidelines.
- iii) Optimization studies of the Installed Capacity after considering Incremental Energy benefits, Plant Load Factor, % utilization Addl. Capacity, % availability of Design Discharge in 75% dependable Year and Cost Benefit Ratio.
- iv) Energy generated/Energy available for sale based on 75% dependable year discharges.

### **CHAPTER-V : GEOLOGY**

This chapter should include the followings:

- i) Regional geology.
- ii) Geology of various sites of the project area component wise.
- iii) Stability of slope, if required.
- iv) Seismology.
- v) Bearing capacity of the various sites of the project area.

### **CHAPTER-VI : CIVIL ENGINEERING STRUCTURES**

Beside general details of all the Civil Engineering Components and layout of the project the following detail may also be incorporated/discussed in the DPR.

- i) Hydraulic designs for sizing of different project components indicating the various elevations of the structures.
- ii) Technical details of all Civil Engineering components based on structural designs.
- iii) Component wise details of the various aspects.

### **CHAPTER-VII : POWER PLANT AND TRANSMISSION**

Based upon analysis of data, available head and techno-economic studies formulate the

- i) Basic parameters of Electro-mechanical works in terms of type, number and capacity of Turbines, Generators, Transformers, Gates and other Power House and Sub-Station equipment for incorporating in the DPR.
- ii) The feasibility of power evacuation system either through HPSEB transmission net work or otherwise is required to be established.

#### **CHAPTER-VIII : COMMUNICATION AND CONSTRUCTION FACILITIES**

In this chapter the location of the project and its access, project roads, availability of labour, accommodation, construction power, communication and other pre-construction facilities should be incorporated.

#### **CHAPTER-IX : CONSTRUCTION MATERIALS**

The construction material surveys for availability of construction material i.e. coarse stone aggregate, fine aggregate (sand) near project area along with test reports be incorporated.

#### **CHAPTER-X : CONSTRUCTION METHODOLOGY**

Implementation schedule indicating time period for various important activities starting from conception to commissioning of the project supported by requisite CPM/PERT network be incorporated.

#### **CHAPTER-XI : ENVIROMENT AND ECOLOGY**

The environmental aspects such as submergence, effect on climate, Catchment Area Treatment, seismicity, water logging and salinity, rehabilitation and other preventive measures and benefits are to be discussed and incorporated.

#### **PART-II : COST ESTIMATE AND FINANCIAL ANALYSIS**

##### **CHAPTER-XII : ANALYSIS OF RATES FOR PRINCIPAL ITEMS OF CIVIL WORKS AND MACHINERY**

For arriving at the rates of principal items of civil works and machinery the analysis of rates as per CWC/CEA/HPSR and MNES guidelines be prepared and incorporated.

##### **CHAPTER-XIII : COST ESTIMATE**

The first order project cost estimate covering Civil, Electro-mechanical works and other allied specially relevant and useful amenities for the scheme be prepared and incorporated as per CEA/CWC/MNES guidelines.

##### **CHAPTER-XIV : FINANCIAL EVALUATION**

The complete proposal of financing of the scheme incorporating the following may be given to examine the financial viability aspects of the scheme.

- i) Completed cost of the project including Escalation, IDC and FC and LADC/LADF (as per prevailing policy guidelines)
- ii) Phased or year-wise, details of funding for calculating the IDC with Debt-equity ratio.
- iii) Loan repayment schedule.

- iv) ~~Total energy charges which include annual capacity charges and energy charges.~~
- v) Annual capacity charges be calculated by considering:
- Interest on loan capital as per financial package.
  - Depreciation as per Electricity Act or GoI guidelines notified from time to time.
- vi) Energy charges be calculated by considering:
- O & M expenses inclusive of insurance charges as per GoI guidelines notified from time to time.
  - Return on equity as per prevailing rate.
  - Income tax /MAT on income as applicable.
  - Interest on working capital which comprises O & M expenses for one month and one and half month receivables.
- vii) Gross annual generation and energy available for sale after deducting transformation losses, auxiliary consumption, outages, transmission losses and wheeling charges (in case of consumptive use or outside sale) and royalty (Free Power) as per MOU / IA. In addition to above provision of 1% (free power) from the project shall also made for LADF as per prevailing policy guidelines.
- viii) Per unit cost of generation i.e. tariff projections/ levellised tariff for 40 years as per MOU/IA.
- ix) Financial Analysis giving cash flow statement, IRR etc.

### **PART-III : DRAWINGS**

Layout drawings of the scheme covering all civil components and Electro-mechanical components as detailed below:

- Location and vicinity map.
- General layout plan and longitudinal section of the scheme on the contour plan in 1:5000 scale with 2 to 5 meter contour intervals.
- Detailed drawings of all Civil Engineering Components showing plan, different sections and elevations etc. on contour plan in 1:200/1:500 scale.
- Single line diagram of Sub-Station etc.

**Note: Developer will be required to adhere to following steps while preparation of DPR:-**

1. Establishing of discharge sites- 2 months
2. Power potential studies.
3. Freezing of components- 12 months
4. Detailed Survey and Investigations – 12 months
5. Completion and submission of DPR.

**Note:** Up to 25 MW – 24 months & above 25 MW – 30 months



**ANNEXURE-III****TIMELINES FOR PROCESSING OF DETAILED PROJECT REPORTS FOR TIMELY GRANT OF TECHNICAL CONCURRENCE (MAXIMUM PERIOD-5 MONTHS)**

<b>Sr. No.</b>	<b>Description</b>	<b>Time period</b>
1.	Submission of DPR	
2.	Processing of DPR as per checklist. Discussion with Consultant. DPR forwarded to HPPTCL, Electrical wing & Geologist.	Within two weeks
3.	Meeting with project developer, Consultant, PowerPoint presentation on the case. Miscellaneous observations to be attended by project developer.	Next one week
4.	Examination of DPR by Consultant, submission of comments /recommendations	Next one week
5.	Confirmation of power evacuation arrangement, with reasons by HPPTCL, who will be nodal agency for conveyance and HPPTCL will be responsible for the conveyance.	15 days or 30 days from the date of submission of DPR
6.	Observations to be conveyed to IPP & submission of reply/clarification to observations by project developer.	Next one month
7.	Processing after receipt of observations / evacuation arrangement and preparation of memorandum for accordance of final TC	Next one month

## **PROCEDURE FOR DECLARATION OF COMMERCIAL OPERATION DATE (COD) OF VARIOUS HYDRO ELECTRIC PROJECTS**

After ensuring the successful trial run of the Project as per regulatory guidelines and fulfillment of Codal formalities and procedures laid down by the appropriate authorities, the Directorate of Energy shall grant permission for declaration of COD.

The Directorate of Energy on the receipt of written request from Project Developer for declaration of COD submitted 60 days prior to the expected date of completion of the Project, shall seek all necessary reports from the concerned agencies / authorities along with recommendations, before granting permission to certify declaration of COD of a Generating Unit / Project by DoE. The concerned agencies / authorities are required to submit their reports to DoE as per their respective functions and duties assigned herein:

**a) Certification of all Electrical Installations on the Project (Chief Electrical Inspectorate):**

Certification in respect of all electrical installations on the Projects in accordance with the provisions / mandatory stipulations laid down in the Indian Electricity Rules, 1956 and the Central Electricity Regulatory Commission(CERC) guidelines along with recommendations for allowing go ahead with synchronization. However, in case of Projects under Central/Joint sector and Private inter-state generating stations, the certification on the similar lines shall be done by respective authorities.

**b) Report on Power House Design of the Project (Agency designated by Directorate of Energy):**

Report on Power House Design, for ascertaining all operational aspects of the Project operation during trial runs and subsequent synchronization of unit(s) along with recommendation for go ahead to avail connectivity and grant of permission to certify declaration of COD. However in case of Projects under Central/Joint Sector and Private inter-state generating stations, the report on the similar lines shall be furnished by respective authorities.

The Power House Design/or Competent Central Authority, as the case may be, shall declare the COD of the Project from the date of synchronization of Unit/Project after completion of successful trial run of Unit/Project.

**c) Power Evacuation System for Connectivity (Chief Engineer, System Operation, HPSEBL / General Manager (C & D), HPPTCL)**

Report of Chief Engineer (System Operation) with reference to the connectivity along with recommendations for allowing synchronization of units if evacuation is through transmission system of HPSEBL.

Report of HPPTCL in case the power evacuation system of HPPTCL is to be utilized for transmission of power along with recommendations for allowing synchronization of unit(s).

**d) Report on Power Evacuation Arrangement through transmission line of Central Government Transmission Utility or its Joint Venture etc. using Northern Regional Load Despatch Centre (NRLDC) (Central Transmission Utility)**

A report on the availability of the power evacuation system along with recommendations for allowing the access to the concerned Project in consultation with the State Transmission Utility.

**e) NOC / Clearance from State Load Despatch Centre (SLDC) / Northern Regional Load Despatch Centre (NRLDC)**

A Certificate of clearance with respect to the connectivity shall be required to be submitted by SLDC/ NRLDC as the case may be.

**f) Report on capacity and performance test by the Independent Engineer to be nominated mutually agreed upon by HPSEBL / HPPTCL / or central authority as the case may be, and Project Developer).**

An Independent Engineer with competence to be mutually agreed by the concerned parties among which the PPA, has been entered for sale and purchase of power will submit the certify and submit the report on capacity and performance of the generating units.

**g) Report on Safety of all Project components from third party agency /firms specialized in hydro design and execution to be engaged by the Project Developer.**

**h) Safety Aspects (Authority for Hydro Projects Safety, Quality Control & Water Management under DoE/ HIMURJA):**

After compliance of all above reports, Final Report on Safety aspects for ascertaining completion of all the Civil, Hydro-mechanical & Electro-mechanical Components as per the standard guidelines/ procedures.

The Authority during their visit to the Project in reference to grant of permission to certify declaration of COD, shall determine final completion cost of the project as per Cost to completion arrived at the time of COD of Project (Actual expenditure made plus estimated cost of balance ongoing works) to be confirmed after completion of all works of the Project as submitted and approved by Directorate of Energy.

## ANNEXURE-V

A state level committee to look into the problems being faced by the Hydro Power Producers and resolve them in a well-planned time bound manner, under the Chairmanship of Hon'ble MPP & Power Minister, to the Government of Himachal Pradesh is as under:

1.	Hon'ble MPP & Power Minister	Chairman
2.	Addl. Chief Secretary / Principal Secretary (MPP & Power and NES)	Member
3.	Addl. Chief Secretary / Principal Secretary (Forest)	Member
4.	Addl. Chief Secretary / Principal Secretary (Environment Science & Technology)	Member
5.	Addl. Chief Secretary / Principal Secretary (Revenue)	Member
6.	Addl. Chief Secretary / Principal Secretary (PWD)	Member
7.	Addl. Chief Secretary / Principal Secretary (I&PH)	Member
8.	Director, Directorate of Energy	Member Secretary

The Committee shall convene meetings quarterly and the following shall be special invitees to the meeting:-

1. Deputy Commissioner concerned
2. Superintendent of Police concerned
3. Representatives on behalf of Project Developers

### Scope of the Committee:-

1. The Committee will analyze various issues being faced by the project developer during the period of implementation of hydel projects and impart necessary directions / suggestions to the concerned agencies / departments so as to resolve the issues expeditiously within the stipulated time period assigned for respective activities, so as to boost the hydro power sector.
2. The Committee shall monitor the various issues pertaining to implementation of Hydro Electric Projects relating to:-
  - i. Employment
  - ii. Relief and Rehabilitation
  - iii. Review of Progress of Pre-Commissioning and Post-Commissioning LADF.
  - iv. Monitoring of issues being faced in obtaining Forest/Environment Clearance and implementation of Catchment Area Treatment (CAT) Plan, Compensatory Afforestation, Environmental Management Plan, Environment Impact Assessment (EIA) Plan.
  - v. Overview of safety and quality control mechanism of the Projects.
  - vi. Restoration of infrastructure facilities which get damaged because of the implementation of the Projects.

**MAIN FEATURES OF THE MOU/PIA IN RESPECT OF PUBLIC SECTOR PROJECTS**

- i) Free Power Royalty @ 12% or staggered slabs.
- ii) 1.5% of project cost towards LADF for Local Area Development Activities during execution.
- iii) 1% additional free power royalty towards LADF during O&M stage.
- iv) Minimum 40% of approved staff strength during construction and O&M stage in case of joint sector to be provided by GoHP, if available.
- v) 30% of staff at each executive level required by the CPSU/SPSU during Survey and Investigation, construction and O & M stage, to be deployed from GoHP, if available.
- vi) 80% of the recruitment of executives and 100% recruitment at workmen level during construction required to be done by the CPSU/SPSU/Joint sector, if any from Himachalis.
- vii) An option for absorption in CPSU/SPSU/Joint Sector, on completion of the project, to the executives from GoHP.
- viii) Establishing a suitable monitoring mechanism to monitor and evaluate the progress of works and manpower deployment at the project from time to time.
- ix) Reimbursement of amount spent up to the signing of MoU/PIA by HPSEBL/ appropriate State Power Utility on Investigation, Infrastructure works and preparation of PFR/DPR with simple interest @ 10% per annum within six months of signing of MoU/PIA.
- x) Release of minimum environmental flow immediately downstream of the diversion structure @ prescribed by the MoEF & CC/CEIA studies of the basin/ statutory requirement of GoHP as applicable.
- xi) Maintaining Free Flow distance with the upstream or downstream consecutive/ cascading projects as prescribed by MoEF & CC or GoHP as applicable.
- xii) Environment Mitigation Plan shall be implemented in conformity with the Environmental Clearance accorded by the appropriate State/Central Agency.
- xiii) Protection of water rights of the local inhabitants for drinking and irrigation purposes.
- xiv) Identification of transmission system for evacuation of power from project in consultation with State / Central Transmission Utility in view of integrated system requirements.
- xv) Making arrangement for evacuation of power from the project to the substation/ interconnection point and evacuation of power further to planned locations with appropriate State/ Central Utility as per mutually agreed wheeling charges.
- xvi) Providing space for bay at the power station for GoHP share of power for use by the Government in case it opts to draw its share of power from the project on a separate transmission system at a later date subject to approval of CEA.
- xvii) Implementation of the R&R Plan as approved by GoHP.
- xviii) Vesting of rights in respect of fishing, recreational, navigational and hydro tourism activities in GoHP subject to only such restrictions as may be necessary for the operational requirement and safety of the project.
- xix) Free use by the GoHP and general public, of all service roads, constructed and maintained by the Project Developer, facilities as Hospitals, Post Office, Schools etc.
- xx) Surrender of such lands / assets as may be rendered surplus to the requirement of the project to be decided by District Level Committee under Chairmanship of Deputy Commissioner with the members comprising Project Developer and Revenue Officials. The decision of the Committee shall be binding on both the parties.
- xxi) Compliance of all conditions laid down by the appropriate Central or State Agency in respect of Environmental Clearance and Diversion of Forest Land.
- xxii) Handing over of any object of archeological importance at the project sites during the implementation of the project to GoHP.
- xxiii) Compliance of all conditions laid down in relevant provisions in this policy regarding Dam Safety aspects.

~~xxiv)~~ Compliance of GoHP stipulations contained in relevant provision in this policy regarding permission to declare the COD of the project.

~~xxv)~~ Compliance of stipulations given in policy provisions for Implementation of Projects above 5 MW capacity mentioned in this policy, unless specified.

7m.

# **CRITERIA FOR EVALUATION OF FINANCIAL AND TECHNICAL CAPABILITY FOR SMALL HYDRO PROJECTS (0-5 MW)**

Sr. No.	Description	Marks ( Proposed)
1	<b>Criterion for allotment:</b>	
	<b>(A) Himachali:</b>	
	(a) Financial	50
	(b) Technical	30
	(c) Preferential marks as Himachali	20
	<b>(B) Non Himachalis:</b>	
	(a) Financial	50
	(b) Technical	30

## **(A) FINANCIAL EVALUATION:**

The following marking pattern shall be followed:-

**Capacity  
MW**

**Up to 2 MW**

**above 2MW up to 5**

**(Exclusively reserved  
for Himachalis)**

### **a) Financial Capability**

Net worth

50 marks

50 marks

### **b) Preferential Marks to Himachali/Co-operative Society/**

**Voluntary Society/Firms/Trusts/Company promoted by the people of:**

i) Local Panchayat

20 marks

ii) Local District

15 Marks

iii) Himachali

10 Marks

20 Marks

## **ILLUSTRATION OF (b) ABOVE:**

If a Co-operative Society/Firms/NGO/Company are promoted by the people of Local Panchayat /Local District and Other Himachalis, the marks are to be awarded by adding total marks of Local Panchayat/Local District/Other Himachalis, the marks shall be awarded on prorata basis. For example: if there are 6 persons in a Firm/Society/NGO/company promoted by people of Himachalis i.e. 2 from local Gram Panchayat, 3 from Local District and 1 other Himachali, the marks shall be calculated/awarded as under:

(a) 2 from Local Gram Panchayat =  $2 \times 20 = 40$

(b) 3 from Local District =  $3 \times 15 = 45$

(c) Other Himachali =  $1 \times 10 = 10$

-----  
Total = 95 Divided by total number of Persons  
 $95/6 = 15.33$  marks  
i.e. 15.33 marks out of 20.

- Preference will be given to Himachali having better financial capability in case two or more Himachali applicants getting equal marks.
- Preference will be given to Himachali in case Himachali and Non Himachali getting equal marks.
- Preference will be given to the Non Himachali having better financial capability than other non Himachalis, in case both non Himachali applicants getting equal marks.
- In case of individual, property of Parents/Grand Parents and other relatives shall not be considered for evaluation.
- NRI and its property outside the country shall not be considered.
- Property of Himachali applicant outside the State shall be considered for evaluation.

Private Investors claiming themselves to be resident(s) of a particular Panchayat, where the project is being located, should attach proof of their permanent residence from the Secretary of that particular Panchayat and countersigned by concerned BDO/Tehsildar. The applicant(s) should also submit their Bonafide Himachali Certificate (s) along with. Similarly Private Investors claiming themselves resident of the district/Himachal should attach the Bonafide Himachali Certificate issued by Executive Magistrate of that area. In the absence of these certificates claim of the Private Investor for resident of a Panchayat/District/Himachal shall not be considered.

#### **FINANCIAL EVALUATION:**

1. The financial capability of the investors is to be assessed on the basis of Audited Accounts/Published Accounts /un audited financial statements and net means in the case of individuals/newly formed entities. The Balance sheets of the Private Investors pertaining to the last accounting period as supplied by the Private Investors because of variation in Accounting period or otherwise, is to taken into consideration.
2. In case of newly formed entities such as companies, Partnership concerns, Co-operative Societies, Voluntary Societies/Trusts, if the above criteria could not fulfilled, the means of each member/promoter will be evaluated jointly for this purpose. The proof/ documents in support of the above shall be submitted by the individual/ promoters.  
(New Entity shall include the Companies, The Cooperative Societies, Voluntary Societies, Trusts, Partnership Concerns formed within recent year or registered in the preceding years but could not raise Net worth because of non performance of any activities)
3. In case of new entities Weightage shall be assigned on the basis of financial standing of the promoters and of the applicant company. Prorata share of each partner/member shall be calculated as applicable.
4. Since, financial strength is the Prime factor in execution of Projects; the following assumptions have been made:



- a) The probable cost of the Project as per the market rate has been considered as Rs. 11 Crores per MW.
- b) The capacity of the project shall be considered for calculation of financial strength for qualification/ evaluation.

## 5. DEFINITION OF FINANCIAL TERMS

Following definitions have been adopted for different financial terms used in the evaluation of financial strength.

<b>Net Worth</b>	Paid up Capital + Reserves created out of profit/loss account – intangible assets.
<b>Non cash items of Balance sheet</b>	Depreciation on assets etc. accounted for in the books only but physical cash is not available.
<b>Reserves created Out of Profit/Loss account.</b>	Net profit after tax (-) Dividend to Share Holders (-) interest on debentures etc.
<b>Paid up Capital</b>	It is the capital generated by the Company by way of equity shares.
<b>Intangible Asset</b>	Accumulated Losses & Misc. Expenditure (to the extent not written off or adjusted)
<b>Market Value</b>	The value of an assets (Land, Building, Jewellery etc.) duly approved by the approved valuer (latest evaluation certificate)

6. Net Worth calculation in the case of individual/Societies shall be based on following information:-

Cash in hand/Bank Name of the bank, nature of Account & account No./F.D.R. No./amount invested/date of maturity (with proof).

Detail of Assets owned Full description of property, purchase price, market value, details of title deed, whether free from encumbrance. (Land, Building and other immoveable assets) (with proof)

Details of investments, if any Name of the Company/No. of Shares/Units/Bonds etc. with face value/Present market Value /NSCs Jewellery etc. (with proof)

Loans & Advances Loans/advances given which can be realized in ordinary course. (with proof)

Insurance policies on own Life held. Policy No., amount insured, surrender value, date of commencement/maturity, annual premium, whether encumbered. (with proof)

Other assets valued at Movable Depreciated cost/ market Value & Unencumbered Fixed assets, Car, security deposits etc. with complete details and proof thereof.

**Less:-**

Details of borrowings	Amount of loans /borrowing, from whom borrowed, Security offered, when payable.
Details of personal Guarantees given, if any	Amount of guarantee given, in whose favour, purpose of guarantee.
Any other liabilities if any	Give complete details.
Total Income	Copy of IT returns for the last three years to be enclosed in case of income Tax payee.

**7. Marks shall be allotted for screening/evaluating financial strength as follow:-**

**For projects up to 2.00 MW:**

- i) Minimum net worth of Rs. 75 lakhs per MW would be required to become eligible for evaluation.
- ii) The marks shall be awarded as per the following formula:-

$$\frac{\text{Net worth} \times 50}{1100}$$

(Where 50 stands for total financial marks fixed and 1100 is cost per MW in lakhs)

**For projects above 2MW and up to 5MW**

- i) Minimum net worth of Rs. 100 lakhs per MW for Himachali and Rs. 200 lakh per MW for non Himachalis would be required to become eligible for evaluation.
- ii) The marks shall be awarded as per the following formula:-

$$\frac{\text{Net worth} \times 50}{1100}$$

**Note:** The above provisions are for 1 MW, which shall be further considered/computed/adjusted on prorata basis for various capacity of projects other than 1 MW (Plus/Minus).

**8. Considerations relating to existing (in hand) projects and applications for more than one project**

- a) Net Worth of the applicant/developer shall be adjusted first against projects in hand/under implementation and remaining portion only shall be used for evaluation against fresh application.
- b) In the case of projects applied by a applicant are more than one, the applicant/developer shall indicate the net worth clearly for each project for allocation of financial strength for evaluation purpose, otherwise the net worth shall be considered against each applied project in proportionate to their capacity.

**(B) EVALUATION OF TECHNICAL CAPABILITY:**

Criterion for assessing Technical eligibility for allotment	<b>Total Marks for Technical Strength=30</b> <b>Minimum Technical marks for qualifying=15</b>
---	--

#### Allocation of Marks:

- (i) Applicants having experience of commissioning of aggregate capacity 10MW= 30 Marks
- (ii) Applicants having experience of Commissioning of less than 10 MW, the marks will be allocated on prorata basis of capacity commissioned.
- (iii) In case of partnership in the commissioned capacity of 10 MW the marks will be allotted on the basis of Percentage (%) of equity share of each partner.
- (iv) Long Terms MoU up to COD of the applied project signed with reputed Consultant Firm or Reputed Technical Experts/ Consultants having experience of minimum 10 years in Hydro Power development, subject to the condition that the Consultant Firm or Reputed Technical Expert/Consultants shall not be part of any other applicant, applied for the same project. =10 marks.  
( MoU with the applicant shall be allowed for maximum 3 projects)

# ANNEXURE-VIII

## STRUCTURE OF FEE TO BE TAKEN AT DIFFERENT LEVELS DURING IMPLEMENTATION OF THE SMALL HYDRO ELECTRIC PROJECTS UP TO 5 MW CAPACITY.

Sr. No.	Description	Rate
1	Application fee at the time of applying for allotment of project	Rs 10,000/- (per application)
2	EMD to be furnished while applying for allotment of the project.	Rs 50,000/- per MW
3	Processing fee to be deposited within one month of issuance of consent letter: a) Himachalis (i) For Himachali up to 2MW (ii) Above 2 MW up to 5MW b) Non Himachalis	Rs. 50,000/- per project Rs. 1.00 lakh per project  Rs. 3.00 lakh per project
4	Upfront Premium within one month of issuance of consent letter: (i) up to 2 MW (ii) above 2MW up to 5 MW	Nil Rs 1,00,000/- per MW (in two installments of Rs. 50,000/-)
5	Security Charges	Rs. 50,000/- per MW
6	Capacity enhancement charges (by way of upfront premium)	Rs. 1,00,000/- per MW on whole capacity.
7	Fee on account transfer of shares/change in name of entity (All Cases)	Rs. 50,000/- per MW (SIA to be signed)
8	Penalty on account of change in share holding within permissible limit / name of entity without prior approval of Govt.	Rs 20,000/- per MW
9	Extension fee where applicable.	Rs. 20,000/- per MW
10	Per MW cost assumed for assessing Financial strength of the applicants to draw merit	Rs - 11 Crore.
11	Fisheries Development funds (i) up to 2 MW (ii) Above 2 MW up to 5 MW	Nil Rs. 50,000 per MW on whole capacity.

## **GUIDELINES FOR IMPEMETATION OF SOLAR POWER PROJECTS IN HIMACHAL PRADESH**

### **CONTENTS**

- 1. OBJECTIVES**
- 2. APPLICABILITY OF THE GUIDELINES**
- 3. ALLOTMENT OF SOLAR POWER PROJECTS.**
- 4. CONNECTIVITY OF SOLAR POWER PROJECTS WITH DISCOM.**
- 5. POWER PURCHASE AGREEMENT.**
- 6. PROCEDURE FOR DECLARATION OF COMMERCIAL OPERATION DATE (COD).**
- 7. ROLES AND RESPONSIBILITIES.**

## **1. OBJECTIVES:-**

Objective of these Guidelines is to provide a facilitative framework for implementation of Solar Power Project in the State.

## **2. APPLICABILITY OF THE GUIDELINES**

These Guidelines are applicable for allotment of Solar Power Project under various solar schemes, Power Procurement by Discom and Commercial Operation of solar power projects in the State. These guidelines will be applicable in addition to all prevailing Himachal Pradesh Electricity Regulatory Commission (HPERC), Central Electricity Regulatory Commission (CERC), Ministry of Power (MoP), Ministry of New and Renewable Energy (MNRE) and other statutory regulations/guidelines with respect to Solar Power Project, in case of any controversy the already prevailing regulations shall be final.

## **3. ALLOTMENT OF SOLAR POWER PROJECTS:-**

- i. HIMURJA will be the Nodal Agency for allotment of Solar Power Project in the state under various solar schemes.
- ii. The projects will be registered by HIMURJA provisionally & Letter of Registration and Consent shall be issued on a standard format, with the approval of the State Govt.
- iii. Himurja will check and approve the inventory of equipments i.e. inverter, transformer & solar modules to be installed in solar power project as per the relevant regulations & standards. Components like solar modules to be used for setting up of solar projects will be as per the specifications confirming to Ministry of New and Renewable Energy, Government of India/Indian Electricity Grid Code standards. The equipments like transformers etc. will be as per the norms prescribed by HPSEBL or as per prevalent standards.
- iv. The Solar power project developer will inform HIMURJA regularly about the latest status of the project, till it is established and starts commercial production so as to enable the department to monitor the stage of its implementation.
- v. Permanent Registration will be done by HIMURJA on commissioning of the Project after declaration of final Commercial Operation Date (CoD) of the project by Directorate of Energy, Govt. of Himachal Pradesh.
- vi. The Solar Power Project developer will not be allowed any change with respect to project specifications & documents submitted at the time of registration. However if any change required prior approval from HIMURJA may be obtained.
- vii. The equipments sharing i.e. inverter and any other equipment which may affect energy metering/billing between multiple solar power projects is not allowed. If any equipment shared then cost will be equally shared among all project developer as per PPA.

## **4. CONNECTIVITY OF SOLAR POWER PROJECT WITH DISCOM**

- i. The Solar power project developer shall apply for connectivity with Discom, where he intends to set up the Solar power Project and Discom will give its approval after detailed system studies within 30 days for connectivity with its System.

- ii. The Solar Power Project developer shall sign the connection agreement within three months with Discom in line with the allotment of the project & as per the grid connectivity and other relevant regulations for power evacuation. If developer fails to sign agreement then fresh approval will be required from Discom under intimation to Himurja.
- iii. In case more than one bidder are awarded projects to be connected to same Sub-station, they shall be permitted to co-ordinate with each other for sharing of cost for setting up common transmission line for feeding to Sub-Station with the approval of Discom. If subsequent addition of any project at the same substation, then cost will be shared as per the method of Discom.

## 5. POWER PURCHASE AGREEMENT

- i. The Solar power project developer shall apply with Discom for signing of Power Purchase Agreement (PPA) in line with the allotment of the project, and shall sign the PPA with Discom within three month of connectivity.
- ii. The standard PPA will have to be executed by the project developer with Discom as per the HPERC regulations (Promotion of generations from the renewable energy sources and terms and condition for tariff determination) 2017 & its amendments till to time.
- iii. The energy generated from the Solar Power Project shall be purchased by Discom at HPERC approved tariff applicable on the project and shall remain in force as per the terms and conditions stipulated in the PPA.
- iv. The solar power project developer has to complete the project as per the construction schedule mentioned/ agreed in the PPA.
- v. The Payment/Billing to solar power project developers will be after CoD declared by Directorate of Energy, Govt. of Himachal Pradesh.
- vi. Discom shall make regular payments to Solar Power Project Developer and fulfill other obligations as per provisions of PPA.
- vii. Discom shall be entitled for rebate, if the payment of bill is made before the due date of payment as per PPA.

## 6. PROCEDURE FOR DECLARATION OF COMMERCIAL OPERATION DATE (COD).

- i. The Project Developer will request DoE for declaration of CoD.
- ii. On the request of Project developer for CoD/any information received from HPSEBL, Directorate of Energy will request Project Developer to submit necessary reports/documents i.e. (Allotment letter, Power Purchase Agreement, Detail Project Report, Connection agreement, Single line diagram Recommendation of SE (Design) HPSEBL along with independent Engineer report. M&T and P&T reports, SLDC NoC. Approval of electrical Inspectorate etc.. In case data submitted is not complete then receipt of last document will be treated as actual date of submission of document. Any shortcomings/observations raised by DoE, will be attended by the project developer within two weeks time.
- iii. The Government of Himachal Pradesh, Directorate of Energy vide Office Order No- DoE/CE (energy)/Solar Power Plant/2018/1001-1017 dated 11/05/2018 has constituted a committee to facilitate declaration of Commercial Operation Date (CoD) of Solar Power Plants to be set up/being set up in the State comprising of following members:-

Sr. No	Designation	Department/Organization	
1.	Superintending Engineer (E)	O/o Director, Directorate of Energy, GoHP.	Chairman
2.	Sr. Executive Engineer	O/o CE (System Planning)/ HPSEBL (for projects above 5 MW)/ o/o CEO Himurja (For projects up to 5MW).	Member
3.	Electrical Inspector	O/o Chief Electrical Inspector, GoHP.	Member
4.	Sr. Executive Engineer (Concerned Operation Division, HPSEBL)/ Sr. Manager Projects (Concerned Project Implementing Unit) (based on connectivity)	O/o Chief Engineer Operation (South, North & Central Zone) HPSEBL/ General Manager Projects HPPTCL	Member
5.	Sr. Executive Engineer ,	O/o SE (Protection & Testing) Circle Hamirpur, HPSEBL	Member

- iv. The above committee after carrying out detailed scrutiny of reports to be submitted along with the request of the Project Proponent for declaration of Commercial Operation Date (CoD) of Solar Power Plant, shall submit recommendation to Directorate of Energy to declare the Commercial Operation Date (CoD) of Solar Power Plant after conducting necessary site visit within 15 days.
- v. Accordingly Directorate of Energy, will accord the permission for declaring commercial operation Date of the project.

## 7. ROLES AND RESPONSIBILITIES

Sr. No.	Responsible Authority	Brief Description of the Activity
1.	Himurja	<ul style="list-style-type: none"> <li>➤ Allotment of Solar Power Projects under various Solar schemes, inventory approval, Provisional &amp; Permanent Registration etc.</li> <li>➤ To monitor the latest status of the project until it is established and goes into commercial production.</li> <li>➤ Solar Power Project Developer will not allowed any change with respect to the project specifications and submitted documents of the project at the time of registration, however if any change required prior approval from Himurja may be obtained.</li> </ul>
2.	HPSEBL	<ul style="list-style-type: none"> <li>➤ For power evacuation, connection agreement is to be executed after detailed system study by Discom within 30 days. If subsequent addition of any project at the same substation, then cost will be shared as per the method of Discom.</li> <li>➤ The Power Purchase agreement (PPA) is to be executed between the project developer and HPSEBL as per the HPERC regulations (Promotion of generations from the renewable energy sources and terms and condition for tariff determination) 2017 &amp; its amendments from time to time and fulfill obligations as per PPA.</li> </ul>
3.	Electrical Inspectorate	<ul style="list-style-type: none"> <li>➤ With respect to Final approval of energize the electrical installation for whole solar plant, the report is to be submitted as per the relevant provision of Central Electricity Authority (Measure relating to safety and Electric Supply Standard) 2010 &amp;</li> </ul>



		amendments and as per LoA. Electrical Inspectorate will also confirm the rating capacity of equipments installed at site specially inverters, transformers and Solar modules.
4.	State Load Dispatch Centre (SLDC)	➤ Providing No Objection Certificate (NoC) to transmit electricity as well as real time data facility through the electrical system of Distribution Licensee within 15 days.

## 8. CHECK LIST

Sr. No.	Description	Remarks
01	Inverter	Should be as per the allotment, PPA, connection agreement, DPR and as per relevant regulations.
02	Transformer	
03	Solar Modules	
04	Metering (Main & Check meter), ✓	
05	Circuit Breaker/Isolator	
06	CT/PT	

### 1. SUPERINTENDING ENGINEER / SR. EXECUTIVE ENGINEER/AEE OPERATION WING CONCERNED AREA OF HPSEBL

- i. Providing adequate protection at the interconnection point as a part of the interconnection facilities.
- ii. Providing the assistance for synchronizing the unit and also for conducting the commissioning tests.
- iii. Submission of proposed plan and finalization of scheduled outages, maintenance outages, forced outages.
- iv. Providing and maintain adequate and reliable communication system between the station and nearby sub-station of Discom and also between the station and the control centre.
- v. Maintenance of records pertaining to interconnection point etc. The officer will be designated official(s) for recording joint meter reading report (s) and maintenance of records connected with joint meter reading report (s).
- vi. Computation of energy, signing of the statement forming basis for preparation of bills.

### 2. SR. EXECUTIVE ENGINEER CONCERNED M&T DIVISION HPSEBL.

- i. Report of Metering & Testing (M&T), HPSEBL as per Installation of meters regulations 2006 & amendments, LoA and PPA.
- ii. Facilitating the installation of main meter/check meter by project developer at the interconnection point
- iii. Inspection and joint sealing of metering equipments installed at the interconnection point.
- iv. The checking of metering equipments, main meter and check meter both for accuracy and after every six months the installation or at such earlier occasion as and when required as per the agreement, in the presence of both the parties and subsequent adjustments thereof.

### 3. SR. EXECUTIVE ENGINEER CONCERNED P&T DIVISION HPSEBL.

- i. Report of Protection & Testing (P&T), HPSEBL as per LOA, PPA and relevant regulations. Harmonics, DC injection and flickering tests of Solar Power project should be as per the IEEE 519, IEC 61000 & relevant standards.

- ii. To verify the compliance of the arrangements made by the company at the station end for parallel operation with the grid system and automatic isolation of the project in the event of any fault on the grid system in the interest of the project security.

**4. SUPERINTENDING ENGINEER (DESIGN), HPSEBL, SUNDERNAGAR**

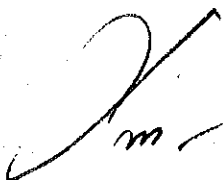
- i. To verify the compliance of the arrangements made by the company at the station end for parallel operation with the grid system and automatic isolation of the project in the event of any fault on the grid system in the interest of the project security.
- ii. Verification of stipulations that are to be fulfilled but the Developer to declaring the unit for synchronization.
- iii. Notifying the unit(s) to be ready for synchronization.
- iv. Notification of date of conduct of the commissioning tests and observing/witnessing the said tests on behalf of the HPSEBL. The commissioning tests shall be conducted/observed/witnessed by the Superintending Engineer (Design) Power House (Elect.) Sundernagar or his authorized representative, Sr. Executive Engineer of concerned Electrical Division of HPSEBL and Sr. Executive Engineer, Protection and Testing of Concerned Division of HPSEBL.
- v. Submission of Results to competent authority for approval and declaring the Unit (s)/project have successfully passed the commissioning tests.
- vi. Final report of SE (Design) along with report of Independent Engineer (Full load capacity and performance test of individual unit/combined project) as per LOA, PPA and relevant regulations is required to be furnished.

**5. CHIEF ENGINEER /SUPERINTENDING ENGINEER (HPSLDC)**

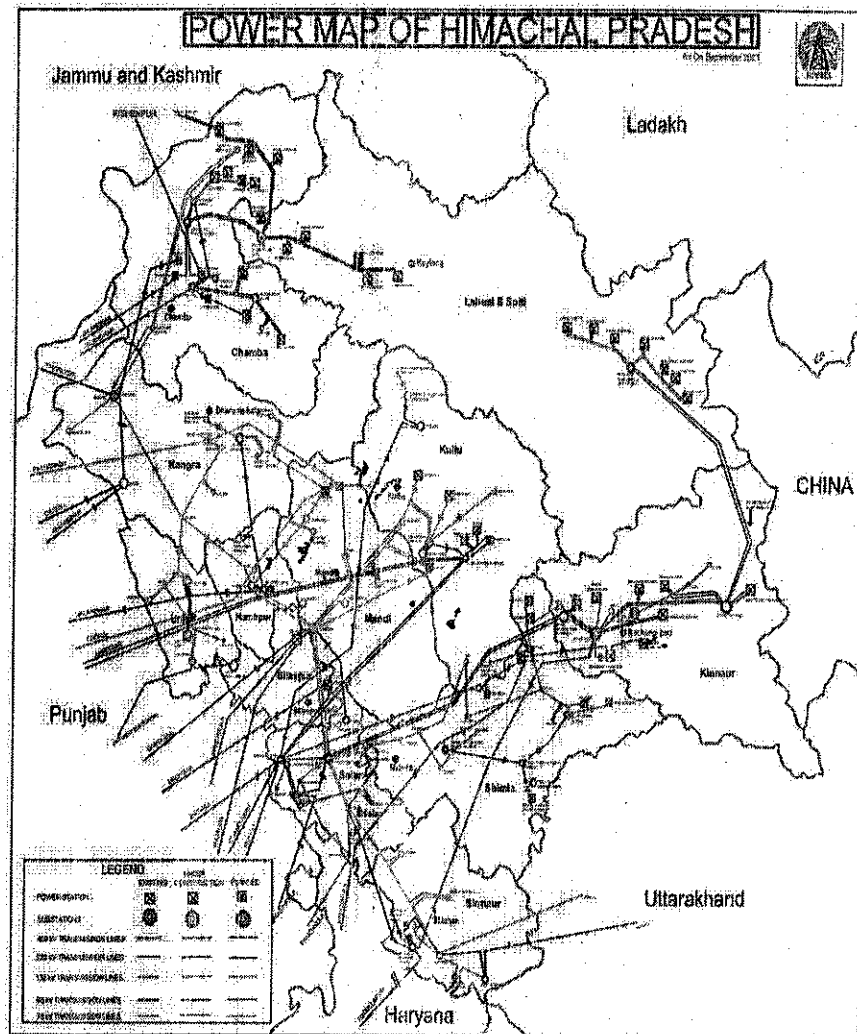
- i. Providing No Objection Certificate (NoC) to transmit electricity as well as real time data facility through the electrical system of Distribution Licensee.

**6. SOLAR POWER PROJECT DEVELOPER**

- i. Solar Power Project Developer will participate in the selection process to be carried out by Himurja by completing all codal formalities. After selection, Solar Power Project Developer shall sign connection agreement & PPA and install the plant as per provisions of solar scheme & applicable rules and regulations. Solar Power Project Developer shall carry out operation of plant as per prudent practices and fulfill all obligations as per provisions of connection agreement, PPA, LoA & relevant regulations. Solar Power Project Developer shall also take all necessary approvals from concerned authorities.



## TRANSMISSION MASTER PLAN



ANNEXURE-XI

**MEMORANDUM OF UNDERSTANDING (MoU)**  
**For \_\_\_\_\_ SMALL HYDRO - ELECTRIC PROJECT (\_\_\_\_\_ MW)**  
**IN DISTRICT-----, HIMACHAL PRADESH**

This agreement executed on this \_\_\_\_\_ day of the month of \_\_\_\_\_ Two Thousand and \_\_\_\_\_ between the Governor of Himachal Pradesh through Special Secretary (NES)-cum- Chief Executive Officer, Himurja, on behalf of Government of Himachal Pradesh having its office at \_\_\_\_\_ -Shimla-(H.P.) \_\_\_\_\_ - ( hereinafter referred to as the "First Party"), which expression, unless repugnant to the context or meaning thereof, shall include its successor(s), administrator(s) or permitted assigns) of the **FIRST PART**.

**AND**

M/s: \_\_\_\_\_, having / its registered office at \_\_\_\_\_ (hereinafter referred to as the "Second Party"), which expression shall, unless repugnant to the context or meaning thereof, include its holding company, subsidiaries, associates, successor(s), administrator(s), and permitted assigns) through \_\_\_\_\_ who has been duly authorized by the Second Party vide their resolution dated \_\_\_\_\_ to execute this agreement, of the **SECOND PART**.

WHEREAS, the First Party has decided in accordance with the provisions of Hydro Power Policy/Energy Policy of GoHP to allow power generation in the Private Sector and has invited proposals for private investments in such Projects, inter alia \_\_\_\_\_ Hydro Electric Project in \_\_\_\_\_ District (Himachal Pradesh) of the capacity of \_\_\_\_\_ MW, (hereinafter referred to as the "Project"); and

WHEREAS, the Second Party is desirous of setting up \_\_\_\_\_ Hydro-electric Power Project (\_\_\_\_\_ MW) in District \_\_\_\_\_, Himachal Pradesh on river/stream \_\_\_\_\_; within elevation range of-----; and

WHEREAS, the First Party vide Letter of Allotment dated: \_\_\_\_\_ has allotted \_\_\_\_\_ Hydro-electric Project (\_\_\_\_\_ MW), in favour of the Second Party for detailed investigations, techno-economical studies and implementation of the said Project and are desirous of reducing in writing the terms and conditions of the said Agreement, and

WHEREAS the Second Party has deposited the First installment of the upfront premium amounting to Rs. \_\_\_\_\_ vide Demand Draft No.----- dated---, processing fee amounting to Rs.-----vide demand draft No.-----dated----- and Security Charges (adjusted from EMD) amounting to Rs----- vide Demand Draft No.----- dated-----, with the First Party and shall deposit the balance upfront premium with the First Party at the time of signing of Implementation Agreement.; and

WHEREAS, the Second Party has agreed to contribute and provide to the First Party a minimum of 1% of Final Project Cost towards LADF for financing local area development activities during execution of Project as per schedule of payment mentioned below:

- i) 1<sup>st</sup> installment comprising 50% of total payable LADF at the time of signing of Implementation Agreement along with the Bank Guarantee (BG) of the 2<sup>nd</sup> & 3<sup>rd</sup> instalments of LADF amount which shall be returned by the First Party immediately after receipt of amount against the due installments to the Second Party.

- ii) 2<sup>nd</sup> installment of 25% will be paid within one year of Zero date and 3<sup>rd</sup> installment of 25% will be paid within two years from the date of achieving of Zero date. The balance amount worked out on the basis of total completed cost of the project within six months after achieving Commercial Operation Date of the Project. The completed cost will be settled at the time of allowing Commercial Operation Date of the Project.

In case of failure to adhere to the time lines as prescribed under (i) and (ii) above, the Second Party shall be levied interest on the due amount of LADF @ 12 %; and

**WHEREAS**, the Second Party is allowed to charge Pre-Commissioning LADF to any Head other than Project Cost Heads; and

**WHEREAS**, in case the Second Party fails to deposit Pre-Commissioning LADF dues, the First Party shall recover the amount due along with interest component in terms of energy to be computed as an uniform percentage of the deliverable energy, six month after Commercial Operation Date of the Project. The quantum of deduction shall be worked out on the basis of average sale rate corresponding to the previous year realization; and

**WHEREAS**, the Second Party shall contribute additional 1% Free Power over and above the agreed rates of normal free power royalty component to the State Government towards LADF

**WHEREAS**, the Second Party has incorporated a Special Purpose Vehicle (SPV) for the implementation of the project with its registered office in Himachal Pradesh as per provisions of Energy policy of the State.

**NOW THIS MEMORANDUM OF UNDERSTANDING BETWEEN THE PARTIES HERETO WITNESSETH AS FOLLOWS:**

1. The equity participation in implementation of the Project as under:

Any change in the name and consortium of the Second Party shall not be allowed from the date of allotment except as allowed against clauses mentioned herein under. It shall be mandatory for Second Party to submit an affidavit stating therein that no change in consortium and name of directors/ promoters have been made. In case of default on the part of Second Party, allotted projects shall be liable for cancellation, except the Second Party follows the provisions laid down in clauses mentioned herein under and submit their request and other necessary documents required for effecting any change in name and consortium of the project.

**I. Transfer of equity**

**A. In case of Non-Himachalis**

The Second Party (*Non-Himachalis*) implementing Hydro-Electric Projects are permitted to transfer the ownership by way of selling their equity stakes upto 100% during the implementation of the project in the name of any third party at any stage which is possessing equivalent or higher technical and financial strengths. However, there will be no restriction in respect of transfer of the project after commissioning.

In lieu of allowing change in name / transfer equity of Principal Promoters, a fee as per **Annexure-VIII** is to be deposited at the time of signing of Tripartite Agreement for transfer of project along with all liabilities/responsibilities in the name of new entity.

**B. In case of Himachalis:**

**(a) Transfer of shares from Himachali to Himachali promoters:-**

In case of Bonafide Himachalis/Co-operative Societies/Companies/ Voluntary Societies/Trusts/Partnership concerns/Sole Proprietorship concerns comprising wholly of Bonafide Himachalis to whom projects up to 2 MW and above 2 MW up to 5 MW capacity are allotted, the Government may consider the request of the promoters to transfer ownership wholly or partially to any other Bonafide Himachalis/Co-operative Societies/ Companies/Voluntary Societies/Trusts/Partnership concerns/ Sole Proprietorship concerns comprising wholly of Bonafide Himachalis, at any stage after allotment.

**(b) Transfer of shares from Himachali to Non-Himachali promoters:-**

In case of Bonafide Himachalis to whom projects up to 5 MW capacity are allotted, the Government may consider the request of promoters to sell/transfer 74% equity shares during implementation of project to Non-Himachalis which is possessing equivalent or higher technical and financial strengths and full disinvestment after commissioning.

In lieu of allowing sale/transfer of equity shares from Himachali promoters to Non-Himachali and change in name of the company, a fee as prescribed in **Annexure-VIII**, shall be charged at the time of signing of Tripartite Agreement for transfer of project in the name of new entity.

**(c)** The fee shall be charged every time the Second Party, both Himachalis & Non Himachalis, changes the shareholding/changes name of entity.

**(d)** In case the Second Party changes the name of the company/change shareholding within permissible limit without prior approval of the Government, penalty as per **Annexure-VIII** for each change shall be payable by the Second Party.

**(e)** In case of death of any of the promoters the shares will be transferable to his legal heir (s) after approval of the First Party

**(f)** Transfer of equity shares by Himachali to Non Himachali / Himachali together, is allowed within the percentage as prescribed herein above.

2. The Second Party is desirous of and has submitted its proposal to the First Party for investigations and implementation of the proposed \_\_\_\_\_ Hydro-electric Power Project (\_\_\_\_\_ MW) in \_\_\_\_\_ District of Himachal Pradesh.

3. The First Party has accepted the proposal of the Second Party and has agreed, in principle, to allow them to investigate the Project subject to fulfillment of terms and conditions of this Memorandum of Understanding by the Second Party.

4. Following milestones shall be required to be achieved by the Second Party failing which consequential action as mentioned below be taken by the First Party. The Second Party shall be required to submit monthly progress report to the First Party. The First Party will be at liberty to cancel the Memorandum of Understanding, after affording due opportunity to the Second Party in case the First Party is not satisfied about the progress made by the Second Party.

Sr. No.	Milestones	Time Period	Consequential Action.
1.	Submission of Detailed Project Report (DPR) as per guidelines at <b>Annexure-II</b> or CWC guidelines.	24 months from the date of signing of MOU (Additional 6 months for Projects falling in Lahaul & Spiti, Pangi of Chamba district and Dodra Kwar area of Shimla)	Extension up to a maximum period of 12 months for the reasons attributable to the Second Party subject to deposit of an extension fee @Rs.20,000 per MW per month {extension for the period of delay on account of reasons beyond the control of the Second Party shall be allowed without imposition of extension fee subject to satisfaction of First Party} failing which, allotment of Project shall be cancelled with forfeiture of all deposits.
2	Grant of Technical Concurrence (TC)	Within 5 months from the date of acceptance of DPR.	Timelines for processing of DPRs for timely grant of TC are at <b>Annexure-III</b> . If the timelines are exceeded on account of non-response of the Second Party towards observations on DPR, the allotment of the project shall be cancelled with forfeiture of all deposits. Relaxation upto 6 months time will be given, if the observations are beyond the control of the Second Party.
3	Signing of the Implementation Agreement (IA)	Within 2 months from the date of grant of TC	Extension up to a maximum of 1 month for the reasons beyond the control of the Second Party. If the Second Party fails to sign the IA even within extended time, allotment of Project shall be cancelled with the forfeiture of all deposits.
4	Application for connectivity & Long Term Open Access (LTOA) Agreement with HPPTCL.	Within 1 month from the date of signing of IA.	Extension up to a maximum of 1 month for the reasons beyond the control of the Second Party. If the Second Party fails to achieve the milestone even within extended time, allotment of Project shall be cancelled with the forfeiture of all deposits.
5	Signing of Connectivity Agreement & Long Term Open Access (LTOA) Agreement with HPPTCL.	Within 4 months from the date of signing of IA.	Extension up to a maximum of 3 months for the reasons beyond the control of project developer. If project developer fails to achieve the milestone even within extended time, allotment of project shall be cancelled with the forfeiture of all deposits.

6	Achieving Zero date	Within 6 months from the date of signing of IA.	Extension up to a maximum period of 6 months for the reasons attributable to the Second Party subject to deposit of an extension fee Rs.20,000 per MW per month {extension for the period of delay on account of reasons beyond the control of the Second Party shall be allowed without imposition of extension fee subject to satisfaction of the First Party} failing which, allotment of Project shall be cancelled with forfeiture of all deposits.
7	Scheduled Commercial Operation Date (SCOD) of the Project	Zero date plus construction period allowed as per TC plus extension of time granted by State, if any.	Delays during construction period on account of the reasons beyond the control of the Second Party shall be considered if applied with full justification within six months from the COD of project and shall be condoned / adjusted only after satisfaction of the appropriate Competent Authority of First Party within six months from the receipt of application. SCOD of the Project shall not be revised beyond synchronization of any one unit.
8	Commercial Operation Date (COD) of the Project.	Actual date when last unit of the Project commences commercial operation.	Incentive / Disincentive as per Clause No 4.1.1 -xlii & xliii.
9	Handing over of the Project to the Government	The date determined on completion of 40 years from the Scheduled Commercial Operation Date (SCOD) of the Project.	Action as deemed fit.

**Notes:**

- a) In case, the Second Party is unable to achieve Financial Closure within the time limit specified above for achieving zero date, the Second Party agrees to start construction work on the project positively within the time limit specified above by investing from its equity component. The Financial Closure shall be concluded within six months of start of the construction work on the project after achieving Zero Date.
- b) In case, unit-wise construction schedule approved is different for different units of the project, then unit wise SCOD will be considered and it will be for calculation of disincentive / penalty only and it will not redefine the project's SCOD as defined above. The Second Party shall not be entitled for any benefit with respect to transfer of project after completion of the agreement period by referring to unit wise SCOD.
- c) First Party is authorized to re-define the milestones afresh where 100% equity transfer is permitted by the State Government by entering into revised agreement for the stalled projects.



- d) A technical cell will be created under DoE to be headed by Chief Engineer (Design) for time bound processing of DPRs as specified in milestones table for accordance of TC, this cell will provide necessary technical assistance and guidance to project developers for preparation of DPRs and sorting out the technical matters. This cell will also be responsible for physical monitoring of the projects during the construction and operation stage of the projects.
- e) Reasons for condonation of delays in achieving various milestones not attributable to the Second Party shall be considered and decided by the First Party in accordance with the power policy provisions.
5. The Second Party shall fix the elevations of various project components with reference to Survey of India bench mark.
6. The Second Party shall be required to obtain all the non-statutory / statutory clearances / NOCs / approvals required for the implementation of project from various departments including Gram Panchayats as may be specified by the Government.
7. The Second Party shall be deemed to have conducted a due diligent exercise in respect of all the aspects of the Project, including a detailed survey of the site. The failure to investigate fully the Site or sub-surface conditions shall not relieve the Second Party from its responsibility for successfully implementing the Project.
8. The Second Party agrees to contract engineering services of a reputed design consultancy organization to oversee the Project planning, its layout design of various project components and quality of construction to ensure safety of the project components/structures during execution and operation of the project in such a way that there is no loss of human life, property of the people, energy generation etc.
9. In case of failure of the Second Party to adhere to the benchmarks as per Memorandum of Understanding resulting in extension of time, the extension fees specified shall be made payable to the Chief Executive Officer Himurja ( H.P. Government Energy Development Agency) . In case of breach of any provision/clause of this Memorandum of Understanding or any part thereof, the amount paid on account of upfront premium, processing fee and Earnest Money Deposit shall be liable to be forfeited by the First Party.
10. The Second Party agrees that the payments to be made on account of Upfront Premium, processing fee and Earnest Money Deposit paid by the Second Party shall not form part of the project cost in the DPR and financial closure, which shall be borne by the Second Party out of the financial strength of the Second Party.
11. The Second Party shall have no claim on any project upstream or downstream of the allotted project. There shall be a stream / basin wise coordination committee of various project developers of concerned stream/ basin under the chairmanship of Director Energy to resolve any issue arising with the upstream and downstream project with respect to construction, water availability, transmission, sharing of cost/ obligation/ benefit etc. as referred.
12. The Second Party shall prepare a Disaster Management Plan taking into consideration the different flood eventualities, cloud bursts or other natural calamities that could occur at various stages of construction and operation of the Project. The Second Party shall include this in the DPR to be submitted to the First Party.
13. The Second Party shall carry out Techno economical studies considering CUF @ 52% in conformity with CERC Regulation, 2017 with CUF 45% net of free power which is equivalent

to 51.72% (45 / 0.87) CUF with relaxation ceiling of 5% CUF on grounds of hydrological, geological and physical features.

14. The Second Party will be permitted to withdraw from the project after the conveyance of non-feasibility of the project during the preparation of the DPR, if the First Party is satisfied that the Second Party has sufficient ground to establish that the project is not techno-economically viable, without any liability on the Government of Himachal Pradesh for the expenditure incurred by the Second Party in this period for any purpose related to the project other than amount deposited by the Second Party on account of Upfront Premium. This amount will be refunded to the project developer without interest.
15. The Second Party will approach the HIMURJA during the preparation of Detailed Project Report with complete proposal for re-defining of domain on account of discrepancy, if any, found in allotted domain after transfer of Survey of India benchmark at the Project site as control point and verification of coordinates.
16. The Second Party shall develop project in the domain allotted by the First Party. The Second Party and the First Party shall ensure minimum horizontal distance of 250 m or elevation difference of 50 m as the case may be, between two projects, depending upon the topography and terrain of the area to have visible flow of water in the original stream. However, the Domain Change Committee constituted by the State Government on case to case basis may allow relaxation of this condition considering the technical, design, socio-economic & topographical aspects.
17. The Second Party shall take appropriate steps, as may be required, for the protection of fish culture as per environmental requirements and give an undertaking to the Fisheries department of the local area that wherever feasible, rearing of fish shall be promoted by the Second Party in consultation with the Fisheries department in the project area at the time of implementation of the project.
18. The Second Party Shall get the Detailed Project Report prepared under the guidance of reputed Experts/Consultants registered with the First Party.
19. Within 24 months of signing of Memorandum of Understanding the Second Party after carrying out detailed investigations and techno-economic studies shall submit the Detailed Project Report (hereinafter called the "DPR") to First Party, for its processing for accord of Technical Concurrence(FC). DPR submission date shall be reckoned only after it has been found that the report is in conformity with Central Electricity Authority/ Central Water Commission guidelines and within allotted/approved elevations & stream. Simultaneously during such period after freezing of components, the second party will be able to seek Essentiality Certificate for land acquisition. NOCs required for initiating the case for diversion of forest land will also be given by the First Party on the request of the Second Party.
20. The Second Party shall submit self attested copies of NOCs obtained from different departments to First Party. The second Party agrees to furnish an affidavit on Rs. 50/- stamp paper duly notarized, to the effect that "all the conditions in the NOCs obtained from the different departments shall be abided by them.
21. The First Party shall, subject to the approval of the GoI or any other competent authority, prepare a rehabilitation and re-settlement plan in association with the Second Party for local residents likely to be adversely affected or displaced due to construction of the Project at the Site. The cost of preparation and implementation of the above plan shall be borne by the Second Party. The Second Party shall execute the rehabilitation and resettlement plan prepared by the First Party at its cost. The amount so incurred shall form part of the Project cost.

22. The Second Party shall be allowed condonation of delay in submission of DPR, which are not attributable to the Second Party for the purpose of grant of extension on the following grounds:

- (i) Delay due to domain change / relocation of Project Components or any discrepancies observed in allotted domain.
- (ii) Delay in obtaining clearance from the National Board of Wildlife, where applicable.
- (iii) Law and Order issues in the project area.

23. If at any stage the Second Party is found not to have met the milestones and terms and conditions of the MOU, the progress of the project shall be reviewed during the monthly project review meeting of the committee under the chairmanship of Administrative Secretary MPP & Power for recommending appropriate action as deemed fit as per the merit of the case to the Government.

24. Force Majeure/Events beyond the control of Second Party:

For the purpose of this MOU, "Force Majeure" shall mean an event which is unforeseeable, beyond the control of the Second Party and not involving the Second Party fault or negligence. Such events may include acts of the First Party /GoI either in its sovereign or its contractual capacity, war, civil war, insurrection, riots, revolutions, fires, floods, epidemics, quarantine restrictions, freight embargoes, radioactivity and earthquakes.

If a Force Majeure situation arises, the Second Party shall promptly inform the First Party in writing of such conditions and the cause thereof. Unless otherwise directed by the First Party in writing, the Second Party shall continue to perform its obligations under the agreement, as far as is reasonably practical, and shall seek all reasonable alternative means for performance, not prevented by the Force Majeure event.

In the event, a Party is rendered unable to perform any obligation required to be performed by it under this MoU by Force Majeure, the particular obligations shall, upon information to the other Party be suspended for the period of Force Majeure. The time for performance of the relative obligations suspended by Force Majeure shall be extendable by the period of delay which is directly attributable to Force Majeure.

25. The projects has been allotted on the basis of tentative installed capacity as mentioned in the Notice Inviting Proposal / Letter of Allotment. However, in case the capacity of a Project increases / decreases upon firming up of the potential by the Competent Authority, the Second Party shall be required to sign the Revised Capacity Agreement (Supplementary Memorandum of Understanding) with the First Party within a period of 30 days from the date of communication of approval.

The competent authority for approval of the capacity enhancement/reduction in respect of the projects upto 25 MW will be DoE if the increase / decrease is within 20% of the allotted capacity. Beyond this the approval of Administrative Department will be required. Such cases in respect of projects upto 5 MW will be routed by the Second Party through Himurja.

Following provisions shall be applicable with regard to approval of capacity addition / reduction:

a) The Capacity Addition Charges shall be payable by the project developer for the capacity enhanced in a single installment at the time of signing of Revised Capacity Agreement. Capacity addition charges in shape of upfront premium on whole capacity @ Rs 1 lakh / MW will be applicable for the future enhancement of the already approved capacity. The pending liabilities in respect of capacity enhancement already approved and agreed will not be affected.

b) No additional free power in lieu of capacity enhancement shall be levied in all future enhancement approvals. However, it shall not affect projects where capacity enhancement has already been approved and agreed.

Already agreed and signed commitments with respect to additional free power will not be affected. For the future reference with respect to addition / reduction in capacity, the capacity last approved for which SIA signed before the policy notification will be considered as benchmark for the calculation of capacity addition/reduction.

c) If the capacity reduction is more than 20% of allotted capacity, the project developer will have the option of surrendering the project, with refund of security deposit without interest, within a maximum period of 2 years from date of issue of Consent Letter. The project developer may however opt to retain the project.

d) If the capacity reduction is within the 20% limit of the allotted capacity, no concession or adjustment in upfront premium shall be permitted.

e) Processing fee @ Rs.10,000 per MW for processing the proposal of addition/reduction in capacity of project will be levied on the increased/decreased capacity.

f) No fresh NOCs / consultations required from Gram Panchayats in case allotted installed capacity is enhanced within the allotted domain or if approved redefined domain falls in same panchayat.

g) If the capacity addition/reduction amounts to change in category of the project, the policy applicable to such category after enhancement or reduction of the capacity shall prevail.

26. The Second Party agrees to supply free of cost to the First Party the Hydrological and Meteorological data observed at the project site, on monthly basis. The First Party shall have the right to use this data for any purpose whatsoever.

27. The Second Party shall carry out the requisite detailed investigations and identify the transmission system for evacuation of power from the Project in consultation with the First Party/State Transmission Utility (STU)/Central Transmission Utility (CTU) keeping in view, the integrated system requirement.

28. The First Party through HPSEBL shall provide electricity connection for the construction power required for execution of Project to the Second Party on priority basis wherever feasible.

29. The Second Party shall carry out the investigations/execution/operation & maintenance of the project keeping in view all quality control and safety measures as per relevant IS Codes / adopted standards and O & M Manual. The Second Party shall allow access to the authorized representative(s) of the Government of Himachal Pradesh to all the locations of the project to inspect compliance in this respect at all stages during the agreement period.

30. The First Party shall allow the Second Party to set up temporary aerial ropeways / cable ways of any type for transporting material, men & machinery without the requirement of NOC of Gram Panchayat subject to adherence of safety parameters as per prevailing rules and regulations.
31. The Second Party shall be free to dispose of power from the Project, after allowing royalty in the shape of free power to the First Party in any manner they like in accordance with the provisions contained in the Electricity Act, 2003 and amendments thereof and the rules and regulations made there under.
32. The Second Party shall make arrangements for evacuation of power from the Project to the substation (designated as Interconnection Point) as per the provisions in the DPR agreed to by the relevant party undertaking the transmission beyond the interconnection point. Evacuation of power beyond the interconnection point shall be based on mutually agreed wheeling charges or determination by the competent regulatory body as per the provisions of State Energy Policy.
33. The Second Party shall follow all the relevant laws, including, but/ without limitation, all labour laws, and shall also provide for safety provisions as per the Electricity Act, 2003, Factories Act, 1948, Mines Act, 1952 and such other statutory provisions relating to the safety of the Projects and any subsequent amendments made thereto.
34. The validity of this Memorandum of Understanding (MOU) shall be upto signing of Implementation Agreement. The Second Party shall be required to sign Implementation Agreement with the First Party within the prescribed time period including any extension granted by the First Party. The Implementation agreement shall remain in force up to a period of 40 years from the Scheduled Commercial Operation Date of the project. Thereafter, the project shall revert to the First Party free of cost and free from all encumbrances and liabilities. The project assets would be maintained by the Second Party in a condition that would ensure rated efficiency of the project and residual life of civil, mechanical and electro-mechanical components at any point of time. During the 10<sup>th</sup>, 20<sup>th</sup>, 30<sup>th</sup>, 35<sup>th</sup> & 40<sup>th</sup> years of operations, the First Party or one of its appointed agencies would carry out mandatory inspection of the project in this regard. After the inspection at 35<sup>th</sup> year decision will be taken with respect to transfer / extension / maintenance of the project within 2 years of the inspection.
- If during such inspections it is found that the project capacity or life is being undermined by inadequate maintenance, the First Party reserves all the rights to terminate the agreement at any time.
35. The Second Party agrees to abide by the provisions of the Energy policy and Industry Policy of the State with regard to deployment of man power and employment to Himachalis in the project.
36. The First Party agrees to provide to the Second Party at its request, copies of all available documents, data, information, reports relating to the Project including copies of all investigations and studies carried out since the inception of the Project to enable them to use this information in the best interest of the implementation of the Project. The Government further agrees to render all possible assistance to facilitate the Second Party in obtaining necessary statutory clearances from the concerned authorities.
37. The Second Party shall provide royalty in the shape of free power from the project during the entire agreement period to the Government of Himachal Pradesh at the rate agreed in their respective agreements (IA/SIA) of the Deliverable Energy of the project, from the date of

~~synchronization of first unit whereas, the projects allotted in future shall provide royalty in the shape of free power @ 12% uniformly.~~

38. The boundaries (domain) marked (Intake & outfall locations) at the time of Project allotment will not be altered and any increase or decrease in capacity will be subject to the developer remaining within the boundaries/ domain marked. If the elevations indicated in the proposal/Letter of allotment found to be incorrect at site the actual elevations based on the marked boundaries shall be adopted after obtaining approval of First Party.
  39. Subject to security and operational factors, the Second Party shall permit free use by the First Party and general public, of all service roads, constructed and maintained by it for the Project. Other facilities like hospitals, post offices, schools etc., shall also be made available to the general public as per policy of the Second Party. The needs and requirements of local people shall be kept in view in any such policy.
  40. The Second Party shall bear the cost of improvement/widening of the existing roads required to be carried out for the construction of the Project.
  41. The First Party shall have the right for withdrawal of water from the river course for the consumptive use by pumping or by gravity for the purpose of potable water supply and irrigation to the affected villagers.
  42. First Party reserves the right to abandon or reduce capacity / discharge of any identified project for meeting the commitment towards social / environmental concerns.
  43. Any incentives announced in respect of different categories by various Ministries of Government of India from time to time providing Central financial Assistance for development of Micro & Small hydro programme in the Country shall be applicable to the Second Party .
  44. The Second party shall ensure release of minimum environmental flow (e-flow) immediately downstream of the diversion structure of the project throughout the year. The e-flow shall not be less than the threshold value of 15% of minimum inflow observed in the lean season in line with the State Pollution Control Board notification.
- The Second Party shall provide necessary arrangement/ mechanism in the civil structure including discharge measurement system for the release of laid down minimum flow immediately downstream of the diversion structure.
45. First Party has constituted an Authority for Hydro-Electric Project's Safety, Quality Control & Water Management at Directorate of Energy, GoHP. The authority shall be entrusted with roles and responsibilities for developing monitoring mechanism for the safety, quality and management of water flows of HEPs ensuring long term generation capability and residual life of Hydro- electric projects as per the guidelines provisioned in the State Energy Policy
  46. The Second Party shall ensure proper quality control and safety measures during investigations / execution / Operation & Maintenance of the project keeping in view all quality control and safety measures as per relevant IS Codes / adopted standards and O&M Manual. Second Party shall also ensure essential first aid facilities at all Project sites.
  47. The First Party will have the right to constitute a Committee with such membership as it deems fit to review and monitor various matters during the implementation of the Project. These may inter-alia include Employment related provisions, Relief and Rehabilitation, review of

Progress of LADC schemes, Compensatory Afforestation, restoration of facilities which get damaged because of the implementation of the Project, quality control mechanism of the Projects etc. The Committee may also review the recommendations and implementation thereof of the Forum of Hydroelectric Power Producers. The Committee may review the progress of all statutory clearances, time and cost overruns of the Project, if any. The Committee may also draw up the methodology to regulate the payments to be made by the Second Party to the various departments of the Government in connection with the implementation of the Project. The Committee may meet at such intervals and at such places as is decided by it.

48. The Second Party shall follow instructions and directives of concerned environmental authorities with regard to disposal of blasting muck and soil etc. This will include use of such material during Project construction, use by other development departments like PWD, I&PH and others for the execution of their area developmental schemes including the channelization of the river waters by the concerned development agencies, Private crusher owners/ other private users. The prescribed norms in this regard will be as laid down by the Pollution Control Board.

The Second Party shall be allowed to use the muck / mineral generated during the execution of the project work and to set up captive stone crusher in the project area as per the HP Minor Mineral Rules provided Second Party adheres to the prevailing environmental safe guards. The royalty on the usage of such minerals shall be payable to the State Industry department as per rules.

The Second Party shall use such material for the project as may be found suitable for the construction and the remaining material shall be allowed to be used by other development departments of the state, subject to the prevailing Rules and Regulations.

The Second Party shall ensure that the material excavated from the site shall be dumped in the area duly approved by the Ministry of Environment, Forest & Climate Change (MoEF&CC), GoI, /State Pollution Control Board.

49. The lease amount for acquiring Government / Forest Land for Hydro Power Projects shall be charged as per the prevailing rates notified by the Government.

50. In case any existing facilities including but not limited to, irrigation systems, water supplies, roads, bridges, buildings, communication system(s), power systems and water mills are adversely affected because of the implementation of the Project, the Second Party shall be responsible for taking remedial measures to mitigate such adverse effects. The cost of the above remedial measures shall become a part of the Project cost. Such facilities shall be as mutually identified and agreed upon between the Second Party and the First Party. The Second Party shall not interfere with any of the existing facilities till an alternate facility, as identified, is created.

51. The Second Party shall ensure protection of the water rights of the local inhabitants for drinking and irrigation purposes etc. by verifying the revenue entries and activities of Jal Shakti department so as to ensure that such rights are not infringed upon. Any dispute in the matter shall be referred to a committee to be appointed by the First Party involving Jal Shakti and Revenue departments. Thereafter, the decision of the First Party shall be final and binding on all the parties.

52. The First Party shall, as and when required, put in place a committee comprising of experts from Directorate of Energy/Himurja for determining the impact, if any, on the existing project

~~due to allotment of any upstream and/or down-stream project.~~ In the event of a dispute, the decision of First Party in the matter shall be final and binding on all the parties.

53. On completion of the Agreement Period, the Project shall revert to the First Party free from all encumbrances together with all land, buildings, plant, machinery, spare parts and all assets of the Project. After completion of 40 years, the First Party may either extend the agreement period on mutually agreed terms or may go for competitive bidding under Renovation and Modernization mode for next 30 years. The royalty for the extended period payable to First party will not be less than 30%.

54. The Second Party agrees to implement the Project strictly as per the milestones stipulated by the First Party.

55. The First Party agrees that till this Memorandum of Understanding is in force, it shall not entertain any proposal in respect of the Project from any other party.

56. This Memorandum of Understanding is exclusive to the Parties hereto and neither of them shall assign its rights and benefits hereunder to third party except with mutual consent.

57. The Second Party shall abide by all provisions related to Projects upto 5 MW capacity of Energy Policy of the First Party as amended from time to time.

58. Each party hereto agrees that it shall not divulge any trade, commercial or technical secrets or confidential matters of one another to any third party, save for the purpose of implementing the understanding arrived at in this Pre-Implementation Agreement.

59. No party shall be considered to be in default under this Memorandum of Understanding for breach of any of the terms thereof due to the imposition of restrictions and onerous regulations by any Government or statutory authority or agency or other cause beyond its reasonable control.

60. Both the parties hereto shall do and execute all such acts, deeds, assurances and things, as may be necessary and proper for carrying out the terms of this Pre Implementation Agreement. The parties agree to negotiate and enter into such agreements as may be required to give effect to the understanding arrived at under this agreement.

61. The Second Party assures the First Party that there is no misrepresentation in the information supplied by it to the First Party as a part of their proposal or during the subsequent selection process. The First Party reserves the right to cancel the Memorandum of Understanding after giving an opportunity to the Second Party in case it is found that there was some such misrepresentation by the Second Party and/or in the event of breach of any of the provisions of this Memorandum of Understanding. The Second Party shall abide by the provisions as contained in the Hydro Power/Energy Policy of First Party.

62. Any violations of the above mentioned issues concerning policy parameters, MOU may result into monetary penalty including cancellation of the Project and its subsequent amendments issued from time to time.

63. Any difference and/or disputes arising at any time between the parties out of this MOU or interpretation thereof shall be endeavored to be resolved by the parties hereto by mutual negotiations, failing which the matter shall be referred to a two tier Grievance Redressal Process. The matter shall be addressed by the Departmental Grievance Redressal Committee constituted by the First Party under the Chairmanship of Chief Executive Officer, Himurja, Shimla. In case



the issue remains unresolved to the satisfaction of the Second Party, the matter shall be referred to a State Level Committee. If the Second Party is still not satisfied with the verdict, the dispute shall be subject to the jurisdiction of Civil Courts in Himachal Pradesh.

64. Any other terms and & conditions deemed necessary shall form integral part this MOU as per the provisions thereto.

IN WITNESS WHEREOF the parties hereto have set their hands unto this on the day, month and year first above written in the presence of:

For & on behalf of the  
Government of Himachal Pradesh  
(Name-----)

The Special Secretary (NES)-cum- Chief  
Executive Officer, Himurja (H.P. Energy  
Development Agency)

WITNESSED BY:

1.

2.

For and on behalf of  
M/s

Authorized signatory

WITNESSED BY:

1.

2.

**IMPLEMENTATION AGREEMENT**

(For Projects upto 5 MW)

**FOR SMALL HYDRO-ELECTRIC PROJECT ( MW)****IN DISTRICT -----, HIMACHAL PRADESH**

This Agreement executed on this \_\_\_\_ day of the month of \_\_\_\_ two thousand \_\_\_\_ between the Governor of Himachal Pradesh, through Special Secretary (NES)-cum- Chief Executive Officer Himurja, Government of Himachal Pradesh, having its office at \_\_\_\_ Shimla \_\_\_\_, (hereinafter referred to as "**First Party**"), which expression unless repugnant to the context or meaning thereof, shall include its successor(s), administrator(s) or permitted assigns, of the **FIRST PART**;

**AND**

M/s: \_\_\_\_, having its registered office at \_\_\_\_, (hereinafter referred to as "**Second Party**") which expression shall, unless repugnant to the context or meaning thereof, include its successor(s), administrator(s) or permitted assigns, through \_\_\_\_ who has been duly authorized by the Second Party vide their resolution dated \_\_\_\_ to execute this agreement, of the **SECOND PART**.

**WHEREAS**, the First Party in accordance with its Energy Policy had entered into a Memorandum of Understanding on \_\_\_\_ in the year \_\_\_\_ with the Second Party to carry out detailed investigations, techno-economic studies, submission of a Detailed Project Report (DPR) for the implementation of \_\_\_\_ Hydro Electric Project (HEP), \_\_\_\_ MW installed capacity, located in District \_\_\_\_, of Himachal Pradesh hereinafter referred to as the "**Project**"; and

**WHEREAS**, the Second Party has deposited the First installment of the upfront premium amounting to Rs. \_\_\_\_ on \_\_\_\_ with the First Party and has deposited the balance upfront premium amounting to Rs. \_\_\_\_ vide Demand draft No. \_\_\_\_ dated \_\_\_\_ as per provisions in the signed MOU; and

**WHEREAS**, the Second Party has agreed to contribute and provide to the First Party a minimum of 1% of Final Project Cost towards LADF for financing local area development activities during execution of Project as per schedule of payment mentioned in the signed MOU; and

**WHEREAS**, in case the Second Party fails to deposit Pre-Commissioning LADF dues, the First Party shall recover the amount due along with interest applicable as per policy and recovery provisions; and

**WHEREAS**, the Second Party has agreed to provide to the First Party the royalty in the shape of free power as per provisions in the signed MOU/as per the Energy policy provisions, as the case may be; and

**WHEREAS**, the Second Party has agreed to contribute additional 1% Free Power over and above the agreed rates of normal Free Power Royalty Component to the First Party as per the policy provisions; and

**NOW, THEREFORE**, in consideration of the promises and mutual covenants and conditions set forth herein, it is agreed by and between the parties hereto as follows:

**1. INTERPRETATIONS AND DEFINITIONS:-**

**1.1. INTERPRETATIONS:-**

**1.1.1** The nomenclature of this agreement, headings and paragraph numbers are for convenience of reference only and shall be ignored in construing or interpreting this agreement.

**1.1.2** References to persons and words denoting natural persons shall include bodies corporate and partnerships, joint ventures and statutory and other authorities and entities.

**1.1.3** References to any enactment, ordinance or regulation or any provision thereof shall include any amendment thereof or any replacement in whole or in part.

**1.1.4** Reference to Recitals, Articles, Clauses, Sub-Clauses or Annexures shall unless the context otherwise requires, be deemed to include the Recitals, Articles, Clauses, Sub-Clauses or Annexures of this Agreement.

**1.1.5** The words importing singulars shall include plurals and vice versa as may be necessary.

**1.1.6** Terms beginning with capital letters and defined as per Clause 1.2 of this agreement shall have the same meaning ascribed thereto and the terms defined in the Annexures, if any and used therein shall have the meaning ascribed thereto in the Annexures, if any.

**1.1.7** The Annexures and Schedules, if any, to this agreement form an integral part of this agreement and shall be in full force and effect as if they were expressly set out in the body of this agreement.

**1.1.8** Any reference at any time to any agreement, deed, instrument, license or document of any description shall be construed as reference to that agreement, deed, instrument, license or other document as amended, varied, supplemented, modified or suspended at the time of such reference provided that this Clause shall not operate so as to increase liability or obligations of any Party hereunder or pursuant hereto in any manner whatsoever.

**1.1.9** Any agreement, consent, approval, authorization, notice, communication, information or report required under or pursuant to this agreement from or by any Party shall be valid and effectual only if it is in writing and under the hands of duly authorized representative of such Party in this behalf and not otherwise.

**1.1.10** Any reference to any period commencing "from" a specified day or date and "till" or "until" a specified day or date shall include both such days and dates.

**1.2 DEFINITIONS:-** In this Agreement, the following words and expressions, unless repugnant to the context or meaning thereof, shall have the meanings hereinafter respectively as assigned to them as under:-

**1.2.1** "Act" means the Electricity Act, 2003 and its amendments;

**1.2.2** "Acquired Land" shall have the meaning set forth in Clause 4.3;

**1.2.3 "Agreement"** means this agreement together with all its Appendices and Annexures, if any and any amendments thereto made in accordance with the provisions herein contained;

**1.2.4 "Agreement Period"** shall have the meaning as specified in Clause 3;

**1.2.5 "CEA"** means the Central Electricity Authority as defined under section 2 (6) of the Electricity Act, 2003 or its successors;

**1.2.6 "Central Transmission Utility (CTU)"** means any Government Company which the Central Government has notified under sub-section (1) of section 38 of the Act;

**1.2.7 "Commercial Operation"** means the state of Unit/Project when Unit/Project is capable of delivering Active Power and Reactive Power on a regular basis after having successfully completed the commissioning tests as per Prudent Utility Practices;

**1.2.8 "Commercial Operation Date (COD)" in relation to generating unit:** means the date declared by the generating company with the permission of the State Authority on which the Commercial Operation of Unit/Project as the case may be is achieved by the Second Party;

**1.2.9 "Commercial Operation Date (COD)" in relation to the project** means the date of commercial operation of the last generating unit of the project.

**1.2.10 "Company"** means \_\_\_\_\_ a generating company within the meaning of section 2 (28) of the Electricity Act, 2003 and registered under Companies Act, 1956;

**1.2.11 "Contractor"** means any person, firm or body corporate engaged by the Second Party for the implementation of the Project;

**1.2.12 "Control Centre" or "State Load Despatch Centre"** located at Shimla or such other control center designated by the First Party from time to time from which the despatch instructions will be issued to the Second Party at the Station;

**1.2.13 "Debt"** means the amount of any loan, non-convertible debenture or other similar obligation, contracted or raised and received by the Second Party under the Financing agreements, and actually expended (or to be expended) for the Project and which shall not be greater than the principal amount of debt specified in the applicable currency in the estimate of Capital Cost of the Project;

**1.2.14 "Deliverable Energy"** means the electrical energy generated at the Station, as measured at generator(s) terminals less the summation of the following:-

- (i) actual auxiliary consumption for the bonafide use of auxiliaries, lighting and ventilation in the Power Station and Intake Works and the transformation losses (from generation voltage to transmission voltage) of the step up transformers at the power house switchyard; and
- (ii) transmission losses at actuals, which shall be the difference of the electrical energy measured at sending and receiving ends of the transmission line (i.e. the power station end and the Interconnection Point);

For this purpose and subject to above, the energy meter reading shall be taken on monthly basis at the Interconnection Point;

**1.2.15 "Despatch"** means to schedule and control the generation of the Project in order to commence, increase, decrease or cease the electrical output as delivered to the Grid System in

accordance with the instructions from the HPSLDC/ Control Centre in conformity with the agreement and Prudent Practices;

**1.2.16 "Despatch Instruction"** shall mean an instruction issued by the HPSLDC/ Control Centre to the Second Party for the despatch of power by message/fax/email to be confirmed in writing by HPSLDC/Control Centre as per the operating procedure developed by the Parties to operate the Project in accordance with the terms of this agreement and technical limits and Prudent Utility Practices including-

(a) an instruction to target active/reactive power output to be maintained by the Project;

(b) an instruction to synchronise or de-synchronise a generating unit at a particular time;

(c) an instruction to defer or cancel a scheduled outage or maintenance outage; and

(d) an instruction for backing down the active/reactive power due to Grid conditions;

**1.2.17 "Detailed Project Report (DPR)"** means the Project Report submitted by the Second Party and as approved by the competent authority;

**1.2.18 "Disincentive Energy"** shall have the meaning set forth in Clause 5.31;

**1.2.19 "Dispute"** shall have the meaning as specified in Article 11;

**1.2.20 "Effective Date"** means the date of signing of the Implementation Agreement;

**1.2.21 "Equity"** means the aggregate of all subscribed and paid up share capital of the Second Party in different currencies as converted into Rupees, by application of the procedure approved by the Authority/GoI, as invested in the Project and held by one or more shareholders in the Second Party, which shall be in accordance with the financial plan;

**1.2.22 "Financial Closure"** means the first business day on which substantial funds are made available to the Second Party under the terms of the Financing Agreement;

**1.2.23 "Financing Agreement"** means the loan agreements, notes, indenture, security agreements, letters of credit and other documents relating to the financing (including refinancing) of the Project and the capital cost of any part thereof, as amended, supplemented or modified from time to time and approved by the First Party;

**1.2.24 "Force Majeure"** shall have the meaning as described thereto in Article-7;

**1.2.25 "Government"** means the Government of Himachal Pradesh;

**1.2.26 "GoI"** means the Government of India;

**1.2.27 "Grid/Grid System"** means the network of power system interconnecting different Power Generating Stations, Transmission Lines and Sub-Stations for transmitting the electrical output from the Interconnection Point upto main load Centre(s);

**1.2.28 "HPSEBL"** means Himachal Pradesh State Electricity Board Limited.

1.2.29 **"HPERC"** and **"State Regulatory Commission"** means the Himachal Pradesh Electricity Regulatory Commission;

1.2.30 **"HPPTCL"** means Himachal Pradesh Power Transmission Corporation Limited;

1.2.31 **"HPSPCB"** means Himachal Pradesh State Pollution Control Board;

1.2.32 **"Himurja"** means Himachal Pradesh Government Energy Development Agency.

1.2.33 **"Incentive Energy"** shall have the meaning set forth in Clause 5.30;

1.2.34 **"Interconnection Facilities"** means all the facilities which shall include without limitation, switching equipment, communication, protection, control and metering devices etc. at the Interconnection Point(s) to be installed and maintained at the cost of the Second Party to enable evacuation of power output from the Project in accordance with this agreement;

1.2.35 **"Interconnection Point(s)"** shall mean the physical touch point at sub-station(s) of the HPSEBL/State Transmission Utility/Central Transmission Utility where the Project's transmission line for evacuating the power from the Project is connected to the Grid;

1.2.36 **"Local Area Development Committee (LADC)"** shall mean the Committee constituted by the Government and entrusted with the function as specified in Clause 4.16;

1.2.37 **"Local Area Development Fund (LADF)"** shall mean the i) Pre-Commissioning LADF-fund to be deposited by the project at pre-commissioning stage for its utilization towards local area development and ii) Post-Commissioning LADF - fund received from sale of 1% deliverable energy share at post commissioning stage to be distributed amongst all the Project Affected Families as per policy provisions.

1.2.38 **"Law"** means any Act, rule, regulation, notification, order or instruction having the force of Law enacted or issued by any competent legislature, Government or statutory authority in India;

1.2.39 **"MoEF & CC"** means Ministry of Environment, Forest and Climate Change, Government of India or its successor authority/agency;

1.2.40 **"Month"** means English Calendar month;

1.2.41 **"Net Saleable Energy"** means the electrical energy in KWh, delivered by the Second Party at the Interconnection Point, less the First Party Supply;

1.2.42 **"NRLDC"** means "Northern Regional Load Despatch Centre" or its successor entity;

1.2.43 **"PGCIL"** means Power Grid Corporation of India Limited.;

1.2.44 **"Parties"** refer to the First Party and the Second Party collectively;

1.2.45 **"Party"** shall refer to the Government and/or the Company individually;

1.2.46 **"Permanent Works"** means the permanent works forming part of the Project that are required to be constructed/installed and maintained as such for the implementation of the Project for at

least the Agreement Period and shall also include housing facilities for staff to be engaged for Operation & Maintenance of the Project;

**1.2.47 "Power Purchase Agreement (PPA)"** means a contractual agreement to be signed by the Second Party with a party for sale of power from the Project to that party;

**1.2.48 "Project Affected Area (PAA)"** shall have the meaning as set forth in Energy Policy.

**1.2.49 "Project Affected Family (PAF)"** shall have the meaning as set forth in Energy Policy.

**1.2.50 "Project Affected Zone (PAZ)"** shall have the meaning as set forth in Energy Policy.

**1.2.51 "Project"** means \_\_\_\_\_ Hydro-Electric Project proposed to be established on \_\_\_\_\_ river in the \_\_\_\_\_ District of Himachal Pradesh, India including complete hydro-electric power generating facilities along with all associated infrastructure.

**1.2.52 "Prudent Utility Practices"** means those practices, methods, techniques and standards that are generally accepted internationally from time to time by electric utilities for the purpose of ensuring safe, efficient and economic design, engineering, construction, commissioning, testing, operation and maintenance of various components of the Project of the type specified in this agreement and which practices, methods and standards shall be adjusted as necessary to take account of:-

- (i) Installation, Operation & Maintenance guidelines recommended by the manufacturers of plant and equipment to be incorporated in the Project; and
- (ii) The requirements of Indian Law; and
- (iii) Physical conditions at the Site.

**1.2.53 "Royalty"** shall have the meaning set forth in Clause 5.3;

**1.2.54 "Scheduled Commercial Operation Date"** means the date by which the Second Party shall have achieved the Commercial Operation of the project and approved by appropriate Authority.

**1.2.55 "Site"** means the site of Project appurtenances, generating plant including land, waterways, roads and any rights acquired or to be acquired by the Second Party for the purposes of the Project;

**1.2.56 "State"** means Himachal Pradesh ;

**1.2.57 "Station"** means the ----- for generating electricity, including any building and plant with step up transformer, switchgear, switchyard, cables or other appurtenant equipments, if any, used for that purpose;

**1.2.58 "State Transmission Utility (STU)"** means HPPTCL / HPSEBL (the Government Company specified as such by the First Party under sub-section(1) of section 39 of the Electricity Act,2003);

**1.2.59 "Temporary Works"** means all temporary works of any kind required for the implementation of the Project and that are incidental and ancillary to the design, engineering

and construction of the Project and are constructed/installed and maintained till the Commercial Operation Date of the Project, and will not form part of Permanent Works;

**1.2.60 "Transmission Licensee"** means a licensee authorized by the Appropriate Electricity Regulatory Commission to establish or operate transmission lines;

**1.2.61 "Unit"** means one hydro turbine generator including ancillary equipment and facilities thereto; and

**1.2.62 "Works"** means all works of civil, electrical and mechanical nature and including design, engineering, services, supplies and other work activities required and necessary for the implementation of the Project and shall also include the Permanent Works and the Temporary Works.

## ARTICLE 2

### 2. UPFRONT PREMIUM:-

Upfront Premium (non-refundable), shall be charged at following rates:

- a) For projects up to 2 MW capacity: Nil.
- b) For projects above 2 MW upto 5 MW capacity, the Second Party shall deposit Upfront Premium @ Rs. 50,000/- per MW at the time of signing of IA.
- c) If after enhancement of capacity, the capacity of the project remains up to 5 MW the Second Party shall have to pay upfront premium @ Rs 1,00,000/- per MW on whole capacity as capacity enhancement charges.

## ARTICLE 3

### 3. TERM OF THE AGREEMENT:-

**3.1 Effectiveness:** - This Agreement shall come into force on the Effective Date.

#### 3.2 Agreement Period:-

- (a) This Agreement shall remain in force upto a period of 40 years from the Schedule Commercial Operation Date of the Project, (Agreement Period) unless terminated earlier in accordance with the provisions of this agreement.
- (b) On completion of the Agreement Period, the Project shall revert to the First Party free from all encumbrances together with all land, buildings, plant, machinery, spare parts and all assets of the Project. After completion of 40 years, the First Party may either extend the agreement period on mutually agreed terms or may go for competitive bidding under Renovation and Modernization mode for next 30 years. The royalty for the extended period payable to First party will not be less than 30%.

**3.3 Survival:** - The termination or expiry of this agreement shall not affect the accrued rights, obligations and liabilities of either Party under this agreement, nor shall it affect any continuing obligations which this agreement provides, whether expressly or by necessary implication.



## ARTICLE 4

### 4. OBLIGATIONS OF THE FIRST PARTY

- 4.1 Granting Consents/Permissions and Assistance in Obtaining Clearances:-** The First Party hereby agrees to grant to the Second Party, all consents, permissions, statutory/non-statutory clearances, within its purview as required by the Second Party to undertake, establish, operate, maintain and transfer the Project. The First Party shall assist the Second Party for expediting the various statutory/non-statutory clearances required for the implementation of the Project, from various competent authorities of the First Party/Central Government or State Power Utilities. The First Party shall forward all relevant proposals received from the Second Party to the GoI/Government authorities and shall assist so that all sanctions are accorded/got accorded from the competent authority within the prescribed period.
- 4.2 Subsidiary Company:** - The First Party may provide possible assistance to the Second Party in the incorporation of the new subsidiary Company provided that the registered office of such a Company is within Himachal Pradesh.
- 4.3 Use of Materials:** - The First Party shall permit the Second Party, in accordance with the Law to collect and use boulders, stones, shingles, limestone and other building materials, except precious and semi-precious materials, from the river beds, and/or from the land acquired for or transferred to or leased out to the Second Party for the project, on payment of royalty in accordance with the Government rules/rates in force from time to time.
- 4.4 Acquisition and transfer of land:-**
- (a) The First Party shall acquire, at the request and expense of the Second Party, and in accordance with the provisions of Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation and Resettlement Act, 2013 (RFCTLARR Act, 2013) and other applicable laws, such private lands within the State of Himachal Pradesh as may be required by the Second Party for Permanent Works. The Second Party shall at its own risk also be allowed to acquire such land through direct negotiations with the owners in accordance with the prevailing laws, rules and regulations in the State.
  - (b) The First Party shall provide necessary assistance to the Second Party in obtaining permission of the competent authority for the removal of trees standing on the Acquired/leased Land and on the Government lands which in its reasonable opinion are required to be felled or removed for the Implementation of the Project.
- 4.5 Rehabilitation and Resettlement Plan:-** The First Party shall, subject to the approval of the competent authority, prepare a rehabilitation and re-settlement plan in association with the Second Party for local residents likely to be adversely affected or displaced, if any, due to construction of the Project at the Site as on the Effective Date. The cost of preparation and implementation of the above plan shall be borne by the Second Party.
- 4.6 Upgradation of Roads and Bridges:** - The First Party may, at the request and cost of the Second Party, construct, widen and strengthen such roads and bridges within the State of Himachal Pradesh as are considered reasonably necessary by the First Party. The First Party permits the Second Party to construct roads, bridges, culverts as considered necessary for the

~~Project in the Project lands. The First Party may also permit the Second Party to construct roads, bridges, culverts as are considered reasonably necessary by the First Party in the interest of the Project on a case-to-case basis.~~

- 4.7 Other Approvals:** - If any approval is required under the Law by the Second Party, the lenders, or Contractor(s) with respect to the Project, upon application therefore being made by the Second Party, First Party may take all reasonable and appropriate steps within its administrative power and as permissible by Law, to ensure that such approval is granted in a time bound manner mutually agreed between the parties.
- 4.8 Communication:-** The First Party shall provide due assistance to the Second Party to obtain, in accordance with the prevailing Law and regulations, necessary permits to install and use suitable radio communication systems, including Satellite communication equipment and walkie-talkies. Any system connecting with the National Telecommunication System or any International Telecommunication System will be subject to the approval/license from the relevant authorities, for the issuance of which First Party shall assist.
- 4.9 Explosives:-** The First Party shall provide due assistance to the Second Party, under the Law and regulations, to obtain permission to procure, store and use such explosives which are required for the execution of Project; provided that the responsibility of obtaining such a clearance and making the necessary arrangements rests with the Second Party.
- 4.10 Import License:-** The First Party shall provide due assistance to the Second Party in obtaining all necessary import licenses for the Project from the relevant GoI authorities to the extent permissible by Law. The Second Party shall submit a list of such equipment required to be imported for the Project to the First Party for approval.
- 4.11 Upstream/Downstream Projects:** - The First Party, through its Departments/Boards or IPPs shall be entitled to survey, investigate and implement any River Valley Power Generation Scheme upstream or downstream of the Project. The First Party shall, as and when required, put in place a Committee comprising of experts from the relevant field for determining the impact, if any, on the existing Project due to allotment of any upstream and/or downstream Project. In the event of a dispute, the decision of First Party in the matter shall be final and binding on all the parties.
- 4.12 Commitment towards Social/Environmental concerns:** First Party reserves the right to reduce capacity/discharge or abandon the project for meeting the commitment towards social / environmental concerns.
- 4.13 Monitoring Committee:** - First Party shall review and address various issues faced by the Second Party during the implementation of the project. State Level Committee under the chairpersonship of Hon'ble Power Minister of Himachal Pradesh shall review the progress from time to time.
- 4.14 Authority of Hydro Project Safety, Quality Control & Water Management:** - First Party has constituted an Authority for Hydro-Electric Project's Safety, Quality Control & Water Management at Directorate of Energy, GoHP. The authority shall be entrusted with roles and responsibilities for developing monitoring mechanism for the safety, quality and management of water flows of HEPs ensuring long term generation capability and residual life of Hydro-electric projects as per the guidelines provisioned in the State Energy Policy.

- 4.15 Declaration of Date of Commercial Operation (COD):** First Party will grant permission for declaration of COD of the generating unit/project, as the case may be, by the Second Party after ensuring successful trial run of the project and fulfillment of codal formalities and procedures laid down by the appropriate authorities, in line with the guidelines defined as per provision under Clause 4.1.1.1A of the State Energy Policy.
- 4.16 Local Area Development Committee:** - First Party shall constitute Local Area Development Committee (LADC) under the chairmanship of Deputy Commissioner of concerned District immediately after signing of the Implementation Agreement in line with the provisions of Energy Policy to administer Pre- commissioning LADF and Post -commissioning LADF as per provisions contained in the Energy Policy of the State.
- 4.17 Infrastructure Development Works:**-The Second Party shall build such infrastructural development works in the vicinity of the Project area that may be essentially required for the benefit of local population. The expenditure on such works shall be incurred by the Second Party. These developmental works may be mutually decided with the First Party.
- 4.18 Trees in the Land transferred to the Second Party:-** The First Party shall be responsible for felling and removing of the trees which are necessarily required to be felled or damaged trees during the execution of project on receiving the payment by Forest Department from Second Party on account of price of such trees at prevailing market rates as may be notified by the First Party from time to time. The net sale proceeds of the trees shall be made over to the Second Party.
- 4.19 Aerial Ropeway:** - The First Party shall allow the Second Party to set up temporary aerial ropeways / cable ways of any type for transporting material, men & machinery without the requirement of NOC of Gram Panchayat subject to adherence of safety parameters as per prevailing rules and regulations.
- 4.20 Construction Power:-** The First Party through HPSEBL shall provide electricity connection for the construction power required for execution of Project to the Second Party on priority basis wherever feasible
- 4.21 Evacuation Arrangement:**-The First Party through State Utilities:- HPPTCL or HPSEBL as the case may be, shall create the required evacuation infrastructure for the project as per the terms and conditions of the connectivity agreement strictly as per the CERC/HPERC regulations.
- 4.22 Recruitment of Staff:** - The implementation of the provisions in respect of recruitment of staff on the Project made under Clause 5.4 of this agreement shall be monitored strictly by the Labour Commissioner and Director, Employment as well as by the Department of Labour & Employment and in case of infringement of provisions of employment Clauses by the Second Party, the Labour and Employment Department shall initiate any stringent legal action as they may deem fit.
- 4.23 Comprehensive Insurance:** - The First Party/Department of Labour and Employment shall monitor from time to time, the validity of the Comprehensive Insurance executed by the Second Party during the construction and O&M stage of the Project.

## ARTICLE-5

### 5. OBLIGATIONS OF THE SECOND PARTY

#### 1. The equity participation in implementation of the Project as under:

Any change in the name and consortium of the Company (Second Party) shall not be allowed from the date of allotment except as allowed against clauses mentioned herein under. It shall be mandatory for Second Party to submit an affidavit stating therein that no change in consortium and name of directors/ promoters have been made. In case of default on the part of Second Party, allotted projects shall be liable for cancellation, except the Second Party follows the provisions laid down in clauses mentioned herein under and submit their request and other necessary documents required for effecting any change in name and consortium of the project.

#### I. Transfer of Equity

##### A. In case of Non-Himachalis

The Second Party (*Non-Himachalis*) implementing Hydro-Electric Projects are permitted to transfer the ownership by way of selling their equity stakes upto 100% during the implementation of the project in the name of any third party at any stage which is possessing equivalent or higher technical and financial strengths. However, there will be no restriction in respect of transfer of the project after commissioning.

In lieu of allowing change in name / transfer equity of Principal Promoters, a fee as per **Annexure-VIII** is to be deposited at the time of signing of Tripartite Agreement for transfer of project along with all liabilities/responsibilities in the name of new entity.

##### B. In case of Himachalis:

#### (a) Transfer of shares from Himachali to Himachali promoters:-

In case of Bonafide Himachalis/Co-operative Societies/Companies/ Voluntary Societies/Trusts/Partnership concerns/Sole Proprietorship concerns comprising wholly of Bonafide Himachalis to whom projects up to 2 MW and above 2 MW up to 5 MW capacity are allotted, the Government may consider the request of the promoters to transfer ownership wholly or partially to any other Bonafide Himachalis/Co-operative Societies/ Companies/Voluntary Societies/Trusts/Partnership concerns/ Sole Proprietorship concerns comprising wholly of Bonafide Himachalis, at any stage after allotment.

#### (b) Transfer of shares from Himachali to Non-Himachali promoters:-

In case of Bonafide Himachalis to whom projects up to 5 MW capacity are allotted, the Government may consider the request of promoters to sell/transfer 74% equity shares during implementation of project to Non-Himachalis which is possessing equivalent or higher technical and financial strengths and full disinvestment after commissioning.

In lieu of allowing sale/transfer of equity shares from Himachali promoters to Non-Himachali and change in name of the company, a fee as prescribed in **Annexure-VIII**, shall be charged at the time of signing of Tripartite Agreement for transfer of project in the name of new entity.

- (c) The fee shall be charged from the Second Party, both Himachalis & Non Himachalis, for changes in the shareholding/name of entity.
- (d) In case the Second Party changes the name of the company/change shareholding within permissible limit without prior approval of the Government, penalty as per **Annexure-VIII** for each change shall be payable by the Second Party.
- (e) In case of death of any of the promoters the shares will be transferable to his legal heir (s) after approval of the First Party.
- (f) Transfer of equity shares by Himachali to Non Himachali / Himachali together, is allowed within the percentage as prescribed herein above.

## 5.1 MILESTONES

### 5.2.1 Milestones achieved till date

Sr. No	Milestones	Details of achievement
1.	Deposit of 1 <sup>st</sup> Instalment of Upfront Premium	Deposited on-----
2.	Deposit of Processing fee	Deposited on-----
3.	Allotment Letter	Issued on -----
4.	Signing of Memorandum of Understanding (MOU)	Signed on -----
5.	Submission of DPR	Submitted on -----
6.	Grant of Technical Concurrence (TC)	Granted on-----

### 5.2.1 Milestones To Be Achieved

The Second Party agrees to implement the Project strictly as per the milestones stipulated by the First Party.

Following milestones shall be achieved by the Second Party, failing which consequential action as mentioned shall be taken by the First Party:-

Sr. No	Milestones	Time Period	Consequential Action
1.	Date of Signing of this Agreement (Implementation Agreement)	(Date) -----	-----
2.	Application for connectivity & Long Term Open Access (LTOA) Agreement with HPPTCL.	Within 1 month from the date of signing of IA.	Extension up to a maximum of 1 month for the reasons beyond the control of Second Party. If the Second Party fails to achieve the milestone even within extended time, allotment of Project shall be cancelled with the forfeiture of all deposits.

3.	Signing of Connectivity Agreement & Long Term Open Access (LTOA) Agreement with HPPTCL.	Within 4 months from the date of signing of IA.	Extension up to a maximum of 3 months for the reasons beyond the control of project developer. If project developer fails to achieve the milestone even within extended time, allotment of project shall be cancelled with the forfeiture of all deposits.
4.	Achieving Zero Date.	Within 6 months from the date of signing of IA	Extension up to a maximum period of 6 months for the reasons attributable to the Second Party subject to deposit of an extension fee Rs 20,000 per MW per month (extension for the period of delay on account of reasons beyond the control of Second Party shall be allowed without imposition of extension fee subject to satisfaction of the First Party) failing which, allotment of Project shall be cancelled with forfeiture of all deposits.
5.	Scheduled Commercial Operation Date (SCOD) of the Project	Zero Date plus construction period allowed as per TC plus extension of time granted by First Party, if any.	Delays during construction period on account of the reasons beyond the control of Second Party shall be considered if applied with full justification within 6 months from COD of the Project and shall be condoned / adjusted only after satisfaction of the appropriate competent authority of the First Party within six months from the receipt of application. SCOD of the project shall not be revised beyond synchronization of any one unit.
6.	Commercial Operation Date (COD) of the Project	Actual date when last unit of the project commences commercial operation.	Incentive / Disincentive as per Clause No. ....
7.	Handing over of the Project to the Government	The date determined on completion of 40 years from the Scheduled Commercial Operation Date (SCOD)...	Action as deemed fit

**Notes:**

- a) In case, the Second Party is unable to achieve Financial Closure within the time limit specified above for achieving zero date, the Second Party agrees to start construction work

on the project positively within the time limit specified above by investing from its equity component. The Financial Closure shall be concluded within six months of start of the construction work on the project after achieving Zero Date.

- b) In case, unit-wise construction schedule approved is different for different units of the project, then unit wise SCOD will be considered and it will be for calculation of disincentive / penalty only and it will not redefine the project's SCOD as defined above. The Second Party shall not be entitled for any benefit with respect to transfer of project after completion of the agreement period by referring to unit wise SCOD.
- c) Reasons for condonation of delays in achieving various milestones not attributable to the Second Party shall be considered and decided by the First Party.

**5.3 Submission of reports/documents:-** The Second Party shall submit the following reports and documents to the First Party at the time of start of construction, during construction and at O&M stage of the Project:

**5.3.1 At the time of start of construction:**

- i) Project related agreements including in particular the Construction Contracts / EPC Contract, if any, the Financing Documents and the O&M Contract, if any, in a soft copy.
- ii) The Second Party shall ensure that these Project related agreements do not in any way hold the First Party liable to the Second Party or any Contract in any manner whatsoever and shall be without prejudice to the rights of the First Party.
- iii) Documents on Quality Plan and Safety measures to be adopted at site indicating the procedure, organization charts depicting the hierarchy of personnel deployed for Safety, QA and QC with their designated role both internal and an independent third party. The third party inclusion is particularly required in respect of hydro-mechanical components (Gates, Hoisting Arrangement etc.), Steel Liner & Penstock w.r.t. Ultra-Sonic/Radiographic, DPT (Dye Penetration Test), Spectroscopy and Hardness Test etc. and for Electro-mechanical components.
- iv) Important design parameters/specifications for civil works of the project.

**5.3.2 During Construction Stage:**

- i) Monthly hydrological and meteorological data at the end of every calendar month.
- ii) Quarterly Status of Employment at the end of every calendar quarter on the prescribed format.
- iii) Quarterly physical and financial progress report at the end of every calendar quarter on the prescribed format along with videography covering various construction activities of the Project in that quarter. Such progress report and video recording shall be provided not later than fifteen days after the close of each quarter.
- iv) Quarterly reports on quality and safety measures undertaken / adopted, supported with documentary proofs in the form of photographs, videography and test reports etc. at the end of every calendar quarter.
- v) Inventory of hydro mechanical and electromechanical equipment with manufacturer manuals indicating the specifications to be followed strictly during construction, Operation & Maintenance stage.

### 5.3.3 O&M-stage:

- i) Monthly Discharge data at the end of every calendar month on the prescribed format.
- ii) Monthly report on release of environmental flow at the end of every calendar month.
- iii) Quarterly Status of Employment at the end of every calendar quarter on the prescribed format.
- iv) Pre & Post Monsoon mandatory safety inspection/ audit reports in case of large Dam project.

## 5.4 EMPLOYMENT TO HIMACHALIS

5.4.1 The project developer shall have to provide employment to bonafide himachalis in respect of all the unskilled / skilled staff and other non-executives as may be required for execution, operation and maintenance of the project. However, the first preference will be given to oustees. In the event of non-availability of the requisite skilled manpower at various levels with requisite qualification and experience, the project developer will be free to recruit such persons from outside the state.

5.4.2 The project developer shall satisfy that the contractors/sub-contractors engaged by them for the project shall give employment to local people / himachalis for appointment as supervisors, workmen and labourers / workers in the project. The engagement of minimum himachalis in the project shall be as per the Industrial Policy of the State Government.

5.4.3 In regard to direct recruitment of engineers and other executives, other things being equal in terms of eligibility criteria, qualification, experience etc., the project developer shall give preference to the candidates well conversant with customs, culture, language and dialects of Himachal Pradesh.

5.4.4 The project developer shall ensure that during the deployment of himachalis in respect of executive/non-executive/workmen (skilled / unskilled) categories at any stage of the project implementation, if it is not possible to recruit 100% staff from himachalis for justifiable reasons, only then the project developer shall maintain not less than 80% of the total employees/officers/executives from bonafide himachalis persons as per State Industry Policy.

5.4.5 The project developer shall provide employment as per the provision of R&R plan duly approved by the competent authority.

5.4.6 The petty contracts of the road work, retaining walls, buildings construction, carriage of construction material like sand, aggregate, cement, steel etc, engagement of all categories of other service providers, taxis for the staff deployed to the sites, engagement of other light and heavy vehicles, running of canteens / mess engagement of security personnel through ex-servicemen shall normally be awarded to locals / Himachalis.

5.4.7 The project developer shall also provide training programme to the locals affected by the project so that they are in a position to get employment in respect of various technical/administrative jobs in the Project.

5.5 **Rehabilitation and Resettlement Plan:-** The Second Party shall execute the Rehabilitation and Resettlement Plan prepared by the First Party, pursuant to Clause 4.6 at its cost and also pay for the cost of preparation of the same to the First Party as stipulated under Clause 4.6. The amount so incurred shall form part of the Project cost.



- 5.6 Consultancy:-** The Second Party agrees to contract engineering services of a reputed design consultancy organization to oversee the Project planning, its layout design of various project components and quality of construction to ensure safety of the project components/structures during execution and operation of the project in such a way that there is no loss of human life, property of the people, energy generation etc.
- 5.7 Free Flow/Riparian distance:-** The Second Party shall develop project in the domain allotted by the First Party. The Second Party and the First Party shall ensure minimum horizontal distance of 250m or elevation difference of 50m as the case may be, between two projects, depending upon the topography and terrain of the area to have visible flow of water in the original stream. However, the Domain Change Committee constituted by the First Party on case to case basis may allow relaxation of this condition considering the technical, design, socio-economic & topographical aspects.
- 5.8 Site investigations:-** The Second Party shall be deemed to have conducted a due diligent exercise in respect of all the aspects of the Project, including a detailed survey of the site. The failure to investigate fully the Site or sub-surface conditions shall not relieve the Second Party from its responsibility for successfully implementing the Project.
- 5.9 Compensatory Afforestation:-** The Second Party shall pay to the First Party the cost of raising compensatory afforestation and its maintenance for a period and the extent of area, as may be determined by MoEF & CC, GoI.
- 5.10 Water requirement for construction:-** The Second Party shall ensure that the water requirement for construction of the Project including potable water shall be generally arranged and harnessed by them from the river source.
- 5.11 Maintaining Ecological Balance:-** The Second Party shall be responsible for maintaining the ecological balance by preventing deforestation, water pollution and defacement of natural landscape in the vicinity of Works. The Second Party shall take all reasonable measures to prevent any unnecessary destruction, scarring or defacement of the natural surroundings in the vicinity of the Works.
- 5.12 Existing / Alternative facilities:-** In case any existing facilities including, but not limited to, irrigation systems, water supplies, roads, bridges, buildings, communication system(s), power systems and water mills are adversely affected because of the implementation of the Project, the Second Party shall be responsible for taking remedial measures to mitigate such adverse effects. The cost of the above remedial measures shall become a part of the Project cost. Such facilities shall be as mutually identified and agreed upon between the Second Party and the First Party. The Second Party shall not interfere with any of the existing facilities till an alternate facility, as identified, is created.
- The Second Party shall make suitable financial provisions for mitigation of degradation of environment due to disturbance of eco-system in watershed area, at the cost of project.
- The Second Party shall be responsible for mitigation of degradation of environment due to disturbance of eco-system in watershed area. The cost of the same will be entirely borne by the Second Party.
- 5.13 Improvement of Existing Roads:-** The Second Party shall bear the cost of improvement/widening of the existing roads in the vicinity of the project area which are essentially required to be used for the construction of the Project.

**5.14 Consumptive Use of Water:** The First Party shall have the right for withdrawal of water from the river course for the consumptive use by pumping or by gravity for the purpose of potable water supply and irrigation to the affected population.

**5.15 Local Area Development:-** The Second Party shall build such infrastructural development works in the vicinity for the project area that may be essentially required for the benefits of local population. The expenditure on such works shall be incurred by the Second Party. These developmental works may be mutually decided with the First Party.

**5.16 Police Station/Chowki and Labour Office:-** The Second Party shall inform the local Police Station/Chowki and the Labour Office about the details of the work force engaged from within the State or outside regularly.

**5.17 Protection of water rights:-** The Second Party shall ensure protection of the water rights of the local inhabitants for drinking and irrigation purposes etc. by verifying the revenue entries and activities of Jal Shakti department so as to ensure that such rights are not infringed upon. Any dispute in the matter shall be referred to a committee headed by Deputy Commissioner to be appointed by the First Party involving Jal Shakti and Revenue departments. Thereafter, the decision of the First Party shall be final and binding on all the parties.

**5.18 Upstream and Downstream Projects:-** The Second Party shall have no claim on any project upstream or downstream of the allotted project. There shall be a stream / basin wise coordination committee of various project developers of concerned stream/ basin under the chairmanship of Director Energy to resolve any issue arising with the upstream and downstream project with respect to construction, water availability, transmission, sharing of cost/ obligation/ benefit etc. as referred.

**5.19 Dumping of Excavated Material:-**

**5.19.1** The Second Party shall be allowed to use the muck / mineral generated during the execution of the project work and also shall be allowed to set up captive stone crusher in the project area as per the HP Minor Mineral Rules provided the Second Party adheres to the prevailing environmental safe guards. The royalty on the usage of such minerals shall be payable to the State Industries department as per rules.

**5.19.2** The Second Party shall be required to follow environmental related regulations concerning disposal of muck and soil etc. The Second Party shall use such material for the project as may be found suitable for the construction and the remaining material shall be allowed to be used by other development departments of the State etc. subject to the prevailing Rules and Regulations.

**5.19.3** The Second Party shall ensure that the material excavated from the site shall be dumped in the area duly approved by the MoEF& CC, GoI/HPSPCB.

**5.20 Project inspection:-**

**5.20.1** The First Party shall carry out periodic inspections to the project site during construction stage, after studying and analyzing the information supplied by the Second Party.

**5.20.2** In case of notice of any deviation during inspection to the project site by the inspection team so deputed by the First Party, in relation to the approved norms including the size and location of various components such as Diversion Structure, Water Conductor System, Penstock, Power

House, Electro-Mechanical installations etc. Inspection team shall seek a report from the Second Party to explain the reasons of such deviation. The inspection team shall examine the report so received and analyse each deviation noticed and clearly determine the reasons thereof including the compelling circumstances, such as geological surprises, designs constraints, environmental and local issues etc., if any, and make a comprehensive report.

**5.20.3** The deviations undertaken without any compelling reasons or with mala-fide intentions shall invite levy of penalty to be computed by DoE in each case subject to maximum of the cost in proportion to the deviation of the respective components apart from imposing appropriate cost on the Second Party in consonance with the adverse impacts on social or community infrastructure.

**5.20.4** Provided where the deviation is such that it affects or encroaches upon the domain of the upstream or downstream projects in any manner, the State Government may cancel the allotment of project after affording the opportunity of being heard.

**5.20.5** Provided further that First Party may depending upon the circumstances of each case direct the Second Party to restrict to particular domain apart from levying penalty as laid down in the preceding Para.

**5.21** The Second Party shall, at all times, afford access to the Site to the authorized representatives of the First Party and to the persons duly authorized by any Governmental Agency having jurisdiction over the Project, including those concerned with safety, security or environmental protection to inspect the Project Site and to investigate any matter within their authority and upon reasonable notice, the Second Party shall provide to such persons reasonable assistance/necessary information to carry out their respective duties and functions with minimum disruption to the construction, operation and maintenance of the Project consistent with the purpose for which such persons have gained such access to the Site.

**5.22 Safety measures:-**

**5.22.1** The Second Party shall share the detailed engineering drawings of the Project and equipment installed whenever directed by the First Party to do so, to ensure transparency, safety, quality control and timely remedial action in case of operational problems.

**5.22.2** The Second Party shall ensure proper quality control and safety measures during investigations / execution / Operation & Maintenance of the project keeping in view all quality control and safety measures as per relevant IS Codes / adopted standards and O&M Manual. Second Party shall also ensure essential first aid facilities at all Project sites.

**5.22.3** The Second Party shall ensure that the residential camps for all categories of manpower are situated at safer locations by taking into consideration the occurrence of probable flash floods and other eventualities like cloudbursts etc. The Second Party shall also ensure the well interconnectivity of the whole Project area through effective communication and transportation arrangements.

**5.22.4** The Second Party shall ensure that all the Project vehicles and the access to roads are properly maintained and fully safe for use.

**5.22.5** The Second party shall be entirely responsible for detailed designs and working drawings of project components with regard to their structural, hydrological and mechanical performance & safety and ensure its compliance during execution of the Project.

**5.23 Project Performance:-** The Second Party shall ensure that the execution, operation and maintenance of the Project is in conformity with the Project concept as per Detailed Project Report (DPR), Prudent Utility Practices and the manufacturer's specifications. The Project/Unit(s) shall be capable of meeting the load despatch requirements. The Second Party shall follow the directives of the HPSLDC/Control Centre in the interest of integrated grid operation. Any dispute with reference to the directives of the HPSLDC/ Control Centre shall be referred to State Electricity Regulatory Commission whose decision in such a matter shall be final. Pending the decision of State Electricity Regulatory Commission, HPSLDC's/Control Centre's directives shall prevail in the interest of smooth operation of the grid.

**5.24 Free Power Royalty:**

**5.24.1** Provisions as per signed MOU, as the case may be, plus 1% additional free power towards LADF.

**5.24.2** In case the First Party levies any duty/tax on generation and supply of power, the same shall be borne by the Second Party except for free power royalty which shall be borne by the First Party.

**5.25 Maintenance of Project:-**

**5.25.1** The agreement shall remain in force up to a period of 40 years from the Scheduled Commercial Operation Date of the project. Thereafter, the project shall revert to the First Party free of cost and free from all encumbrances and liabilities. The project assets would be maintained by the Second Party in a condition that would ensure rated efficiency of the project and residual life of civil, mechanical and electro-mechanical components at any point of time. During the 10<sup>th</sup>, 20<sup>th</sup>, 30<sup>th</sup>, 35<sup>th</sup> & 40<sup>th</sup> years of operations, the First Party would carry out mandatory inspection of the project in this regard. After the inspection at 35<sup>th</sup> year decision will be taken by the First Party with respect to transfer / extension / maintenance of the project within 2 years of the inspection.

**5.25.2** If during such inspections it is found that the project capacity or life is being undermined by inadequate maintenance, the First Party reserves all the rights to terminate the agreement at any time.

**5.25.3 Ensuring Flow of Water:-** The project developer shall ensure release of minimum environmental flow (e-flow immediately downstream of the diversion structure of the project throughout the year. The e-flow shall not be less than the threshold value of 15% of minimum inflow observed in the lean season in line with the State Pollution Control Board notification.

The Second Party shall provide necessary arrangement/ mechanism in the civil structure including discharge measurement system for the release of laid down minimum flow immediately downstream of the diversion structure:

In case of violation by the project developer, action will be taken by Department and by appropriate authority in line with the prevailing guidelines and laws.

**5.29 Protection of Fish Culture:-** The Second Party shall take appropriate steps, as may be required, for the protection of fish culture as per environmental requirements and promotion of rearing of fish, wherever feasible in the project area. The Second Party shall enter into a separate agreement on protection of fish culture with the First Party, if it is considered necessary by the Fisheries Department of the Government of Himachal Pradesh.

**5.30 Use of Facilities:** - Subject to availability, security, safety, law and order and operational factors being met, the Second Party shall permit free use, by the First Party and the general public, of all service roads/bridges constructed and maintained by it. Other facilities like hospitals, post offices, schools etc. shall also be extended to the local public in this regard based on the objective of providing such facilities.

**5.31 Revalidation of TC:** - In case the Second Party fails to achieve the zero date and to start the construction work within 3 years of granting TC, the re-validation of the TC shall be mandatory keeping in view the latest hydrological data and permissible limit of CUF.

**5.32 Declaration of COD:** - After the Second Party ensures the successful trial run of the project and fulfillment of Codal formalities and procedures laid down by the appropriate authorities for declaration of COD of the project, the First Party shall grant permission for declaration of COD to the Second Party as per the guidelines provisioned in the State Energy Policy.

**5.33 Mode of sale of power:** - The Second Party shall be free to dispose of power from the project(s), after allowing royalty in the shape of free power to the First Party in any manner they like in accordance with the provisions contained in the Electricity Act, 2003 and amendments thereof and the rules and regulations made there under.

**5.34 Incentive For Early Commercial Operation of The Project:-** In case the Commercial Operation Date (COD) of the project is achieved prior to the Scheduled Commercial Operation Date (SCOD) of the project, the Second Party shall be entitled for incentive as under:-

**5.34.1** From COD of the project upto the SCOD of the project, such percentage of project deliverable energy as agreed in respective agreements two tenth (0.2) percentage points for each period of seventy three (73) days (or part thereof) falling between the COD and SCOD of the project generating units.

**5.34.2** Incentive will be calculated and will be given in the form of energy with free power energy delivery and it will be decided within 6 months of the COD of the Project/ Generating Unit and will be adjusted in next 12 months in twelve equal installments.

**5.36 Disincentive For Delayed Commercial Operation of The Project:-** In case the Commercial Operation Date (COD) of the project is delayed beyond the Scheduled Commercial Operation Date (SCOD) of the project, the Second Party shall be liable for dis-incentive as under:-

**5.36.1** Dis-incentive shall not be imposed in the event that Synchronization of unit(s) achieved prior to Scheduled Commercial Operation Date (SCOD) subject to the condition that other generating unit(s) of the project shall achieve Commercial Operation Date of respective generating units within 3 months from the date of synchronization of first generating unit.

**5.36.2** From SCOD of the respective generating units and upto the COD of the respective generating units, such percentage of project deliverable energy as agreed in respective agreements, two tenth (0.2) percentage points for each period of seventy three (73) days (or part thereof) falling between the COD and SCOD of the respective units.

**5.36.3** Dis-incentive will be calculated and will be given in the form of energy with free power energy delivery and it will be decided within 6 months of the COD of the Project/ Generating Unit and will be adjusted in next 12 months in twelve equal installments.

**5.37. Usage of Land:-** The Second Party shall ensure that the land is used exclusively for the activities related to the project. Any land exceeding the bonafide requirement of the project shall be surrendered to the First Party.

**5.38 Common dedicated transmission system:-** The project developers shall be at liberty to erect common dedicated transmission lines for joint evacuation of power from two or more projects by way of suitable Consortium Agreements. HPSEBL/HPPTCL, as the case may be, will ensure availability of evacuation arrangement before commissioning of the project.

**5.39 Fishing, Recreational and Navigational Rights:-** The fishing, recreational and navigational rights in the river, water, channels, reservoirs, lakes shall remain vested in the First Party subject only to such restrictions as may be necessary for the operational requirements, safety and security of the Project.

**5.40 Precious material found during execution of Project:-** During the implementation of the Project, in case any object of archaeological importance is found by the Second Party or by any of its employees/ Contractors, the Second Party shall arrange to hand over the same to the First Party free of cost, provided that, in case any precious or semi-precious material is located, the Second Party shall inform the First Party immediately and shall then abide by the instructions of the First Party which shall be communicated within a period of two (2) months from the date of receipt of such intimation from the Second Party.

**5.41 Adherence to laws:-** The Second Party shall follow all the relevant laws, including, but/ without limitation, all labour laws, and shall also provide for safety provisions as per the Electricity Act, 2003, Factories Act, 1948, Mines Act, 1952 and such other statutory provisions relating to the safety of the Projects and any subsequent amendments made thereto.

**5.42 Trees in the Land transferred to the Second Party:-** The Second Party shall pay to the Forest Department of the First Party, the price of the trees as are required to be felled or are damaged in the execution of the Project, at prevailing market rates as may be notified by the First Party from time to time.

**5.43 Tax Deduction at Source:-** The Second Party shall ensure that it makes the payments for works within the State of Himachal Pradesh and deposits the tax deducted at source with the offices of the Income Tax Department located within the State of Himachal Pradesh.

**5.44 Indemnity:-** The Second Party shall be fully responsible for any damage or loss arising out of the construction, operation or maintenance of the Project to any property or person.

**5.45 Misrepresentation:-** The Second Party assures the First Party that there is no misrepresentation in the information supplied by it to the First Party at any stage. The First Party reserves the right to cancel the IA after giving an opportunity to the Second Party in case it is found that there was some such misrepresentation by the Second Party and/or in the event of breach of any of the provisions of this IA.

**5.46 Comprehensive Insurance:-** The Second Party shall be bound to execute total comprehensive insurance of the whole Project covering loss of human life, property etc including third party losses, during construction and O&M of the Project.

**5.47** The Second Party agrees to abide by the provisions as contained in the Energy Policy of the Government of Himachal Pradesh.

## **ARTICLE 6**

### **6. TERMINATION AND TAKING OVER OF THE PROJECT:-**

- 6.1** The First Party reserves the right to terminate the agreement if the Second Party fails to achieve the milestone as stipulated in Clause 5.1.
- 6.2** In the event it is eventually confirmed as impossible or impractical to start construction work on the Project on or before the expiry of period mentioned in Clause 5.1 of this agreement, for the reasons other than those solely attributable to the First Party, the First Party reserves the right to terminate the agreement.
- 6.3** In the event of continuous stoppage of construction on the main Project components by the Second Party for a period of more than three months for reasons not covered under Force Majeure and for reasons attributable to the Second Party, the First Party shall, after giving due opportunity to the Second Party, have the right to terminate this agreement. All deposits shall stand forfeited and the site shall revert to and vest in the name of First Party without any compensation. Notwithstanding any investment in the First Party under this Clause, the Second Party shall be liable to pay all the dues owed to the First Party by the Second Party in pursuant to this agreement.

## **ARTICLE 7**

### **7. FORCE MAJEURE:-**

- 7.1** For the purpose of this agreement, "Force Majeure" shall mean an event which is unforeseeable, beyond the control of the Second Party and not involving the Second Party fault or negligence. Such events may include acts of the First Party /GoI either in its sovereign or its contractual capacity, war, civil war, insurrection, riots, revolutions, fires, floods, epidemics, quarantine restrictions, freight embargoes, radioactivity and earthquakes.
- 7.2** If a Force Majeure situation arises, the Second Party shall promptly inform the First Party in writing of such conditions and the cause thereof. Unless otherwise directed by the First Party in writing, the Second Party shall continue to perform its obligations under the agreement, as far as is reasonably practical, and shall seek all reasonable alternative means for performance, not prevented by the Force Majeure event.
- 7.3** In the event, a Party is rendered unable to perform any obligation required to be performed by it under this agreement by Force Majeure, the particular obligations shall, upon information to the other Party be suspended for the period of Force Majeure. The time for performance of the relative obligations suspended by Force Majeure shall be extendable by the period of delay which is directly attributable to Force Majeure.

## **ARTICLE 8**

### **8. CONFIDENTIALITY:-**

Each Party hereto agrees that it shall not divulge any trade, commercial or technical secrets or confidential matters of one another to any third party, except for the purpose of implementation, operation and maintenance of the Project.

## ARTICLE 9

### 9. GOVERNING LAW:-

The rights and obligations of the Parties under or pursuant to this Agreement shall be governed by and construed according to Law. This Agreement shall be subject to the jurisdiction of the competent courts of Himachal Pradesh.

## ARTICLE 10

### 10. VIOLATION PENALTY:-

Any violations of the above mentioned issues concerning Policy parameters, IA may result into monetary penalty including cancellation of the Project.

## ARTICLE 11

### 11. RESOLUTION OF DISPUTES:-

11.1 The Parties shall attempt to resolve any dispute in relation to, arising out of or in connection with the agreement (hereinafter referred to as the Dispute) by mutual discussions.

11.2 Any difference and/or disputes arising at any time between the parties out of this IA or interpretation thereof shall be endeavored to be resolved by the parties hereto by mutual negotiations, failing which the matter shall be referred to a two tier Grievance Redressal Process. The matter shall be addressed by the Departmental Grievance Redressal Committee constituted by the First Party under the Chairmanship of Chief Executive Officer, Himurja, Shimla. In case the issue remains unresolved to the satisfaction of the Second Party, the matter shall be referred to a State Level Committee. If the Second Party is still not satisfied with the verdict, the dispute shall be subject of the jurisdiction of Civil Courts in Himachal Pradesh.

11.3 During the pendency of the such proceedings, both Parties shall continue to perform their respective obligations under this agreement, unless the performance of such obligation itself is subject of such proceedings.

11.4 No party shall be considered to be in default under this IA for any breach of any of the terms thereof due to the imposition of restrictions and onerous regulations by any Government or statutory authority or agency or other cause beyond its reasonable control.

11.5 All legal proceedings arising in connection with this agreement shall be subject to the jurisdiction of the Himachal Pradesh High Court and its subordinate courts in the State of Himachal Pradesh irrespective of the place of performance/execution of the Agreement.

## ARTICLE 12

### 12. ASSIGNMENT AND AMENDMENTS:-

The Second Party may, only for the purpose of arranging or rearranging finance for the Project, assign or otherwise transfer all or any portion of its rights and benefits with prior written approval of the First Party, but not its obligations under the agreement to any other person or entity. No amendment or waiver of any provision of the agreement, and no consent to any departure by either Party here from, shall in any event be effective unless the same is in writing and signed by each of the parties.



**ARTICLE 13**

**13. COMMUNICATION:-**

**13.1** Any communication/notice by one Party to the other Party under this agreement shall be deemed to have been served if sent by cable, fax or Email followed by a confirmation letter delivered by hand or by mail to the respective addresses.

**13.2** Communication should be addressed as below:-

**If to the Company**

**If to the Government**

Chief Executive Officer,

Himurja,

H.P. Govt. Energy Development Agency

Shimla-171009, H.P. India.

Tele- Fax No.-----

**13.3** Either Party may change the address and/or addresses to which such communications/notices are to be delivered or mailed by duly informing the other Party.

Any other terms and & conditions deemed necessary shall form integral part of this Implementation agreement as per the provisions thereto.

In witness whereof, the Parties hereto have executed and delivered this agreement at Shimla, Himachal Pradesh on the date first written above.

**For and on behalf of the  
Government of Himachal Pradesh**

**For and on behalf of Company  
M/s \_\_\_\_\_**

( Name--- )  
(Special Secretary (NES) -cum-  
Chief Executive Officer  
Himurja, Shimla-171009, H.P.

**WITNESSED BY:**

**WITNESSED BY:**

1.

1.

2.

2.

## PRE-IMPLEMENTATION AGREEMENT

For \_\_\_\_\_ HYDRO - ELECTRIC PROJECT (\_\_\_\_\_ MW)

This agreement executed on this \_\_\_\_\_ day of the month of \_\_\_\_\_ Two Thousand and \_\_\_\_\_ between the Governor of Himachal Pradesh through Director Energy, on behalf of Government of Himachal Pradesh having its office at \_\_\_\_\_ - Shimla-(H.P.) \_\_\_\_\_ - (hereinafter referred to as the "First Party"), which expression, unless repugnant to the context or meaning thereof, shall include its successor(s), administrator(s) or permitted assigns) of the **FIRST PART.**

AND

M/s. \_\_\_\_\_, having its registered office at \_\_\_\_\_ (hereinafter referred to as the "Second Party"), which expression shall, unless repugnant to the context or meaning thereof, include its holding company, subsidiaries, associates, successor(s), administrator(s), and permitted assigns) through \_\_\_\_\_ who has been duly authorized by the Second Party vide their resolution dated \_\_\_\_\_ to execute this agreement, of the **SECOND PART.**

WHEREAS, the First Party has decided in accordance with the provisions of Hydro Power Policy/Energy Policy of GoHP to allow power generation in the Private Sector and has invited proposals for private investments in such Projects, interalia \_\_\_\_\_ Hydro Electric Project in \_\_\_\_\_ District (Himachal Pradesh) of the capacity of \_\_\_\_\_ MW, (hereinafter referred to as the "Project"); and

WHEREAS, the Second Party is desirous of setting up \_\_\_\_\_ Hydro-electric Power Project (\_\_\_\_\_ MW) in District \_\_\_\_\_, Himachal Pradesh on river \_\_\_\_\_; and

WHEREAS, the First Party vide Letter of Allotment dated: \_\_\_\_\_ has allotted \_\_\_\_\_ Hydro-electric Project (\_\_\_\_\_ MW), in favour of the Second Party for detailed investigations, techno-economical studies and implementation of the said Project and are desirous of reducing in writing the terms and conditions of the said *Agreement*.

WHEREAS, the Second Party has deposited the First installment of the upfront premium amounting to Rs. \_\_\_\_\_ on \_\_\_\_\_ with the First Party and shall deposit the balance upfront premium with the First Party at the time of signing of Implementation Agreement; and

WHEREAS, the Second Party has agreed to contribute and provide to the First Party a minimum of 1.5% of Final Project Cost towards LADF for financing local area development activities during execution of Project as per schedule of payment mentioned below:

- i) 1<sup>st</sup> installment comprising 50% of total payable LADF at the time of signing of Implementation Agreement alongwith the Bank Guarantee (BG) of the 2<sup>nd</sup> & 3<sup>rd</sup> installments of LADF amount which shall be returned by the First Party immediately after receipt of amount against the due instalments to the Second Party.
- ii) 2<sup>nd</sup> installment of 25% will be paid within one year of Zero date and 3<sup>rd</sup> installment of 25% will be paid within two years from the date of achieving of Zero date. The balance amount worked out on the basis of total completed cost of within six months after achieving

~~Commercial Operation Date of the Project. The completed cost will be settled at the time of allowing Commercial Operation Date of the Project.~~

In case of failure to adhere to the time lines as prescribed under (i) and (ii) above, the Project Developer shall be levied interest on the due amount of LADF @ 12 %;and

**WHEREAS**, the Second Party is allowed to charge Pre-Commissioning LADF to any Head other than Project Cost Heads; and

**WHEREAS**, in case the Second Party fails to deposit Pre-Commissioning LADF dues, the First Party shall recover the amount due along with interest component in terms of energy to be computed as an uniform percentage of the deliverable energy, six month after Commercial Operation Date of the Project and the same shall be recovered with in next one year in 12 equal installments. The quantum of deduction shall be worked out on the basis of average sale rate corresponding to the previous year realization; and

**WHEREAS**, the Second Party has agreed to contribute additional 1% Free Power over and above the agreed rates of normal Free Power Royalty Component to the First Party as per the provision incorporated by the First Party in its Hydro Power/Energy Policy towards LADF for providing regular stream of revenue for income generation to the Project Affected Families in the form of annuity over the entire life of the project; and

**WHEREAS**, the Second Party has incorporated a Special Purpose Vehicle (SPV) for the implementation of the project with its registered office in Himachal Pradesh as per provisions of Energy policy of the State.

**NOW THIS PRE IMPLEMENTATION AGREEMENT BETWEEN THE PARTIES HERETO WITNESSETH AS FOLLOWS:**

1. The equity participation in implementation of the project as under:

Sr. No.	Name of Company/Consortium	Equity participation

The Second Party agrees that Principal Promoters of the Second Party with prior approval of First Party are allowed to sell / transfer their equity up to 100% during the implementation period of the project in the name of any third party, which is possessing equivalent or higher technical and financial strengths, subject to the fulfillment of the below mentioned terms & conditions. However, there will be no restriction in respect of transfer of the project after commissioning;

- a) A detailed proposal showing competence in terms of financial and technical credentials of the new entity willing to acquire the project, is submitted for consideration of the First Party by either of the parties, along with the firm letter of consent and valid resolutions duly passed by the Board of Directors of both the parties, stating that all liabilities and responsibilities assigned in favour of the Second Party shall be acceptable to the new entity.

- b) ~~An undertaking to the effect that all liabilities as well as payments due in favour of the Second Party are duly accepted by the new entity.~~
- c) The new entity should possess adequate financial as well as technical competence in such a manner that the credential of the new entity should meet the strengths required for Qualification as per the allotment terms and conditions.
- d) For allowing change / transfer of equity of Principal Promoters, a fee @ Rs.50,000/- per MW subject to maximum of Rs.50 lakh is to be deposited at the time of signing of Tripartite Agreement (TA) / Supplementary Pre-Implementation Agreement (SPIA) for transfer of project along with all liabilities / responsibilities in the name of new entity.
- e) If Second Party agrees that if they change / dilute its equity participation of the constituent member(s) or changes the name of the Second Party (whether it is a Company / Limited Liability Partnership (LLP) firm / Body Corporate) without the prior approval of the First Party, a penalty at the rates described below shall be levied. Accordingly, a Supplementary PIA/TA to this effect shall be signed within two months from the conveyance of approval. The Second Party shall intimate to the First Party about the above changes as early as possible on priority within 6 months.

Sr. No.	Description	Penalty Charges
1.	For any equity change without the prior approval of the Government	Rs.20,000/- per MW subject to maximum of Rs.20 lakh.
2.	For change of name of the Company / Firm without the prior approval of the Government	Rs.20,000/- per MW subject to maximum of Rs.20 lakh.
3.	For change in equity as well as change in name of the Company / Firm without prior approval of the Government.	Rs.20,000/- per MW subject to maximum of Rs.20 lakh.

2. The Second Party is desirous of and has submitted its proposal to the First Party for investigations and implementation of the proposed \_\_\_\_\_ Hydro-electric Power Project (\_\_\_\_\_ MW) in \_\_\_\_\_ District of Himachal Pradesh.
3. The First Party has accepted the proposal of the Second Party and has agreed, in principle, to allow them to investigate the Project subject to fulfillment of terms and conditions of this Pre-Implementation Agreement by the Second Party.
4. Following milestones shall be achieved by the Second Party failing which consequential action as mentioned below be taken by the First Party. The Second Party shall be required to submit monthly progress report to the First Party. The First Party will be at liberty to cancel the Pre Implementation Agreement, after affording due opportunity to the Second Party in case the First Party is not satisfied about the progress made by the Second Party.

Sr. No	Milestones	Time Period	Consequential Action.
1.	Submission of Detailed Project Report (DPR) as per guidelines at Annexure_____.	24 months from the date of signing of PIA for Projects above 5 MW & up to 25 MW and 30 months for Projects above 25 MW (Additional 6 months for Projects falling under	Extension up to a maximum period of 12 months for the reasons attributable to the Second Party subject to deposit of an extension fee @ Rs.20,000/- per MW per month {extension for the period of delay on account of reasons beyond

		Chenab river basin in the districts of Lahaul and Spiti, Pangi area of Chamba and Dodra Kwar area of Shimla)	the control of the Second Party shall be allowed without imposition of extension fee subject to satisfaction of First Party} failing which, allotment of Project shall be cancelled with forfeiture of all deposits.
2.	Grant of Technical Concurrence (TC)	Within 5 months from the date of acceptance of DPR.	Timelines for processing of DPRs for timely grant of TC are at <b>Annexure-III</b> . If the timelines are exceeded on account of non-response of the Second Party towards observations on DPR, the allotment of the project shall be cancelled with forfeiture of all deposits. Relaxation up to 6 months time will be given, if the observations are beyond the control of the Second Party.
3.	Signing of the Implementation Agreement (IA)	Within 2 months from the date of grant of TC	Extension up to a maximum of 1 month for the reasons beyond the control of the Second Party. If the Second Party fails to sign the IA even within extended time, allotment of Project shall be cancelled with the forfeiture of all deposits.
4.	Application for connectivity & Long Term Open Access (LTOA) Agreement with HPPTCL.	Within 1 month from the date of signing of IA.	Extension up to a maximum of 1 month for the reasons beyond the control of the Second Party. If the Second Party fails to achieve the milestone even within extended time, allotment of Project shall be cancelled with the forfeiture of all deposits.
5.	Signing of Connectivity Agreement & Long Term Open Access (LTOA) Agreement with HPPTCL.	Within 4 months from the date of signing of IA.	Extension up to a maximum of 3 months for the reasons beyond the control of project developer. If project developer fails to achieve the milestone even within extended time, allotment of project shall be cancelled with the forfeiture of all deposits.
6.	Achieving Zero date	Within 6 months from the date of signing of IA.	Extension up to a maximum period of 6 months for the reasons attributable to the The Second Party subject to deposit of an extension fee Rs.20,000 per MW per month {extension for the period of delay on account of reasons beyond the control of the Second Party shall be

			allowed without imposition of extension fee subject to satisfaction of the First Party} failing which, allotment of Project shall be cancelled with forfeiture of all deposits.
7.	Scheduled Commercial Operation Date (SCOD) of the Project	Zero date plus construction period allowed as per TC plus extension of time granted by State, if any.	Delays during construction period on account of the reasons beyond the control of the Second Party shall be considered if applied with full justification within six months from the COD of project and shall be condoned / adjusted only after satisfaction of the appropriate Competent Authority of First Party within six months from the receipt of application. SCOD of the Project shall not be revised beyond synchronization of any one unit.
8.	Commercial Operation Date (COD) of the Project.	Actual date when last unit of the Project commences commercial operation.	Incentive / Disincentive as per Clause No. _____
9.	Handing over of the Project to the Government	The date determined on completion of 40 years from the Scheduled Commercial Operation Date (SCOD) of the Project.	Action as deemed fit.

**Notes:**

- a) In case, the Second Party is unable to achieve Financial Closure within the time limit specified above for achieving zero date, the Second Party agrees to start construction work on the project positively within the time limit specified above by investing from its equity component. The Financial Closure shall be concluded within six months of start of the construction work on the project after achieving Zero Date.
  - b) In case, unit-wise construction schedule approved is different for different units of the project, then unit-wise SCOD will be considered and it will be for calculation of disincentive / penalty only and it will not redefine the project's SCOD as defined above. The Second Party shall not be entitled for any benefit with respect to transfer of project after completion of the agreement period by referring to unit wise SCOD.
  - c) Reasons for condonation of delays in achieving various milestones not attributable to the Second Party shall be considered and decided by the First Party.
5. The Second Party shall fix the elevations of various project components with reference to Survey of India bench mark.
  6. The Second Party shall be required to obtain all the non-statutory / statutory clearances / NOCs / approvals required for the implementation of project from various departments including Gram Panchayats as may be specified by the Government.

7. The Second Party agrees to reimburse to the HPSEBL the amount spent on investigations and infrastructure works of the project, if any, up to the date of signing of Pre-Implementation Agreement (PIA), with simple interest @ 10% per annum, within six months of signing Pre-Implementation Agreement. This shall form a part of the Project cost.
8. The Second Party shall be deemed to have conducted a due diligent exercise in respect of all the aspects of the Project, including a detailed survey of the site. The failure to investigate fully the Site or sub-surface conditions shall not relieve the Second Party from its responsibility for successfully implementing the Project.
9. The Second Party agrees to contract engineering services of a reputed design consultancy organization to oversee the Project planning, its layout design of various project components and quality of construction to ensure safety of the project components/structures during execution and operation of the project in such a way that there is no loss of human life, property of the people, energy generation etc.
10. In case of failure of the Second Party to adhere to the benchmarks as per Pre-Implementation Agreement resulting in extension of time, the extension fees specified shall be made payable to the Director Energy, Government of Himachal Pradesh. In case of breach of any provision/clause of this Pre-Implementation Agreement, or any part thereof, the amount paid on account of upfront premium payable for the Project shall be liable to be forfeited by the First Party.
11. The Second Party agrees that the payments to be made on account of Upfront Premium by the Second Party shall not form part of the project cost in the DPR and financial closure, which shall be borne by the Second Party out of the financial strength of the Second Party.
12. The Second Party shall have no claim on any project upstream or downstream of the allotted project. There shall be a stream / basin wise coordination committee of various project developers of concerned stream/ basin under the chairmanship of Director Energy to resolve any issue arising with the upstream and downstream project with respect to construction, water availability, transmission, sharing of cost/ obligation/ benefit etc. as referred.
13. The Second Party shall be liable to carry out Environmental Impact Assessment as required under the Environmental (Protection) Act, 1986 and Wild Life Protection Act through Consultant(s)/Experts drawn from a reputed National/International organisation and obtain the consent of State Pollution Control Board under the Water (Prevention and Control of Pollution) Act, 1974 or any other environmental law(s), Wild Life Protection Laws as may be applicable.
14. The Second Party shall be responsible for mitigation of adverse impacts as per the approved EIA Plan and mitigation of degradation of environment due to disturbance of eco-system in watershed area. The cost of the same will be entirely borne by the Second Party.
15. The Second Party shall prepare a Disaster Management Plan taking into consideration the different flood eventualities, cloud bursts or other natural calamity that could occur at various stages of construction and operation of the Project. The Second Party shall include this in the DPR to be submitted to the First Party.
16. The Second Party shall carry out Techno – economical studies considering CUF @ 52% in conformity with CERC Regulation, 2017 with CUF 45% net of free power which is equivalent

to 51.72% (45 / 0.87) CUF with relaxation ceiling of 5% CUF on grounds of hydrological, geological and physical features.

17. Within 24 months of signing of Pre-Implementation Agreement the Second Party after carrying out detailed investigations and techno-economic studies shall submit the Detailed Project Report (hereinafter called the "DPR") to First Party/CEA, as the case may be, for its processing for accord of Technical Concurrence(TC). Simultaneously during such period after freezing of components, the second party will be able to seek Essentiality Certificate for land acquisition. NOCs required for initiating the case for final Environmental Clearances and diversion of forest land will also be given by the First Party on the request of the Second Party.
  18. The Second Party shall submit self attested copies of NOCs obtained from different departments to First Party. The Second Party agrees to furnish an affidavit on Rs. 50/- stamp paper duly notarized, to the effect that "all the conditions in the NOCs obtained from the different departments shall be abided by them.
  19. The First Party shall, subject to the approval of the GoI or any other competent authority, prepare a Rehabilitation and Resettlement plan, in association with the Second Party for local residents likely to be adversely affected or displaced due to construction of the Project at the Site. The cost of preparation and implementation of the above plan shall be borne by the Second Party. The Second Party shall execute the Rehabilitation and Resettlement plan prepared by the First Party at its cost. The amount so incurred shall form part of the Project cost.
  20. The Second Party shall be allowed condonation of delay in submission of DPR, which are not attributable to the Second Party for the purpose of grant of extension on the following grounds:
    - (i) Delay in accordance of Term of Reference (ToR) approval by Ministry of Environment, Forest and Climate Change (MoEF&CC), as the case may be, beyond 12 months after signing of PIA, subject to the condition that inputs / case stand submitted within 4 months after PIA.
    - (ii) Delay due to domain change / relocation of Project Components or any discrepancies observed in allotted domain.
    - (iii) Delay in obtaining clearance from the National Board of Wildlife, where applicable.
    - (iv) Law and Order issues in the project area.
  21. The project has been allotted on the basis of tentative installed capacity as mentioned in the Notice Inviting Proposal / Bid Document / LoA. However, in case the capacity of a project increases / decreases upon firming up of the potential by the Competent Authority, the Second Party shall be required to sign the Revised Capacity Agreement (Supplementary Pre-Implementation Agreement (SPIA) with the First Party within a period of 30 days from the date of communication of approval.
- Following provisions shall be applicable with regard to approval of capacity addition / reduction:
- a) Capacity addition charges @ Rs 1 lakh / MW will be applicable for the future enhancement of the already approved capacity. The pending liabilities in respect of capacity enhancement already approved and agreed will not be affected.



- b) No additional free power in lieu of capacity enhancement shall be levied in all future enhancement approvals. However, it shall not affect projects where capacity enhancement has already been approved and agreed.
- c) If the capacity reduction is more than 20% of allotted capacity, the project developer will have the option of surrendering the project with refund of Upfront Premium without interest, within a maximum period of 2 years from signing of PIA / MoU. The project developer may however opt to retain the project with the adjustment of upfront premium against the revised capacity.
- d) If the capacity reduction is within the 20% limit of the allotted capacity, no concession or adjustment in upfront premium shall be permitted.
- e) Processing fee @ Rs.10,000 per MW for processing the proposal of addition/reduction in capacity of project will be levied on the increased/decreased capacity.
- f) No fresh NOCs / consultations required from Gram Panchayats for projects up to 25 MW in case allotted installed capacity is enhanced within the allotted domain or if approved redefined domain falls in the same panchayat.
- g) If the capacity addition / reduction amounts to change in category of the Project, the Policy applicable to such category after enhancement or reduction of the capacity shall prevail.
22. The Second Party shall submit free of cost to the First Party the Hydrological and Meteorological data observed at the project site, on monthly basis. The First Party shall have the right to use this data for any purpose whatsoever.
23. The Second Party shall carry out the requisite detailed investigations and identify the transmission system for evacuation of power from the Project in consultation with the First Party/State Transmission Utility (STU)/Central Transmission Utility (CTU) keeping in view, the integrated system requirement.
24. The First Party shall allow the Second Party to set up temporary aerial ropeways / cable ways of any type for transporting material, men & machinery without the requirement of NOC of Gram Panchayat subject to adherence of safety parameters as per prevailing rules and regulations.
25. The First Party through HPSEBL shall provide electricity connection for the construction power required for execution of Project to the Second Party on priority basis wherever feasible.
26. The Second Party shall ensure proper quality control and safety measures during investigations / execution / Operation & Maintenance of the project keeping in view all quality control and safety measures as per relevant IS Codes / adopted standards and O&M Manual. Second Party shall also ensure essential first aid facilities at all Project sites
27. The Second Party shall be free to dispose of power from the Project, after allowing royalty in the shape of free power to the First Party in any manner they like in accordance with the provisions contained in the Electricity Act, 2003 and amendments thereof and the rules and regulations made there under.
28. The Second Party shall follow all the relevant laws, including, but without limitation, all labour laws, and shall also provide for safety provisions as per the Electricity Act, 2003, Factories Act, 1948, Mines Act, 1952 and such other statutory provisions relating to the safety of the Projects and any subsequent amendments made thereto.
29. The validity of this Pre-Implementation Agreement shall be up to signing of Implementation Agreement. The Second Party shall be required to sign Implementation Agreement with the

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~~First Party within the prescribed time period including any extension granted by the First Party.~~  
The Implementation agreement shall remain in force up to a period of 40 years from the Scheduled Commercial Operation Date of the project. Thereafter, the project shall revert to the First Party free of cost and free from all encumbrances and liabilities.

30. The Second Party agrees to abide by the provisions of the Energy policy and Industry Policy of the State with regard to deployment of man power and employment to Himachalis in the project.
31. The First Party agrees to provide to the Second Party at its request, copies of all available documents, data, information, reports relating to the project including copies of all investigations and studies carried out since the inception of the project to enable them to use this information in the best interest of the implementation of the project. The Government further agrees to render all possible assistance to facilitate the Second Party in obtaining necessary statutory clearances from the concerned authorities.
32. The Second Party shall provide royalty in the shape of free power from the project during the entire agreement period to the Government of Himachal Pradesh at the rate agreed in their respective agreements (IA/SIA) of the Deliverable Energy of the project, from the date of synchronization of first unit whereas, the projects allotted in future shall provide royalty in the shape of free power @ 12% uniformly.
33. The boundaries (domain) marked (Intake & outfall locations) at the time of project allotment will not be altered and any increase or decrease in capacity will be subject to the developer remaining within the boundaries/ domain marked. If the elevations indicated in the offer of allotment / Bid documents found to be incorrect at site the actual elevations based on the marked boundaries shall be adopted after obtaining approval of First Party.
34. Subject to security and operational factors, the Second Party shall permit free use by the First Party and general public, of all service roads, constructed and maintained by it for the project. Other facilities like hospitals, post offices, schools etc., shall also be made available to the general public as per policy of the Second Party. The needs and requirements of local people shall be kept in view in any such policy.
35. The Second Party shall bear the cost of improvement/widening of the existing roads required to be carried out for the construction of the project.
36. The First Party shall have the right for withdrawal of water from the river course for the consumptive use by pumping or by gravity for the purpose of potable water supply and irrigation to the affected villagers.
37. The Second Party shall ensure minimum environmental flow (e-flow) immediately downstream of the diversion structure of the project throughout the year, as per provisions contained in Energy Policy of the State.
38. The Second Party shall ensure proper quality control and safety measures during investigations / execution / Operation & Maintenance of the project keeping in view all quality control and safety measures as per relevant IS Codes / adopted standards and O&M Manual. The Second Party shall also ensure essential first aid facilities at all project sites.

39. The Second Party shall be allowed to use the muck / mineral generated during the execution of the project work and also shall be allowed to set up captive stone crusher in the project area as per the HP Minor Mineral Rules provided the Second Party adheres to the prevailing environmental safe guards. The royalty on the usage of such minerals shall be payable to the State Industries department as per rules.
40. The Second Party shall be required to follow environmental related regulations concerning disposal of muck and soil etc. The Second Party shall use such material for the project as may be found suitable for the construction and the remaining material shall be allowed to be used by other development departments of the State subject to the prevailing Rules and Regulations.
41. The Second Party agrees not to dump such material on the project site or any other inappropriate place from where it could flow into rivers and streams and cause environmental damage. Any such action will attract penal action by the State Pollution Control Board.
42. The Second Party shall ensure that the material excavated from the site shall be dumped in the area duly approved by the MoEF & CC, GoI/HPSPCB.
43. In case any existing facilities including, but not limited to, irrigation systems, water supplies, roads, bridges, buildings, communication system(s), power systems and water mills are adversely affected because of the implementation of the project, the Second Party shall be responsible for taking remedial measures to mitigate such adverse effects. The cost of the above remedial measures shall become a part of the project cost. Such facilities shall be as mutually identified and agreed upon between the Second Party and the First Party. The Second Party shall not interfere with any of the existing facilities till an alternate facility, as identified, is created.
44. The Second Party shall make suitable financial provisions for mitigation of adverse impacts as per the approved ELA plan and mitigation of degradation of environment due to disturbance of eco-system in watershed area, at the cost of project.
45. The Second Party shall be responsible for mitigation of adverse impacts as per the approved EIA Plan and mitigation of degradation of environment due to disturbance of eco-system in watershed area. The cost of the same will be entirely borne by the Second Party.
46. The Second Party shall ensure protection of the water rights of the local inhabitants for drinking and irrigation purposes etc. by verifying the revenue entries and activities of Jal Shakti department so as to ensure that such rights are not infringed upon. Any dispute in the matter shall be referred to a committee to be appointed by the First Party involving Jal Shakti and Revenue departments. Thereafter, the decision of the First Party shall be final and binding on all the parties.
47. The lease amount for acquiring Government / Forest Land for Hydro Power Projects shall be charged as per the prevailing rates notified by the Government.
48. The Second Party shall have no claim on any project upstream or downstream of the allotted project. There shall be a stream/basin wise coordination committee of various project developers of concerned stream/basin under the chairmanship of Director Energy to resolve any issue arising with the upstream and downstream project with respect to construction, water availability, transmission, sharing of cost/obligation/benefit etc. as referred.

49. The First Party shall, as and when required, put in place a committee comprising of experts from Directorate of Energy for determining the impact, if any, on the existing project due to allotment of any upstream and/or downstream project. In the event of a dispute, the decision of First Party in the matter shall be final and binding on all the parties.
50. On completion of the Agreement Period, the Project shall revert to the First Party free from all encumbrances together with all land, buildings, plant, machinery, spare parts and all assets of the project. After completion of 40 years, the First Party may either extend the agreement period on mutually agreed terms or may go for competitive bidding under Renovation and Modernization mode for next 30 years. The royalty for the extended period payable to First party will not be less than 30%.
51. The Second Party agrees to implement the Project strictly as per the milestones stipulated by the First Party.
52. The Second Party shall explore the possibility of converting the project in to Pump Storage/Pondage/Hybridization option while preparing DPR and submit proposal for the approval of the First Party accordingly. The provisions regarding such options contained in the State Energy Policy shall be applicable.
53. The First Party agrees that till this Pre Implementation Agreement is in force, it shall not entertain any proposal in respect of the Project from any other party.
54. For the purpose of this agreement, "Force Majeure" shall mean an event which is unforeseeable, beyond the control of the Second Party and not involving the Second Party fault or negligence. Such events may include acts of the First Party /GoI either in its sovereign or its contractual capacity, war, civil war, insurrection, riots, revolutions, fires, floods, epidemics, quarantine restrictions, freight embargoes, radioactivity and earthquakes.
- If a Force Majeure situation arises, the Second Party shall promptly inform the First Party in writing of such conditions and the cause thereof. Unless otherwise directed by the First Party in writing, the Second Party shall continue to perform its obligations under the agreement, as far as is reasonably practical, and shall seek all reasonable alternative means for performance, not prevented by the Force Majeure event.
- In the event, a Party is rendered unable to perform any obligation required to be performed by it under this agreement by Force Majeure, the particular obligations shall, upon information to the other Party be suspended for the period of Force Majeure. The time for performance of the relative obligations suspended by Force Majeure shall be extendable by the period of delay which is directly attributable to Force Majeure.
55. This Pre-Implementation Agreement is exclusive to the Parties hereto and neither of them shall assign its rights and benefits hereunder to third party except with mutual consent.
56. The Second Party shall abide by all provisions related to projects of above 5 MW capacity, of Energy Policy of the First Party as amended from time to time.
57. Each party hereto agrees that it shall not divulge any trade, commercial or technical secrets or confidential matters of one another to any third party, save for the purpose of implementing the understanding arrived at in this Pre-Implementation Agreement.
58. No party shall be considered to be in default under this Pre-Implementation Agreement for breach of any of the terms thereof due to the imposition of restrictions and onerous regulations

by any Government or statutory authority or agency or other cause beyond its reasonable control.

59. Both the parties hereto shall do and execute all such acts, deeds, assurances and things, as may be necessary and proper for carrying out the terms of this Pre Implementation Agreement. The parties agree to negotiate and enter into such agreements as may be required to give effect to the understanding arrived at under this agreement.
60. The Second Party assures the First Party that there is no misrepresentation in the information supplied by it to the First Party as a part of their Bid or during the subsequent selection process. The First Party reserves the right to cancel the Pre-Implementation Agreement after giving an opportunity to the Second Party in case it is found that there was some such misrepresentation by the Second Party and/or in the event of breach of any of the provisions of this Pre-Implementation Agreement. The Second Party shall abide by the provisions as contained in the Energy Policy of First Party.
61. Any violations of the above mentioned issues concerning policy parameters, PIA may result into monetary penalty including cancellation of the project and its subsequent amendments issued from time to time.
62. Any difference and/or disputes arising at any time between the parties out of this PIA or interpretation thereof shall be endeavored to be resolved by the parties hereto by mutual negotiations, failing which the matter shall be referred to a two tier Grievance Redressal Process. The matter shall be addressed by the departmental Grievance Redressal Committee constituted by the First Party under the Chairmanship of Director Energy, GoHP, Shimla. In case the issue remains unresolved to the satisfaction of the Second Party, the matter shall be referred to a State Level Committee. If the Second Party is still not satisfied with the verdict, the dispute shall be subject of the jurisdiction of Civil Courts in Himachal Pradesh.

IN WITNESS WHEREOF the parties hereto have set their hands unto this on the day, month and year first above written in the presence of:

For & on behalf of the  
Government of Himachal Pradesh

For and on behalf of  
M/s

The Director Energy,  
Government of Himachal Pradesh

Authorized signatory

WITNESSED BY:

WITNESSED BY:

1.

1.

2.

2.

**IMPLEMENTATION AGREEMENT**

(For Projects Above 5 MW up to 25 MW)

**FOR HYDRO-ELECTRIC PROJECT (      MW)**

This Agreement executed on this \_\_\_\_ day of the month of \_\_\_\_ two thousand \_\_\_\_ between the Governor of Himachal Pradesh, through Sh./Smt. \_\_\_\_, Director Energy, Government of Himachal Pradesh, having its office at \_\_\_\_ Shimla \_\_\_\_, (hereinafter referred to as "**First Party**"), which expression unless repugnant to the context or meaning thereof, shall include its successor(s), administrator(s) or permitted assigns, of the **FIRST PART**;

**AND**

M/s \_\_\_\_, having its registered office at \_\_\_\_, (hereinafter referred to as "**Second Party**") which expression shall, unless repugnant to the context or meaning thereof, include its successor(s), administrator(s) or permitted assigns, through \_\_\_\_ who has been duly authorized by the Second Party vide their resolution dated \_\_\_\_ to execute this agreement, of the **SECOND PART**.

**WHEREAS**, the First Party in accordance with its Energy Policy had entered into a Pre-Implementation Agreement on \_\_\_\_ in the year \_\_\_\_ with the Second Party to carry out detailed investigations, techno-economic studies, submission of a Detailed Project Report (DPR) for the implementation of \_\_\_\_ Hydro Electric Project (HEP) \_\_\_\_ MW installed capacity, located in District \_\_\_\_, of Himachal Pradesh hereinafter referred to as the "**Project**"; and

**WHEREAS**, the Second Party has deposited the First instalment of the upfront premium amounting to Rs. \_\_\_\_ on \_\_\_\_ with the First Party and shall deposit the balance upfront premium as per provisions in the signed PIA; and

**WHEREAS**, the Second Party has agreed to contribute and provide to the First Party a minimum of 1.5% of Final Project Cost towards LADF for financing local area development activities during execution of Project as per schedule of payment mentioned in the signed PIA; and

**WHEREAS**, in case the Second Party fails to deposit Pre-Commissioning LADF dues, the First Party shall recover the amount due along with interest applicable as per policy and recovery provisions; and

**WHEREAS**, the Second Party has agreed to provide to the First Party the royalty in the shape of free power as per provisions in the signed PIA; and

**WHEREAS**, the Second Party has agreed to contribute additional 1% Free Power over and above the agreed rates of normal Free Power Royalty Component to the First Party as per the policy provisions; and

**NOW, THEREFORE**, in consideration of the promises and mutual covenants and conditions set forth herein, it is agreed by and between the parties hereto as follows:

## **1. INTERPRETATIONS AND DEFINITIONS:-**

### **1.1 INTERPRETATIONS:-**

- 1.1.1** The nomenclature of this agreement, headings and paragraph numbers are for convenience of reference only and shall be ignored in construing or interpreting this agreement.
- 1.1.2** References to persons and words denoting natural persons shall include bodies corporate and partnerships, joint ventures and statutory and other authorities and entities.
- 1.1.3** References to any enactment, ordinance or regulation or any provision thereof shall include any amendment thereof or any replacement in whole or in part.
- 1.1.4** Reference to Recitals, Articles, Clauses, Sub-Clauses or Annexures shall unless the context otherwise requires, be deemed to include the Recitals, Articles, Clauses, Sub-Clauses or Annexures of this Agreement.
- 1.1.5** The words importing singulars shall include plurals and vice versa as may be necessary.
- 1.1.6** Terms beginning with capital letters and defined as per Clause 1.2 of this agreement shall have the same meaning ascribed thereto and the terms defined in the Annexures, if any and used therein shall have the meaning ascribed thereto in the Annexures, if any.
- 1.1.7** The Annexures and Schedules, if any, to this agreement form an integral part of this agreement and shall be in full force and effect as if they were expressly set out in the body of this agreement.
- 1.1.8** Any reference at anytime to any agreement, deed, instrument, license or document of any description shall be construed as reference to that agreement, deed, instrument, license or other document as amended, varied, supplemented, modified or suspended at the time of such reference provided that this Clause shall not operate so as to increase liability or obligations of any Party hereunder or pursuant hereto in any manner whatsoever.
- 1.1.9** Any agreement, consent, approval, authorization, notice, communication, information or report required under or pursuant to this agreement from or by any Party shall be valid and effectual only if it is in writing and under the hands of duly authorized representative of such Party in this behalf and not otherwise.
- 1.1.10** Any reference to any period commencing "from" a specified day or date and "till" or "until" a specified day or date shall include both such days and dates.

### **1.2 DEFINITIONS:-** In this Agreement, the following words and expressions, unless repugnant to the context or meaning thereof, shall have the meanings hereinafter respectively as assigned to them as under:-

- 1.2.1** "Act" means the Electricity Act, 2003 and its amendments;
- 1.2.2** "Acquired Land" shall have the meaning set forth in Clause 4.3;
- 1.2.3** "Agreement" means this agreement together with all its Appendices and Annexures, if any and any amendments thereto made in accordance with the provisions herein contained;

- 1.2.4 **"Agreement Period"** shall have the meaning as specified in Clause 3.2;
- 1.2.5 **"CEA"** means the Central Electricity Authority as defined under section 2 (6) of the Electricity Act, 2003 or its successors;
- 1.2.6 **"Central Transmission Utility (CTU)"** means any Government Company which the Central Government has notified under sub-section (1) of section 38 of the Act;
- 1.2.7 **"Commercial Operation"** means the state of Unit/Project when Unit/Project is capable of delivering Active Power and Reactive Power on a regular basis after having successfully completed the commissioning tests as per Prudent Utility Practices;
- 1.2.8 **"Commercial Operation Date (COD)" in relation to generating unit:** means the date declared by the generating company with the permission of the State Authority on which the Commercial Operation of Unit/Project as the case may be is achieved by the Second Party;
- 1.2.9 **"Commercial Operation Date (COD)" in relation to the project:** means the date of commercial operation of the last generating unit of the project.
- 1.2.10 **"Company"** means \_\_\_\_\_ a generating company within the meaning of section 2 (28) of the Electricity Act, 2003 and registered under Companies Act, 1956;
- 1.2.11 **"Contractor"** means any person, firm or body corporate engaged by the Second Party for the implementation of the Project;
- 1.2.12 **"Control Centre" or "State Load Despatch Centre"** located at Shimla or such other control center designated by the First Party from time to time from which the despatch instructions will be issued to the Second Party at the Station;
- 1.2.13 **"Debt"** means the amount of any loan, non-convertible debenture or other similar obligation, contracted or raised and received by the Second Party under the Financing agreements, and actually expended (or to be expended) for the Project and which shall not be greater than the principal amount of debt specified in the applicable currency in the estimate of Capital Cost of the Project;
- 1.2.14 **"Deliverable Energy"** means the electrical energy generated at the Station, as measured at generator(s) terminals less the summation of the following:-
- (i) Actual auxiliary consumption for the bonafide use of auxiliaries, lighting and ventilation in the Power Station and Intake Works and the transformation losses (from generation voltage to transmission voltage) of the step up transformers at the power house switchyard; and
  - (ii) Transmission losses at actuals, which shall be the difference of the electrical energy measured at sending and receiving ends of the transmission line (i.e. the power station end and the Interconnection Point);

For this purpose and subject to above, the energy meter reading shall be taken on monthly basis at the Interconnection Point;

- 1.2.15 **"Despatch"** means to schedule and control the generation of the Project in order to commence, increase, decrease or cease the electrical output as delivered to the Grid System in



accordance with the instructions from the HPSLDC/ Control Centre in conformity with the agreement and Prudent Practices;

**1.2.16 "Despatch Instruction"** shall mean an instruction issued by the HPSLDC/ Control Centre to the Second Party for the despatch of power by message/fax/email to be confirmed in writing by HPSLDC/Control Centre- as per the operating procedure developed by the Parties to operate the Project in accordance with the terms of this agreement and technical limits and Prudent Utility Practices including-

- (a) an instruction to target active/reactive power output to be maintained by the Project;
- (b) an instruction to synchronise or desynchronise a generating unit at a particular time;
- (c) an instruction to defer or cancel a scheduled outage or maintenance outage; and
- (d) an instruction for backing down the active/reactive power due to Grid conditions;

**1.2.17 "Detailed Project Report (DPR)"** means the Project Report submitted by the Second Party and as approved by the competent authority;

**1.2.18 "Disincentive"** shall have the meaning set forth in Clause 5.36;

**1.2.19 "Dispute"** shall have the meaning as specified in Article 11;

**1.2.20 "Effective Date"** means the date of signing of the Implementation Agreement;

**1.2.21 "Equity"** means the aggregate of all subscribed and paid up share capital of the Second Party in different currencies as converted into Rupees, by application of the procedure approved by the Authority/GoI, as invested in the Project and held by one or more shareholders in the Second Party, which shall be in accordance with the financial plan;

**1.2.22 "Financial Closure"** means the first business day on which substantial funds are made available to the Second Party under the terms of the Financing Agreement;

**1.2.23 "Financing Agreement"** mean the loan agreements, notes, indenture, security agreements, letters of credit and other documents relating to the financing (including refinancing) of the Project and the capital cost of any part thereof, as amended, supplemented or modified from time to time and approved by the First Party;

**1.2.24 "Force Majeure"** shall have the meaning as described thereto in Article-7;

**1.2.25 "Government"** means the Government of Himachal Pradesh;

**1.2.26 "GoI"** means the Government of India;

1.2.27 **"Grid/Grid System"** means the network of power system interconnecting different Power Generating Stations, Transmission Lines and Sub-Stations for transmitting the electrical output from the Interconnection Point up to main load Centre(s);

1.2.28 **"HPSEBL"** means Himachal Pradesh State Electricity Board Limited.

1.2.29 **"HPERC"** and **"State Regulatory Commission"** means the Himachal Pradesh Electricity Regulatory Commission;

1.2.30 **"HPPTCL"** means Himachal Pradesh Power Transmission Corporation Limited;

1.2.31 **"HPPCB"** means Himachal Pradesh Pollution Control Board;

1.2.32 **"Incentive"** shall have the meaning set forth in Clause 5.35;

1.2.33 **"Interconnection Facilities"** means all the facilities which shall include without limitation, switching equipment, communication, protection, control and metering devices etc. at the Interconnection Point(s) to be installed and maintained at the cost of the Second Party to enable evacuation of power output from the Project in accordance with this agreement;

1.2.34 **"Interconnection Point(s)"** shall mean the physical touch point at sub-station(s) of the HPSEBL / State Transmission Utility/Central Transmission Utility where the Project's transmission line for evacuating the power from the Project is connected to the Grid;

1.2.35 **"Local Area Development Committee (LADC)"** shall mean the Committee constituted by the Government and entrusted with the function as specified in Clause 4.18;

1.2.36 **"Local Area Development Fund (LADF)"** shall mean the i) Pre -Commissioning LADF-fund to be deposited by the project at pre-commissioning stage for its utilisation towards local area development and ii) Post-Commissioning LADF - fund received from sale of 1% deliverable energy share at post commissioning stage to be distributed amongst all the Project Affected Families as per policy provisions.

1.2.37 **"Law"** means any Act, rule, regulation, notification, order or instruction having the force of Law enacted or issued by any competent legislature, Government or statutory authority in India;

1.2.38 **"MoEF & CC"** means Ministry of Environment, Forest and Climate Change, Government of India or its successor authority/agency;

1.2.39 **"Month"** means English Calendar month;

1.2.40 **"NRLDC"** means "Northern Regional Load Despatch Centre" or its successor entity;

1.2.41 **"PGCIL"** means Power Grid Corporation of India Limited.;

1.2.42 **"Parties"** refer to the First Party and the Second Party collectively;

1.2.43 **"Party"** shall refer to the Government and/or the Company individually;

**1.2.44 "Permanent Works"** means the permanent works forming part of the Project that are required to be constructed/installed and maintained as such for the implementation of the Project for at least the Agreement Period and shall also include housing facilities for staff to be engaged for Operation & Maintenance of the Project;

**1.2.45 "Power Purchase Agreement (PPA)"** means a contractual agreement to be signed by the Second Party with a party for sale of power from the Project to that party;

**1.2.46 "Project Affected Area (PAA)"** shall have the meaning as set forth in Energy Policy.

**1.2.47 "Project Affected Family (PAF)"** shall have the meaning as set forth in Energy Policy.

**1.2.48 "Project Affected Zone (PAZ)"** shall have the meaning as set forth in Energy Policy.

**1.2.49 "Project"** means \_\_\_\_\_ Hydro-Electric Project proposed to be established on \_\_\_\_\_ river in the \_\_\_\_\_ District of Himachal Pradesh, India including complete hydro-electric power generating facilities along with all associated infrastructure.

**1.2.50 "Prudent Utility Practices"** means those practices, methods, techniques and standards that are generally accepted internationally from time to time by electric utilities for the purpose of ensuring safe, efficient and economic design, engineering, construction, commissioning, testing, operation and maintenance of various components of the Project of the type specified in this agreement and which practices, methods and standards shall be adjusted as necessary to take account of:-

- (i) Installation, Operation & Maintenance guidelines recommended by the manufacturers of plant and equipment to be incorporated in the Project; and
- (ii) The requirements of Indian Law; and
- (iii) Physical conditions at the Site.

**1.2.51 "Royalty"** shall have the meaning set forth in Clause 3.2 & 4.3;

**1.2.52 "Scheduled Commercial Operation Date"** means the date by which the Second Party shall have achieved the Commercial Operation of the project and approved by appropriate Authority.

**1.2.53 "Site"** means the site of Project appurtenances, generating plant including land, waterways, roads and any rights acquired or to be acquired by the Second Party for the purposes of the Project;

**1.2.54 "State"** means Himachal Pradesh ;

**1.2.55 "Station"** means the ----- for generating electricity, including any building and plant with step up transformer, switchgear, switchyard, cables or other appurtenant equipments, if any, used for that purpose;

**1.2.56 "State Transmission Utility (STU)"** means HPPTCL / HPSEBL (the Government Company specified as such by the First Party under sub-section(1) of section 39 of the Electricity Act,2003);

**1.2.57 "Temporary Works"** means all temporary works of any kind required for the implementation of the Project and that are incidental and ancillary to the design, engineering

and construction of the Project and are constructed/installed and maintained till the Commercial Operation Date of the Project, and will not form part of Permanent Works;

**1.2.58 "Transmission Licensee"** means a licensee authorized by the Appropriate Electricity Regulatory Commission to establish or operate transmission lines;

**1.2.59 "Unit"** means one hydro turbine generator including ancillary equipment and facilities thereto; and

**1.2.60 "Works"** mean all works of civil, electrical and mechanical nature and including design, engineering, services, supplies and other work activities required and necessary for the implementation of the Project and shall also include the Permanent Works and the Temporary Works.

## **ARTICLE 2**

**2. UPFRONT PREMIUM:-** "As per provisions contained in signed PLA"

## **ARTICLE 3**

**3. TERM OF THE AGREEMENT:-**

**3.1 Effectiveness:** - This Agreement shall come into force on the Effective Date.

**3.2 Agreement Period:-**

(a) This Agreement shall remain in force up to a period of 40 years from the Schedule Commercial Operation Date of the Project, (Agreement Period) unless terminated earlier in accordance with the provisions of this agreement.

(b) On completion of the Agreement Period, the Project shall revert to the First Party free from all encumbrances together with all land, buildings, plant, machinery, spare parts and all assets of the Project. After completion of 40 years, the First Party, may either extend the agreement on mutually agreed terms & conditions or may go for competitive bidding under Renovation and Modernisation mode for next thirty years, however the royalty payable to the First Party for the extended period in any case will not be less than 30%.

**3.3 Survival:** - The termination or expiry of this agreement shall not affect the accrued rights, obligations and liabilities of either Party under this agreement, nor shall it affect any continuing obligations which this agreement provides, whether expressly or by necessary implication.

## **ARTICLE 4**

**4. OBLIGATIONS OF THE FIRST PARTY**

**4.1 Granting Consents/Permissions and Assistance in Obtaining Clearances:-** The First Party hereby agrees to grant to the Second Party all consents, permissions, statutory/non-statutory, within its purview as required by the Second Party to undertake, establish, operate, maintain and transfer the Project. The First Party shall assist the Second Party for expediting the various statutory/non-statutory clearances required for the implementation of the Project, from various competent authorities of the First Party/Central Government or State Power Utilities. The First Party shall forward all relevant proposals received from the Second Party to the GoI/Government authorities and shall assist so that all sanctions are accorded/got accorded from the competent authority within the prescribed period.

**4.2 Subsidiary Company:-** The First Party may provide possible assistance to the Second Party in the incorporation of the new subsidiary Company provided that the registered office of such a Company is within Himachal Pradesh.

**4.3 Use of materials:-** The First Party shall permit the Second Party, in accordance with the Law to collect and use boulders, stones, shingles, limestone and other building materials, except precious and semi-precious materials, from the river beds, and/or from the land acquired for or transferred to or leased out to the Second Party for the project, on payment of royalty in accordance with the Government rules/rates in force from time to time.

**4.4 Acquisition and transfer of land:-**

(a) The First Party shall acquire, at the request and expense of the Second Party, and in accordance with the provisions of Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation and Resettlement Act, 2013 (RFCTLARR Act, 2013) and other applicable laws, such private lands within the State of Himachal Pradesh as may be required by the Second Party for Permanent Works. The Second Party shall at its own risk also be allowed to acquire such land through direct negotiations with the owners in accordance with the prevailing laws, rules and regulations in the State.

(b) The First Party shall provide necessary assistance to the Second Party in obtaining permission of the competent authority for the removal of trees standing on the Acquired/leased Land and on the Government lands which in its reasonable opinion are required to be felled or removed for the Implementation of the Project.

**4.5 Rehabilitation and Resettlement Plan:-** The First Party shall, subject to the approval of the competent authority, prepare a Rehabilitation and Resettlement plan in association with the Second Party for local residents likely to be adversely affected or displaced, if any, due to construction of the Project at the Site as on the Effective Date. The cost of preparation and implementation of the above plan shall be borne by the Second Party.

**4.6 Upgradation of Roads and Bridges:-** The First Party may, at the request and cost of the Second Party, construct, widen and strengthen such roads and bridges within the State of Himachal Pradesh as are considered reasonably necessary by the First Party. The First Party permits the Second Party to construct roads, bridges, culverts as considered necessary for the Project in the Project lands. The First Party may also permit the Second Party to construct roads, bridges, culverts as are considered reasonably necessary by the First Party in the interest of the Project on a case-to-case basis.

**4.7 Other Approvals:-** If any approval is required under the Law by the Second Party, the lenders, or Contractor(s) with respect to the Project, upon application therefore being made by the Second Party, First Party may take all reasonable and appropriate steps within its administrative power and as permissible by Law, to ensure that such approval is granted in a time bound manner mutually agreed between the parties.

**4.8 Communication:-** The First Party shall provide due assistance to the Second Party to obtain, in accordance with the prevailing Law and regulations, necessary permits to install and use suitable radio communication systems, including Satellite communication equipment and walkie-talkies. Any system connecting with the National telecommunication system or any International Telecommunication system will be subject to the approval/license from the relevant authorities, for the issuance of which First Party shall assist.

- 4.9 Explosives:-** The First Party shall provide due assistance to the Second Party, under the Law and regulations, to obtain permission to procure, store and use such explosives which are required for the execution of Project; provided that the responsibility of obtaining such a clearance and making the necessary arrangements rests with the Second Party.
- 4.10 Import License:-** The First Party shall provide due assistance to the Second Party in obtaining all necessary import licenses for the Project from the relevant GoI authorities to the extent permissible by Law. The Second Party shall submit a list of such equipment required to be imported for the Project to the First Party for approval.
- 4.11 Upstream/Downstream Projects:-** The First Party, through its departments/Boards or IPPs shall be entitled to survey, investigate and implement any River Valley Power Generation Scheme upstream or downstream of the Project. The First Party shall, as and when required, put in place a Committee comprising of experts from the relevant field for determining the impact, if any, on the existing Project due to allotment of any upstream and/or downstream Project. In the event of a dispute, the decision of First Party in the matter shall be final and binding on all the parties.
- 4.12 Commitment towards Social/Environmental Concerns:** First Party reserves the right to reduce capacity/discharge or abandon the project for meeting the commitment towards social / environmental concerns.
- 4.13 Monitoring Committee:-** First Party shall review and address various issues faced by the Second Party during the implementation of the project. State Level Committee under the chairpersonship of Hon'ble Power Minister of Himachal Pradesh shall review the progress from time to time.
- 4.14 Authority of Hydro Project Safety, Quality Control & Water Management:-** First Party has constituted an Authority for Hydro-Electric Project's Safety, Quality Control & Water Management at Directorate of Energy, GoHP. The Authority shall be entrusted with roles and responsibilities for developing monitoring mechanism for the safety, quality and management of water flows of HEPs ensuring long term generation capability and residual life of Hydro-electric projects as per the guidelines provisioned in the State Energy Policy. The authority shall also act as Dam Safety cell to carry out Dam Safety programme in accordance with standard guidelines laid down by Dam Safety Organization of Centre Water Commission (CWC) and recommendations of Dam Safety Monitoring Directorate, CWC, Government of India. The Second Party agrees to abide by the guidelines of above authority.
- 4.15 Declaration of Date of Commercial Operation (COD):** First party will grant permission for declaration of COD of the generating unit/project, as the case may be, by the Second Party after ensuring successful trial run of the project and fulfilment of Codal formalities and procedures laid down by the appropriate authorities, in line with the guidelines defined as per provision under Clause 4.1.1.1 A – xxxv) of the State Energy Policy.
- 4.16 Local Area Development Committee:-** First Party shall constitute Local Area Development Committee (LADC) of concerned District immediately after signing of the Implementation Agreement in line with the provisions of Energy Policy to administer Pre- commissioning LADF and Post -commissioning LADF as per provisions contained in the Energy Policy of the State.

4.17 **Infrastructure Development Works:-** The Second Party shall build such infrastructural development works in the vicinity for the Project area that may be essentially required for the benefit of local population. The expenditure on such works shall be incurred by the Second Party. These developmental works may be mutually decided with the First Party.

4.18 **Trees in the Land transferred to the Second Party:-** The First Party shall be responsible for felling and removing of the trees which are necessarily required to be felled or damaged trees during the execution of project on receiving the payment by Forest Department from Second Party on account of price of such trees at prevailing market rates as may be notified by the First Party from time to time. The net sale proceeds of the trees shall be made over to the Second Party.

4.19 **Aerial Ropeway:-** The First Party shall allow the Second Party to set up temporary aerial ropeways / cable ways of any type for transporting material, men & machinery without the requirement of NOC of Gram Panchayat subject to adherence of safety parameters as per prevailing rules and regulations.

4.20 **Construction Power:-** The First Party through HPSEBL shall provide electricity connection for the construction power required for execution of Project to the Second Party on priority basis wherever feasible.

4.21 **Evacuation Arrangement:-** The First Party through State Utilities – HPPTCL or HPSEBL as the case may be, shall create the required evacuation infrastructure for the project as per the terms and conditions of the connectivity agreement strictly as per the CERC/HPERC regulations.

4.22 **Recruitment of Staff:-** The implementation of the provisions in respect of recruitment of staff on the Project made under Clause 5.4 of this agreement shall be monitored strictly by the Labour Commissioner and Director, Employment as well as by the Department of Labour & Employment and in case of infringement of provisions of employment Clauses by the Second Party, the Labour and Employment Department shall initiate any stringent legal action as they may deem fit.

4.23 **Comprehensive Insurance:-** The First Party shall monitor from time to time, the validity of the Comprehensive Insurance executed by the Second Party during the construction and O&M stage of the Project.

## ARTICLE-5

### OBLIGATIONS OF THE SECOND PARTY

#### 5.1 Equity Participation:-

##### 5.1.1 The equity participation in implementation of the Project as under:-

Sr. No.	Name of Company/Consortium	Equity participation

##### 5.1.2 The Second Party agrees that Principal Promoters of the Second Party with prior approval of First Party are allowed to sell/transfer their equity up to 100% during the implementation of project in the name of Third Party, which is possessing better technical and financial strengths, subject to the fulfillment of the below mentioned terms & conditions. However, there will be no restriction in respect of transfer of the project after commissioning;

- A detailed proposal showing competence in terms of financial and technical credentials of the new entity willing to acquire the project, is submitted by the Second Party for consideration of the First Party by either of the parties, along with the firm letter of consent and valid resolutions duly passed by the Board of Directors of both the concerned parties, stating that all liabilities and responsibilities assigned in favour of the Second Party shall be acceptable to the new entity.
- An undertaking to the effect that all liabilities as well as payments due in favour of the Second Party are duly accepted by the new entity.
- The new entity should possess adequate financial as well as technical competence in such a manner that the credential of the new entity should meet the strengths required for Qualification as per the allotment terms and conditions.
- For allowing change / transfer of equity of Principal Promoters, a fee @ Rs.50,000/- per MW subject to maximum of Rs.50 lakh is to be deposited at the time of signing of Tripartite Agreement for transfer of project along with all liabilities / responsibilities in the name of new entity.

##### 5.1.3 The Second Party agrees that if they change / dilute equity participation of the constituent member(s) or change the name of the Second Party (whether it is a Company / Limited Liability Partnership (LLP) firm / Body Corporate) without the prior approval of the First Party, a penalty at the rates described below shall be levied. Accordingly, a Supplementary IA/TA to this effect shall be signed within two months from the conveyance of approval. The Second Party agrees that they shall intimate to the First Party about the above changes as early as possible on priority within 6 months.

Sr. No.	Description	Penalty Charges
1.	For any equity change without the prior approval of the First Party.	Rs.20,000/- per MW subject to maximum of Rs.20 lakh.
2.	For change of name of the Second Party without the prior approval of the First Party.	Rs.20,000/- per MW subject to maximum of Rs.20 lakh.
3.	For change in equity as well as change in name of the Second Party without prior approval of the First Party.	Rs.20,000/- per MW subject to maximum of Rs.20 lakh.



**5.1.4** The First Party may consider the request of the Second Party for changing the name of the Second Party or Consortium subject to the condition that the Principal promoter shall retain the controlling interest i.e. 51% equity in the new entity. In the event of any contravention, the First Party shall terminate this Agreement forthwith at any stage.

## **5.2 MILESTONES**

### **5.2.1 Milestones achieved till date**

<b>Sr. No</b>	<b>Milestones</b>	<b>Details of achievement</b>
<b>1.</b>	Deposit of 1 <sup>st</sup> Installment of Upfront Premium	Deposited on-----
<b>2.</b>	Allotment Letter	Issued on -----
<b>3.</b>	Signing of Pre Implementation Agreement (PIA)/Memorandum of understanding (MOU)	Signed on -----
<b>4.</b>	Submission of DPR	Submitted on -----
<b>5.</b>	Grant of Technical Concurrence (TC)	Granted on-----

### **5.2.2 Milestones To Be Achieved**

The Second Party agrees to implement the Project strictly as per the milestones stipulated by the First Party.

Following milestones shall be achieved by the Second Party, failing which consequential action as mentioned shall be taken by the First Party:-

<b>Sr. No</b>	<b>Milestones</b>	<b>Time Period</b>	<b>Consequential Action</b>
<b>1.</b>	Date of Signing of this Agreement (Implementation Agreement)	(Date) -----	-----
<b>2.</b>	Application for connectivity & Long Term Open Access (LTOA) Agreement with HPPTCL.	Within 1 month from the date of signing of IA.	Extension up to a maximum of 1 month for the reasons beyond the control of Second Party. If the Second Party fails to achieve the milestone even within extended time, allotment of Project shall be cancelled with the forfeiture of all deposits.
<b>3.</b>	Signing of Connectivity Agreement & Long Term Open Access (LTOA) Agreement with HPPTCL.	Within 4 months from the date of signing of IA.	Extension up to a maximum of 3 months for the reasons beyond the control of project developer. If project developer fails to achieve the milestone even within extended time, allotment of project shall be cancelled with the forfeiture of all deposits.

4.	Achieving Zero Date	Within 6 months from the date of signing of IA	Extension up to maximum period of 6 months for the reasons attributable to the Second Party subject to deposit of an extension fee Rs.20,000/- per MW per month ( extension for the period of delay on account of reasons beyond the control of Second Party shall be allowed without imposition of extension fee subject to satisfaction of the First Party) failing which, allotment of Project shall be cancelled with forfeiture of all deposits.
5.	Scheduled Commercial Operation Date (SCOD) of the Project	Zero date plus construction period allowed as per TC plus extension of time granted by First Party, if any.	Delays during construction period on account of the reasons beyond the control of Second Party shall be considered if applied with full justification within 6 months from COD of the Project and shall be condoned / adjusted only after satisfaction of the appropriate competent authority of the First Party within six months from the receipt of application. SCOD of the project shall not be revised beyond synchronization of any one unit.
6.	Commercial Operation Date (COD) of the Project	Actual date when last unit of the project commences commercial operation.	Incentive / Disincentive as per Clause No.....
7.	Handing over of the Project to the Government	The date determined on completion of 40 years from the Scheduled Commercial Operation Date (SCOD).	Action as deemed fit

**Notes:**

- a) In case, the Second Party is unable to achieve Financial Closure within the time limit specified above for achieving zero date, the Second Party agrees to start construction work on the project positively within the time limit specified above by investing from its equity component. The Financial Closure shall be concluded within six months of start of the construction work on the project after achieving Zero Date.
- b) In case, unit-wise construction schedule approved is different for different units of the project, then unit wise SCOD will be considered and it will be for calculation of disincentive / penalty only and it will not redefine the project's SCOD as defined above. The Second Party shall not be entitled for any benefit with respect to transfer of project after completion of the agreement period by referring to unit wise SCOD.
- c) Reasons for condonation of delays in achieving various milestones not attributable to the

Second Party shall be considered and decided by the First Party.

**5.3 Submission of reports/documents:-** The Second Party shall submit the following reports and documents to the First party at the time of start of construction, during construction and at O&M stage of the Project:

**5.3.1 At the time of start of construction:**

- i. Project related agreements including in particular the Construction Contracts / EPC Contract, if any, the Financing Documents and the O&M Contract, if any, in a soft copy.
- ii. The Second Party shall ensure that these Project related agreements do not in any way hold the First Party liable to the Second Party or any Contract in any manner whatsoever and shall be without prejudice to the rights of the First Party.
- iii. Documents on Quality Plan and Safety measures to be adopted at site indicating the procedure, organization charts depicting the hierarchy of personnel deployed for Safety, QA and QC with their designated role both internal and an independent third party. The third party inclusion is particularly required in respect of hydro-mechanical components (Gates, Hoisting Arrangement etc.), Steel Liner & Penstock w.r.t. Ultra-Sonic/Radiographic, DPT (Dye Penetration Test), Spectroscopy and Hardness Test etc. and for Electro-mechanical components.
- iv. Important design parameters/specifications for civil works of the project.

**5.3.2 During Construction Stage:**

- i) Monthly hydrological and meteorological data at the end of every calendar month.
- ii) Quarterly Status of Employment at the end of every calendar quarter on the prescribed format.
- iii) Quarterly physical and financial progress report at the end of every calendar quarter on the prescribed format along with videography covering various construction activities of the Project in that quarter. Such progress report and video recording shall be provided not later than fifteen days after the close of each quarter.
- iv) Quarterly reports on quality and safety measures undertaken / adopted, supported with documentary proofs in the form of photographs, videography and test reports etc. at the end of every calendar quarter.
- v) Inventory of hydro mechanical and electromechanical equipment with manufacturer manuals indicating the specifications to be followed strictly during construction, Operation & Maintenance stage.

**5.3.3 O&M stage:**

- i) Monthly Discharge data at the end of every calendar month on the prescribed format.
- ii) Monthly report on release of environmental flow at the end of every calendar month.

- iii) Quarterly Status of Employment at the end of every calendar quarter on the prescribed format.
- iv) Pre & Post Monsoon mandatory safety inspection/ audit reports in case of large Dam project.

#### **5.4 EMPLOYMENT TO HIMACHALIS**

**5.4.1** The project developer shall have to provide employment to bonafide himachalis in respect of all the unskilled / skilled staff and other non-executives as may be required for execution, operation and maintenance of the project. However, the first preference will be given to oustees. In the event of non-availability of the requisite skilled manpower at various levels with requisite qualification and experience, the project developer will be free to recruit such persons from outside the state.

**5.4.2** The project developer shall satisfy that the contractors/sub-contractors engaged by them for the project shall give employment to local people / himachalis for appointment as supervisors, workmen and labourers / workers in the project. The engagement of minimum himachalis in the project shall be as per the Industrial Policy of the State Government.

**5.4.3** In regard to direct recruitment of engineers and other executives, other things being equal in terms of eligibility criteria, qualification, experience etc., the project developer shall give preference to the candidates well conversant with customs, culture, language and dialects of Himachal Pradesh.

**5.4.4** The project developer shall ensure that during the deployment of himachalis in respect of executive/non-executive/workmen (skilled / unskilled) categories at any stage of the project implementation, if it is not possible to recruit 100% staff from himachalis for justifiable reasons, only then the project developer shall maintain not less than 80% of the total employees/officers/executives from bonafide himachalis persons as per State Industry Policy.

**5.4.5** The project developer shall provide employment as per the provision of R&R plan duly approved by the competent authority.

**5.4.6** The petty contracts of the road work, retaining walls, buildings construction, carriage of construction material like sand, aggregate, cement, steel etc, engagement of all categories of other service providers, taxis for the staff deployed to the sites, engagement of other light and heavy vehicles, running of canteens / mess engagement of security personnel through ex-servicemen shall normally be awarded to locals / Himachalis.

**5.4.7** The project developer shall also provide training programme to the locals affected by the project so that they are in a position to get employment in respect of various technical/administrative jobs in the Project.

**5.5 Rehabilitation and Resettlement plan:-** The Second Party shall execute the Rehabilitation and Resettlement Plan prepared by the First Party, pursuant to Clause 4.7 at its cost and also pay for the cost of preparation of the same to the First Party as stipulated under Clause 4.7. The amount so incurred shall form part of the Project cost.

**5.6 Consultancy:-** The Second Party agrees to contract engineering services of a reputed design consultancy organization to oversee the Project planning, its layout design of various project components and quality of construction to ensure safety of the project components/structures during execution and operation of the project in such a way that there is no loss of human life, property of the people, energy generation etc.

**5.7 Free Flow/Riparian distance:-** The Second Party shall develop project in the domain allotted by the First Party. The Second Party and the First Party shall ensure minimum horizontal distance of 250m or elevation difference of 50m as the case may be, between two projects, depending upon the topography and terrain of the area to have visible flow of water in the original stream. However, the Domain Change Committee constituted by the First Party on case to case basis may allow relaxation of this condition considering the technical, design, socio-economic & topographical aspects.

**5.8 Site Investigations:-** The Second Party shall be deemed to have conducted a due diligent exercise in respect of all the aspects of the Project, including a detailed survey of the site. The failure to investigate fully the Site or sub-surface conditions shall not relieve the Second Party from its responsibility for successfully implementing the Project.

**5.9 Compensatory Afforestation:-** The Second Party shall pay to the First Party the cost of raising compensatory afforestation and its maintenance for a period and the extent of area, as may be determined by MoEF & CC, GoI.

**5.10 Catchment Area Treatment Plans:-** The Second Party shall make suitable financial provisions in the project cost for the Catchment Area Treatment Plans, as may be determined by the MoEF & CC, GoI. The cost involved on this account shall be paid by the Second Party to the First Party as per Forest and Environment clearance accorded by the GoI.

**5.11 Environmental Impact Assessment:-** The Second Party shall obtain the consent of HPPCB under the Water (Prevention and Control of Pollution) Act, 1974 or any other environmental law(s), Wild Life Protection Laws as may be applicable.

The Second Party shall be responsible for mitigation of adverse impacts as per the approved EIA Plan and mitigation of degradation of environment due to disturbance of eco-system in watershed area. The cost of the same will be entirely borne by the Second Party.

**5.12 Water requirement for construction:-** The Second Party shall ensure that the water requirement for construction of the Project including potable water shall be generally arranged and harnessed by them from the river source.

**5.13 Maintaining Ecological Balance:-** The Second Party shall be responsible for maintaining the ecological balance by preventing deforestation, water pollution and defacement of natural landscape in the vicinity of Works. The Second Party shall take all reasonable measures to prevent any unnecessary destruction, scarring or defacement of the natural surroundings in the vicinity of the Works.

**5.14 Existing / Alternative facilities:-** In case any existing facilities including, but not limited to, irrigation systems, water supplies, roads, bridges, buildings, communication system(s), power systems and water mills are adversely affected because of the implementation of the Project, the Second Party shall be responsible for taking remedial measures to mitigate such adverse effects. The cost of the above remedial measures shall become a part of the Project cost. Such facilities shall be as mutually identified and agreed upon between the Second Party and the

~~First Party. The Second Party shall not interfere with any of the existing facilities till an alternate facility, as identified, is created.~~

The Second Party shall make suitable financial provisions for mitigation of adverse impacts as per the approved EIA plan and mitigation of degradation of environment due to disturbance of eco-system in watershed area, at the cost of project.

The Second Party shall be responsible for mitigation of adverse impacts as per the approved EIA Plan and mitigation of degradation of environment due to disturbance of eco-system in watershed area. The cost of the same will be entirely borne by the Second Party.

**5.15 Improvement of Existing Roads:-** The Second Party shall bear the cost of improvement/widening of the existing roads in the near vicinity of the project area, which are essentially required to be used for the construction of the Project.

**5.16 Consumptive Use of Water:-** The First Party shall have the right for withdrawal of water from the river course for the consumptive use by pumping or by gravity for the purpose of potable water supply and irrigation to the affected population.

**5.17 Local Area Development:-** The Second Party shall build such infrastructural development works in the vicinity for the project area that may be essentially required for the benefits of local population. The expenditure on such works shall be incurred by the Second Party. These developmental works may be mutually decided with the First Party.

**5.18 Police Station/Chowki and Labour Office:-** The Second Party shall inform the local Police Station/Chowki and the Labour Office about the details of the work force engaged from within the State or outside regularly.

**5.19 Protection of Water Rights:-** The Second Party shall ensure protection of the water rights of the local inhabitants for drinking and irrigation purposes etc. by verifying the revenue entries and activities of Jal Shakti department so as to ensure that such rights are not infringed upon. Any dispute in the matter shall be referred to a committee headed by Deputy Commissioner to be appointed by the First Party involving Jal Shakti and Revenue departments. Thereafter, The decision of the First Party shall be final and binding on all the parties.

**5.20 Upstream and Downstream Projects:-** The Second Party shall have no claim on any project upstream or downstream of the allotted project. There shall be a stream / basin wise coordination committee of various project developers of concerned stream/ basin under the chairmanship of Director Energy to resolve any issue arising with the upstream and downstream project with respect to construction, water availability, transmission, sharing of cost/ obligation/ benefit etc. as referred.

**5.21 Dumping of Excavated Material:-**

**5.21.1** The Second Party shall be allowed to use the muck / mineral generated during the execution of the project work and also shall be allowed to set up captive stone crusher in the project area as per the HP Minor Mineral Rules provided the Second Party adheres to the prevailing environmental safe guards. The royalty on the usage of such minerals shall be payable to the State Industries department as per rules.

**5.21.2** The Second Party shall be required to follow environmental related regulations concerning disposal of muck and soil etc. The Second Party shall use such material for the project as may

be found suitable for the construction and the remaining material shall be allowed to be used by other development departments of the State subject to the prevailing Rules and Regulations.

**5.21.3** The Second Party shall ensure that the material excavated from the site shall be dumped in the area duly approved by the MoEF& CC, GoI/HPPCB.

## **5.22 Project Inspection:-**

**5.22.1** The First Party shall carry out periodic inspections to the project site during construction stage after studying and analyzing the information supplied by the Second Party.

**5.22.2** In case of notice of any deviation during inspection to the project site by the inspection team so deputed by the First Party, in relation to the approved norms including the size and location of various components such as Diversion Structure, Water Conductor System, Penstock, Power House, Electro-Mechanical installations etc. Inspection team shall seek a report from the Second Party to explain the reasons of such deviation. The inspection team shall examine the report so received and analyse each deviation noticed and clearly determine the reasons thereof including the compelling circumstances, such as geological surprises, designs constraints, environmental and local issues etc. if any and make a comprehensive report.

**5.22.3** The deviations undertaken without any compelling reasons or with mala-fide intentions shall invite levy of penalty to be computed by DoE in each case subject to maximum of the cost in proportion to the deviation of the respective components apart from imposing appropriate cost on the Second Party in consonance with the adverse impacts on social or community infrastructure.

**5.22.4** Provided where the deviation is such that it affects or encroaches upon the domain of the upstream or downstream projects in any manner, the State Government may cancel the allotment of project after affording the opportunity of being heard.

**5.22.5** Provided further that First Party may depending upon the circumstances of each case direct the Second Party to restrict to particular domain apart from levying penalty as laid down in the preceding Para.

**5.23** The Second Party shall, at all times, afford access to the Site to the authorized representatives of the First Party and to the persons duly authorized by any Governmental Agency having jurisdiction over the Project, including those concerned with safety, security or environmental protection to inspect the Project Site and to investigate any matter within their authority and upon reasonable notice, the Second Party shall provide to such persons reasonable assistance/necessary information to carry out their respective duties and functions with minimum disruption to the construction, operation and maintenance of the Project consistent with the purpose for which such persons have gained such access to the Site.

## **5.24 Safety Measures:-**

**5.24.1** The Second Party shall share the detailed engineering drawings of the Project and equipment installed whenever directed by the First Party to do so, to ensure transparency, safety, quality control and timely remedial action in case of operational problems.

**5.24.2** The Second Party shall ensure proper quality control and safety measures during investigations / execution / Operation & Maintenance of the project keeping in view all quality control and safety measures as per relevant IS Codes / adopted standards and O&M Manual. The Second Party shall also ensure essential first aid facilities at all project sites.

5.24.3 The Second Party shall ensure that the residential camps for all categories of manpower are situated at safer locations by taking into consideration the occurrence of probable flash floods and other eventualities like cloudbursts etc. The Second Party shall also ensure the well interconnectivity of the whole Project area through effective communication and transportation arrangements.

5.24.4 The Second Party shall ensure that all the Project vehicles and the access to roads are properly maintained and fully safe for use.

5.24.5 The Second party shall be entirely responsible for detailed designs and working drawings of project components with regard to their structural, hydrological and mechanical performance & safety and ensure its compliance during execution of the Project.

5.24.6 The Second Party shall abide by guidelines mentioned in the Energy Policy of the First Party regarding safety, quality, disaster management and risk reduction in respect of hydro electric projects, as per its applicability.

5.25 **Project Performance:-** The Second Party shall ensure that the execution, operation and maintenance of the Project is in conformity with the Project concept as per Detailed Project Report (DPR), Prudent Utility Practices and the manufacturer's specifications. The Project/Unit(s) shall be capable of meeting the load dispatch requirements. The Second Party shall follow the directives of the HPSLDC/Control Centre in the interest of integrated grid operation. Any dispute with reference to the directives of the HPSLDC/ Control Centre shall be referred to State Electricity Regulatory Commission whose decision in such a matter shall be final. Till the decision of State Electricity Regulatory Commission, HPSLDC's/Control Centre's directives shall prevail in the interest of smooth operation of the grid.

5.26 **Free Power Royalty:**

5.26.1 Provisions as per signed PIA, as the case may be, plus 1% additional free power towards LADF.

5.26.2 In case the First Party levies any duty/tax on generation and supply of power, the same shall be borne by the Second Party except for free power royalty which shall be borne by the First Party.

5.27 **Maintenance of Project:-**

5.27.1 The agreement shall remain in force up to a period of 40 years from the Scheduled Commercial Operation Date of the project. Thereafter, the project shall revert to the First Party free of cost and free from all encumbrances and liabilities. The project assets would be maintained by the Second Party in a condition that would ensure rated efficiency of the project and residual life of civil, mechanical and electro-mechanical components at any point of time. During the 10<sup>th</sup>, 20<sup>th</sup>, 30<sup>th</sup>, 35<sup>th</sup> & 40<sup>th</sup> years of operations, the First Party would carry out mandatory inspection of the project in this regard. After the inspection at 35<sup>th</sup> year decision will be taken by the First Party with respect to transfer / extension / maintenance of the project within 2 years of the inspection.

5.27.2 If during such inspections it is found that the project capacity or life is being undermined by inadequate maintenance, the First Party reserves all the rights to terminate the agreement at any time.



**5.28 Ensuring Flow of Water:-** The Second Party shall ensure release of minimum environmental flow (e-flow) immediately downstream of the Diversion Structure of the project throughout the year, at a season-wise rates as recommended by Ministry of Environment and Forests & Climate Change (MoEF & CC), Government of India. For projects, where recommendations are not made by MoEF & CC, the e-Flows shall not be less than the threshold value of 15% of the minimum inflow observed in the lean season in line with the State Pollution Control Board notification. E-flow discharge shall be monitored by the concerned departments/agencies.

The Second Party shall provide necessary arrangement/ mechanism in the civil structure including discharge measurement system for the release of laid down minimum flow immediately downstream of the diversion structure.

In case of violation by the Second Party, action will be taken by the First Party inline with the prevailing guidelines and laws.

**5.29 Protection of Fish Culture:-** The Second Party shall take appropriate steps, as may be required, for the protection of fish culture as per environmental requirements and promotion of rearing of fish, wherever feasible in the project area. The Second Party shall enter into a separate agreement on protection of fish culture with the First Party, if it is considered necessary by the Fisheries Department of the Government of Himachal Pradesh.

**5.30 Use of Facilities:-** Subject to availability, security, safety, law and order and operational factors being met, the Second Party shall permit free use, by the First Party and the general public, of all service roads/bridges constructed and maintained by it. Other facilities like hospitals, post offices, schools etc. shall also be extended to the local public in this regard based on the objective of providing such facilities.

**5.31 Revalidation of TC:-** In case the Second Party fails to achieve the zero date and to start the construction work within 3 years of granting TC, the re-validation of the TC shall be mandatory keeping in view the latest hydrological data and permissible limit of CUF.

**5.32 Declaration of COD:-** After the Second Party ensures the successful trial run of the project and fulfillment of Codal formalities and procedures laid down by the appropriate authorities for declaration of COD of the project, the First Party shall grant permission for declaration of COD to the Second Party as per the guidelines provisioned in the State Energy Policy.

**5.33 Mode of Sale of Power:-** The Second Party shall be free to dispose of power from the project(s), after allowing royalty in the shape of free power to the First Party in any manner they like in accordance with the provisions contained in the Electricity Act, 2003 and amendments thereof and the rules and regulations made there under.

**5.34 Incentive For Early Commercial Operation of The Project:-** In case the Commercial Operation Date (COD) of the project is achieved prior to the Scheduled Commercial Operation Date (SCOD) of the project, the Second Party shall be entitled for incentive as under:-

**5.34.1** From COD of the project up to the SCOD of the project, such percentage of project deliverable energy as agreed in respective agreements two tenth (0.2) percentage points for each period of seventy three (73) days (or part thereof) falling between the COD and SCOD of the project generating units.

**5.34.2** Incentive will be calculated and will be given in the form of energy with free power energy delivery and it will be decided within 6 months of the COD of the Project/ Generating Unit and will be adjusted in next 12 months in twelve equal installments.

**5.35 Disincentive For Delayed Commercial Operation of The Project:-** In case the Commercial Operation Date (COD) of the project is delayed beyond the Scheduled Commercial Operation Date (SCOD) of the project, the Second Party shall be liable for dis-incentive as under:-

**5.35.1** Dis-incentive shall not be imposed in the event that Synchronization of unit(s) achieved prior to Scheduled Commercial Operation Date (SCOD) subject to the condition that other generating unit(s) of the project shall achieve Commercial Operation Date of respective generating units within 3 months from the date of synchronization of first generating unit.

**5.35.2** From SCOD of the respective generating units and up to the COD of the respective generating units, such percentage of project deliverable energy as agreed in respective agreements, two tenth (0.2) percentage points for each period of seventy three (73) days (or part thereof) falling between the COD and SCOD of the respective units.

**5.35.3** Dis-incentive will be calculated and will be given in the form of energy with free power energy delivery and it will be decided within 6 months of the COD of the Project/ Generating Unit and will be adjusted in next 12 months in twelve equal installments.

**5.48 Usage of Land:-** The Second Party shall ensure that the land is used exclusively for the activities related to the project. Any land exceeding the bonafide requirement of the project shall be surrendered to the First Party.

**5.49 Common dedicated transmission system:-** The project developers shall be at liberty to erect common dedicated transmission lines for joint evacuation of power from two or more projects by way of suitable Consortium Agreements. HPSEBL/HPPTCL, as the case may be, will ensure availability of evacuation arrangement before commissioning of the project.

**5.50 Fishing, Recreational and Navigational Rights:-** The fishing, recreational and navigational rights in the river, water, channels, reservoirs, lakes shall remain vested in the First Party subject to such restrictions as may be necessary for the operational requirements, safety and security of the Project.

**5.51 Precious Material Found During Execution of Project:-** During the implementation of the Project, in case any object of archaeological importance is found by the Second Party or by any of its employees/ Contractors, the Second Party shall arrange to hand over the same to the First Party free of cost, provided that, in case any precious or semi-precious material is located, the Second Party shall inform the First Party immediately and shall then abide by the instructions of the First Party which shall be communicated within a period of two (2) months from the date of receipt of such intimation from the Second Party.

**5.52 Adherence to laws:-** The Second Party shall follow all the relevant laws, including, but/ without limitation, all labour laws, and shall also provide for safety provisions as per the Electricity Act, 2003, Factories Act, 1948, Mines Act, 1952 and such other statutory provisions relating to the safety of the Projects and any subsequent amendments made thereto.

**5.53 Trees in the Land transferred to the Second Party:-** The Second Party shall pay to the Forest Department of the First Party, the price of the trees as are required to be felled or are damaged in the execution of the Project, at prevailing market rates as may be notified by the First Party from time to time.

- 5.54 The Second Party shall explore the possibility of converting the project in to Pump Storage/Pondage/Hybridization option and submit proposal for the approval of the First Party accordingly. The provisions regarding such options contained in the State Energy Policy shall be applicable.
- 5.55 **Tax Deduction at Source:-** The Second Party shall ensure that it makes the payments for works within the State of Himachal Pradesh and deposits the tax deducted at source with the offices of the Income Tax Department located within the State of Himachal Pradesh.
- 5.56 **Indemnity:-** The Second Party shall be fully responsible for any damage or loss arising out of the construction, operation or maintenance of the Project to any property or person.
- 5.57 **Misrepresentation:-** The Second Party assures the First Party that there is no misrepresentation in the information supplied by it to the First Party at any stage. The First Party reserves the right to cancel the IA after giving an opportunity to the Second Party in case it is found that there was some such misrepresentation by the Second Party and/or in the event of breach of any of the provisions of this IA.
- 5.58 **Comprehensive Insurance:-** The Second Party shall be bound to execute total comprehensive insurance of the whole Project covering loss of human life, property etc including third party losses, during construction and O&M of the Project.
- 5.59 The Second Party agrees to abide by the provisions as contained in the Energy Policy of the Government of Himachal Pradesh.

## ARTICLE 6

### 6. TERMINATION AND TAKING OVER OF THE PROJECT:-

- 6.1 The First Party reserves the right to terminate the agreement if the Second Party fails to achieve the milestone as stipulated in Clause 5.2.
- 6.2 In the event it is eventually confirmed as impossible or impractical to start construction work on the Project on or before the expiry of period mentioned in Clause 5.2 of this agreement, for the reasons other than those solely attributable to the First Party, the First Party reserves the right to terminate the agreement.
- 6.3 In the event of continuous stoppage of construction on the main Project components by the Second Party for a period of more than three months for reasons not covered under Force Majeure and for reasons attributable to the Second Party, the First Party shall, after giving due opportunity to the Second Party, have the right to terminate this agreement. All deposits shall stand forfeited and the site shall revert to and vest in the name of First Party without any compensation. Notwithstanding any investment in the First Party under this Clause, the Second Party shall be liable to pay all the dues owed to the First Party by the Second Party in pursuant to this agreement.

## ARTICLE 7

### 7. FORCE MAJEURE:-

- 7.1 For the purpose of this agreement, "Force Majeure" shall mean an event which is unforeseeable, beyond the control of the Second Party and not involving the Second Party fault or negligence. Such events may include acts of the First Party /GoI either in its sovereign or its

contractual capacity, war, civil war, insurrection, riots, revolutions, fires, floods, epidemics, quarantine restrictions, freight embargoes, radioactivity and earthquakes.

7.2 If a Force Majeure situation arises, the Second Party shall promptly inform the First Party in writing of such conditions and the cause thereof. Unless otherwise directed by the First Party in writing, the Second Party shall continue to perform its obligations under the agreement, as far as is reasonably practical, and shall seek all reasonable alternative means for performance, not prevented by the Force Majeure event.

7.3 In the event, a Party is rendered unable to perform any obligation required to be performed by it under this agreement by Force Majeure, the particular obligations shall, upon information to the other Party be suspended for the period of Force Majeure. The time for performance of the relative obligations suspended by Force Majeure shall be extendable by the period of delay which is directly attributable to Force Majeure.

#### ARTICLE 8

##### 8. CONFIDENTIALITY:-

Each Party hereto agrees that it shall not divulge any trade, commercial or technical secrets or confidential matters of one another to any third party, except for the purpose of implementation, operation and maintenance of the Project.

#### ARTICLE 9

##### 9. GOVERNING LAW:-

The rights and obligations of the Parties under or pursuant to this Agreement shall be governed by and construed according to Law. This Agreement shall be subject to the jurisdiction of the competent courts of Himachal Pradesh.

#### ARTICLE 10

##### 10. VIOLATION PENALTY:-

Any violations of the above mentioned issues concerning Policy parameters, PIA/IA may result into monetary penalty including cancellation of the Project.

#### ARTICLE 11

##### 11. RESOLUTION OF DISPUTES:-

11.1 The Parties shall attempt to resolve any dispute in relation to, arising out of or in connection with the agreement (hereinafter referred to as the Dispute) by mutual discussions.

11.2 Any difference and/or disputes arising at any time between the parties out of this IA or interpretation thereof shall be endeavored to be resolved by the parties hereto by mutual negotiations, failing which the matter shall be referred to a two tier Grievance Redressal Process. The matter shall be addressed by the Departmental Grievance Redressal Committee constituted by the First Party under the Chairmanship of Director Energy, GoHP, Shimla. In case the issue remains unresolved to the satisfaction of the Second Party, the matter shall be referred to a State Level Committee. If the Second Party is still not satisfied with the verdict, the dispute shall be subject of the jurisdiction of Civil Courts in Himachal Pradesh.

- 11.3 During the pendency of the such proceedings, both Parties shall continue to perform their respective obligations under this agreement, unless the performance of such obligation itself is subject of such proceedings.
- 11.4 No party shall be considered to be in default under this IA for any breach of any of the terms thereof due to the imposition of restrictions and onerous regulations by any Government or statutory authority or agency or other cause beyond its reasonable control.
- 11.5 All legal proceedings arising in connection with this agreement shall be subject to the jurisdiction of the Himachal Pradesh High Court and its subordinate courts in the State of Himachal Pradesh irrespective of the place of performance/execution of the Agreement.

## ARTICLE 12

### 12. ASSIGNMENT AND AMENDMENTS:-

The Second Party may, only for the purpose of arranging or rearranging finance for the Project, assign or otherwise transfer all or any portion of its rights and benefits with prior written approval of the First Party, but not its obligations under the agreement to any other person or entity. No amendment or waiver of any provision of the agreement, and no consent to any departure by either Party here from, shall in any event be effective unless the same is in writing and signed by each of the parties.

**ARTICLE 13**

**13. COMMUNICATION:-**

**13.1** Any communication/notice by one Party to the other Party under this agreement shall be deemed to have been served if sent by cable, fax or Email followed by a confirmation letter delivered by hand or by mail to the respective addresses.

**13.2** Communication should be addressed as below:-

**If to the Company**

\_\_\_\_\_

**If to the Government**

Director Energy

Government of Himachal Pradesh,

Shimla, H.P, India.

Tele- Fax No. \_\_\_\_\_

**13.3** Either Party may change the address and/or addresses to which such communications/notices are to be delivered or mailed by duly informing the other Party.

Any other terms and conditions deemed necessary shall form integral part of this Implementation Agreement as per provisions thereto.

In witness whereof, the Parties hereto have executed and delivered this agreement at Shimla, Himachal Pradesh on the date first written above.

**For and on behalf of the  
Government of Himachal Pradesh**

**For and on behalf of Company**  
M/s \_\_\_\_\_

**Director Energy  
Government of Himachal Pradesh  
Shimla (HP)-----**

**WITNESSED BY:**

1.

2.

**WITNESSED BY:**

1.

2.

**IMPLEMENTATION AGREEMENT**  
**(For Projects Above 25MW)**  
**FOR HYDRO-ELECTRIC PROJECT (      MW)**

This Agreement executed on this \_\_\_\_ day of the month of \_\_\_\_ two thousand \_\_\_\_ between the Governor of Himachal Pradesh, through Sh./Smt. \_\_\_\_, Director Energy, Government of Himachal Pradesh, having its office at \_\_\_\_ Shimla \_\_\_\_, (hereinafter referred to as "**First Party**"), which expression unless repugnant to the context or meaning thereof, shall include its successor(s), administrator(s) or permitted assigns, of the **FIRST PART**;

**AND**

M/s \_\_\_\_, having its registered office at \_\_\_\_, (hereinafter referred to as "**Second Party**") which expression shall, unless repugnant to the context or meaning thereof, include its successor(s), administrator(s) or permitted assigns, through \_\_\_\_ who has been duly authorized by the Second Party vide their resolution dated \_\_\_\_ to execute this agreement, of the **SECOND PART**.

**WHEREAS**, the First Party in accordance with its Energy Policy had entered into a Pre-Implementation Agreement on \_\_\_\_ in the year \_\_\_\_ with the Second Party to carry out detailed investigations, techno-economic studies, submission of a Detailed Project Report (DPR) for the implementation of \_\_\_\_ Hydro Electric Project (HEP) \_\_\_\_ MW installed capacity, located in District \_\_\_\_, of Himachal Pradesh hereinafter referred to as the "**Project**"; and

**WHEREAS**, the Second Party has deposited the First instalment of the upfront premium amounting to Rs. \_\_\_\_ on \_\_\_\_ with the First Party and shall deposit the balance upfront premium as per provisions in the signed PIA; and

**WHEREAS**, the Second Party has agreed to contribute and provide to the First Party a minimum of 1.5% of Final Project Cost towards LADF for financing local area development activities during execution of Project as per schedule of payment mentioned in the signed PIA; and

**WHEREAS**, in case the Second Party fails to deposit Pre-Commissioning LADF dues, the First Party shall recover the amount due along with interest applicable as per policy and recovery provisions; and

**WHEREAS**, the Second Party has agreed to provide to the First Party the royalty in the shape of free power as per provisions in the signed PIA; and

**WHEREAS**, the Second Party has agreed to contribute additional 1% Free Power over and above the agreed rates of normal Free Power Royalty Component to the First Party as per the policy provisions; and

**NOW, THEREFORE**, in consideration of the promises and mutual covenants and conditions set forth herein, it is agreed by and between the parties hereto as follows:

## **1. INTERPRETATIONS AND DEFINITIONS:**

### **1.1 INTERPRETATIONS:-**

- 1.1.1** The nomenclature of this agreement, headings and paragraphs numbers are for convenience of reference only and shall be ignored in construing or interpreting this agreement.
- 1.1.2** References to persons and words denoting natural persons shall include bodies corporate and partnerships, joint ventures and statutory and other authorities and entities.
- 1.1.3** References to any enactment, ordinance or regulation or any provision thereof shall include any amendment thereof or any replacement in whole or in part.
- 1.1.4** Reference to Recitals, Articles, Clauses, Sub-Clauses or Annexures shall unless the context otherwise requires, be deemed to include the Recitals, Articles, Clauses, Sub-Clauses or Annexures of this Agreement.
- 1.1.5** The words importing singulars shall include plurals and vice versa as may be necessary.
- 1.1.6** Terms beginning with capital letters and defined as per Clause 1.2 of this agreement shall have the same meaning ascribed thereto and the terms defined in the Annexures, if any and used therein shall have the meaning ascribed thereto in the Annexures, if any.
- 1.1.7** The Annexures and Schedules, if any, to this agreement form an integral part of this agreement and shall be in full force and effect as if they were expressly set out in the body of this agreement.
- 1.1.8** Any reference at anytime to any agreement, deed, instrument, license or document of any description shall be construed as reference to that agreement, deed, instrument, license or other document as amended, varied, supplemented, modified or suspended at the time of such reference provided that this Clause shall not operate so as to increase liability or obligations of any Party hereunder or pursuant hereto in any manner whatsoever.
- 1.1.9** Any agreement, consent, approval, authorization, notice, communication, information or report required under or pursuant to this agreement from or by any Party shall be valid and effectual only if it is in writing and under the hands of duly authorized representative of such Party in this behalf and not otherwise.
- 1.1.10** Any reference to any period commencing "from" a specified day or date and "till" or "until" a specified day or date shall include both such days and dates.

### **1.2 DEFINITIONS:-** In this Agreement, the following words and expressions, unless repugnant to the context or meaning thereof, shall have the meanings hereinafter respectively as assigned to them as under:-

- 1.2.1** "Act" means the Electricity Act, 2003 and its amendments;
- 1.2.2** "Acquired Land" shall have the meaning set forth in Clause 4.3;
- 1.2.3** "Agreement" means this agreement together with all its Appendices and Annexures, if any and any amendments thereto made in accordance with the provisions herein contained;



**1.2.4 "Agreement Period"** shall have the meaning as specified in Clause 3.2;

**1.2.5 "CEA"** means the Central Electricity Authority as defined under section 2 (6) of the Electricity Act, 2003 or its successors;

**1.2.6 "Central Transmission Utility (CTU)"** means any Government Company which the Central Government has notified under sub-section (1) of section 38 of the Act;

**1.2.7 "Commercial Operation"** means the state of Unit/Project when Unit/Project is capable of delivering Active Power and Reactive Power on a regular basis after having successfully completed the commissioning tests as per Prudent Utility Practices;

**1.2.8 "Commercial Operation Date (COD)" in relation to generating unit:** means the date declared by the generating company with the permission of the State Authority on which the Commercial Operation of Unit/Project as the case may be is achieved by the Second Party;

**1.2.9 "Commercial Operation Date (COD)" in relation to the project:** means the date of commercial operation of the last generating unit of the project.

**1.2.10 "Company"** means \_\_\_\_\_ a generating company within the meaning of section 2 (28) of the Electricity Act, 2003 and registered under Companies Act, 1956;

**1.2.11 "Contractor"** means any person, firm or body corporate engaged by the Second Party for the implementation of the Project;

**1.2.12 "Control Centre" or "State Load Despatch Centre"** located at Shimla or such other control center designated by the First Party from time to time from which the despatch instructions will be issued to the Second Party at the Station;

**1.2.13 "Debt"** means the amount of any loan, non-convertible debenture or other similar obligation, contracted or raised and received by the Second Party under the Financing agreements, and actually expended (or to be expended) for the Project and which shall not be greater than the principal amount of debt specified in the applicable currency in the estimate of Capital Cost of the Project;

**1.2.14 "Deliverable Energy"** means the electrical energy generated at the Station, as measured at generator(s) terminals less the summation of the following:-

(i) Actual auxiliary consumption for the bonafide use of auxiliaries, lighting and ventilation in the Power Station and Intake Works and the transformation losses (from generation voltage to transmission voltage) of the step up transformers at the power house switchyard; and

(ii) Transmission losses at actuals, which shall be the difference of the electrical energy measured at sending and receiving ends of the transmission line (i.e. the power station end and the Interconnection Point);

For this purpose and subject to above, the energy meter reading shall be taken on monthly basis at the Interconnection Point;

**1.2.15 "Despatch"** means to schedule and control the generation of the Project in order to commence, increase, decrease or cease the electrical output as delivered to the Grid System in

accordance with the instructions from the HPSLDC/ Control Centre in conformity with the agreement and Prudent Practices;

**1.2.16 "Despatch Instruction"** shall mean an instruction issued by the HPSLDC/ Control Centre to the Second Party for the despatch of power by message/fax/email to be confirmed in writing by HPSLDC/Control Centre as per the operating procedure developed by the Parties to operate the Project in accordance with the terms of this agreement and technical limits and Prudent Utility Practices including-

- (a) an instruction to target active/reactive power output to be maintained by the Project;
- (b) an instruction to synchronise or desynchronise a generating unit at a particular time;
- (c) an instruction to defer or cancel a scheduled outage or maintenance outage; and
- (d) an instruction for backing down the active/reactive power due to Grid conditions;

**1.2.17 "Detailed Project Report (DPR)"** means the Project Report submitted by the Second Party and as approved by the competent authority;

**1.2.18 "Disincentive"** shall have the meaning set forth in Clause 5.36;

**1.2.19 "Dispute"** shall have the meaning as specified in Article 11;

**1.2.20 "Effective Date"** means the date of signing of the Implementation Agreement;

**1.2.21 "Equity"** means the aggregate of all subscribed and paid up share capital of the Second Party in different currencies as converted into Rupees, by application of the procedure approved by the Authority/GoI, as invested in the Project and held by one or more shareholders in the Second Party, which shall be in accordance with the financial plan;

**1.2.22 "Financial Closure"** means the first business day on which substantial funds are made available to the Second Party under the terms of the Financing Agreement;

**1.2.23 "Financing Agreement"** mean the loan agreements, notes, indenture, security agreements, letters of credit and other documents relating to the financing (including refinancing) of the Project and the capital cost of any part thereof, as amended, supplemented or modified from time to time and approved by the First Party;

**1.2.24 "Force Majeure"** shall have the meaning as described thereto in Article-7;

**1.2.25 "Government"** means the Government of Himachal Pradesh;

**1.2.26 "GoI"** means the Government of India;

**1.2.27 "Grid/Grid System"** means the network of power system interconnecting different Power Generating Stations, Transmission Lines and Sub-Stations for transmitting the electrical output from the Interconnection Point up to main load Centre(s);

**1.2.28 "HPSEBL"** means Himachal Pradesh State Electricity Board Limited.

**1.2.29 "HPERC" and "State Regulatory Commission"** means the Himachal Pradesh Electricity Regulatory Commission;

**1.2.30 "HPPTCL"** means Himachal Pradesh Power Transmission Corporation Limited;

**1.2.31 "HPPCB"** means Himachal Pradesh Pollution Control Board;

**1.2.32 "Incentive"** shall have the meaning set forth in Clause 5.35;

**1.2.33 "Interconnection Facilities"** means all the facilities which shall include without limitation, switching equipment, communication, protection, control and metering devices etc. at the Interconnection Point(s) to be installed and maintained at the cost of the Second Party to enable evacuation of power output from the Project in accordance with this agreement;

**1.2.34 "Interconnection Point(s)"** shall mean the physical touch point at sub-station(s) of the HPSEBL / State Transmission Utility/Central Transmission Utility where the Project's transmission line for evacuating the power from the Project is connected to the Grid;

**1.2.35 "Local Area Development Committee (LADC)"** shall mean the Committee constituted by the Government and entrusted with the function as specified in Clause 4.18;

**1.2.36 "Local Area Development Fund (LADF)"** shall mean the (i) Pre-Commissioning LADF-fund to be deposited by the project at pre-commissioning stage for its utilization towards local area development and (ii) Post-Commissioning LADF - fund received from sale of 1% deliverable energy share at post commissioning stage to be distributed amongst all the Project Affected Families as per policy provisions;

**1.2.37 "Law"** means any Act, rule, regulation, notification, order or instruction having the force of Law enacted or issued by any competent legislature, Government or statutory authority in India;

**1.2.38 "MoEF & CC"** means Ministry of Environment, Forest and Climate Change, Government of India or its successor authority/agency;

**1.2.39 "Month"** means English Calendar month;

**1.2.40 "NRLDC"** means "Northern Regional Load Despatch Centre" or its successor entity;

**1.2.41 "PGCIL"** means Power Grid Corporation of India Limited.;

**1.2.42 "Parties"** refer to the First Party and the Second Party collectively;

**1.2.43 "Party"** shall refer to the Government and/or the Company individually;

**1.2.44 "Permanent Works"** means the permanent works forming part of the Project that are required to be constructed/installed and maintained as such for the implementation of the Project for at least the Agreement Period and shall also include housing facilities for staff to be engaged for Operation & Maintenance of the Project;

**1.2.45 "Power Purchase Agreement (PPA)"** means a contractual agreement to be signed by the Second Party with a party for sale of power from the Project to that party;

**1.2.46 "Project Affected Area (PAA)"** shall have the meaning as set forth in Energy Policy.

**1.2.47 "Project Affected Family (PAF)"** shall have the meaning as set forth in Energy Policy.

**1.2.48 "Project Affected Zone (PAZ)"** shall have the meaning as set forth in Energy Policy.

**1.2.49 "Project"** means \_\_\_\_\_ Hydro-Electric Project proposed to be established on \_\_\_\_\_ river in the \_\_\_\_\_ District of Himachal Pradesh, India including complete hydro-electric power generating facilities along with all associated infrastructure.

**1.2.50 "Prudent Utility Practices"** means those practices, methods, techniques and standards that are generally accepted internationally from time to time by electric utilities for the purpose of ensuring safe, efficient and economic design, engineering, construction, commissioning, testing, operation and maintenance of various components of the Project of the type specified in this agreement and which practices, methods and standards shall be adjusted as necessary to take account of:-

- (i) Installation, Operation & Maintenance guidelines recommended by the manufacturers of plant and equipment to be incorporated in the Project; and
- (ii) The requirements of Indian Law; and
- (iii) Physical conditions at the Site.

**1.2.51 "Royalty"** shall have the meaning set forth in Clause 3.2 & 4.3;

**1.2.52 "Scheduled Commercial Operation Date"** means the date by which the Second Party shall have achieved the Commercial Operation of the project and approved by appropriate Authority.

**1.2.53 "Site"** means the site of Project appurtenances, generating plant including land, waterways, roads and any rights acquired or to be acquired by the Second Party for the purposes of the Project;

**1.2.54 "State"** means Himachal Pradesh ;

**1.2.55 "Station"** means the ----- for generating electricity, including any building and plant with step up transformer, switchgear, switchyard, cables or other appurtenant equipments, if any, used for that purpose;

**1.2.56 "State Transmission Utility (STU)"** means HPPTCL / HPSEBL (the Government Company specified as such by the First Party under sub-section(1) of section 39 of the Electricity Act, 2003);

**1.2.57 "Temporary Works"** mean all temporary works of any kind required for the implementation of the Project and that are incidental and ancillary to the design, engineering and construction of the Project and are constructed/installed and maintained till the Commercial Operation Date of the Project, and will not form part of Permanent Works;

**1.2.58 "Transmission Licensee"** means a licensee authorized by the Appropriate Electricity Regulatory Commission to establish or operate transmission lines;

**1.2.59 "Unit"** means one hydro turbine generator including ancillary equipment and facilities thereto; and

**1.2.60 "Works"** mean all works of civil, electrical and mechanical nature and including design, engineering, services, supplies and other work activities required and necessary for the implementation of the Project and shall also include the Permanent Works and the Temporary Works.

## **ARTICLE 2**

**2. UPFRONT PREMIUM:-** "As per provisions contained in signed PIA"

## **ARTICLE 3**

**3. TERM OF THE AGREEMENT:-**

**3.1 Effectiveness:** - This Agreement shall come into force on the Effective Date.

**3.2 Agreement Period:-**

(a) This Agreement shall remain in force up to a period of 40 years from the Schedule Commercial Operation Date of the Project, (Agreement Period) unless terminated earlier in accordance with the provisions of this agreement.

(b) On completion of the Agreement Period, the Project shall revert to the First Party free from all encumbrances together with all land, buildings, plant, machinery, spare parts and all assets of the Project. After completion of 40 years, the First Party, may either extend the agreement on mutually agreed terms & conditions or may go for competitive bidding under Renovation and Modernisation mode for next thirty years, however the royalty payable to the First Party for the extended period in any case will not be less than 30%.

**3.3 Survival:** - The termination or expiry of this agreement shall not affect the accrued rights, obligations and liabilities of either Party under this agreement, nor shall it affect any continuing obligations which this agreement provides, whether expressly or by necessary implication.

## ARTICLE 4

### 4. OBLIGATIONS OF THE FIRST PARTY

**4.1 Granting Consents/Permissions and Assistance in Obtaining Clearances:-** The First Party hereby agrees to grant to the Second Party all consents, permissions, statutory/non-statutory, within its purview as required by the Second Party to undertake, establish, operate, maintain and transfer the Project. The First Party shall assist the Second Party for expediting the various statutory/non - statutory clearances required for the implementation of the Project, from various competent authorities of the First Party/Central Government or State Power Utilities. The First Party shall forward all relevant proposals received from the Second Party to the GoI/Government authorities and shall assist so that all sanctions are accorded/got accorded from the competent authority within the prescribed period.

**4.2 Subsidiary Company:-** The First Party may provide possible assistance to the Second Party in the incorporation of the new subsidiary Company provided that the registered office of such a Company is within Himachal Pradesh.

**4.3 Use of Materials:-** The First Party shall permit the Second Party, in accordance with the Law to collect and use boulders, stones, shingles, limestone and other building materials, except precious and semi-precious materials, from the river beds, and/or from the land acquired for or transferred to or leased out to the Second Party for the project, on payment of royalty in accordance with the Government rules/rates in force from time to time.

### 4.4 Acquisition and transfer of land:-

(a) The First Party shall acquire, at the request and expense of the Second Party, and in accordance with the provisions of Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation and Resettlement Act, 2013 (RFCTLARR Act, 2013) and other applicable laws, such private lands within the State of Himachal Pradesh as may be required by the Second Party for Permanent Works. The Second Party shall at its own risk also be allowed to acquire such land through direct negotiations with the owners in accordance with the prevailing laws, rules and regulations in the State.

(b) The First Party shall provide necessary assistance to the Second Party in obtaining permission of the competent authority for the removal of trees standing on the Acquired/leased Land and on the Government lands which in its reasonable opinion are required to be felled or removed for the Implementation of the Project.

**4.5 Rehabilitation and Resettlement Plan:-** The First Party shall, subject to the approval of the GoI or any other competent authority, prepare a rehabilitation and re-settlement plan in association with the Second Party for local residents likely to be adversely affected or displaced due to construction of the Project at the Site as on the Effective Date. The cost of preparation and implementation of the above plan shall be borne by the Second Party.

**4.6 Upgradation of Roads and Bridges:-** The First Party may, at the request and cost of the Second Party, construct, widen and strengthen such roads and bridges within the State of Himachal Pradesh as are considered reasonably necessary by the First Party. The First Party permits the Second Party to construct roads, bridges, culverts as considered necessary for the Project in the Project lands. The First Party may also permit the Second Party to construct

roads, bridges, culverts as are considered reasonably necessary by the First Party in the interest of the Project on a case-to-case basis.

- 4.7 Other Approvals:-** If any approval is required under the Law by the Second Party, the lenders, or Contractor(s) with respect to the Project, upon application therefore being made by the Second Party, First Party may take all reasonable and appropriate steps within its administrative power and as permissible by Law, to ensure that such approval is granted in a time bound manner mutually agreed between the parties.
- 4.8 Communication:-** The First Party shall provide due assistance to the Second Party to obtain, in accordance with the prevailing Law and regulations, necessary permits to install and use suitable radio communication systems, including Satellite communication equipment and walkie-talkies. Any system connecting with the National Telecommunication System or any International Telecommunication System will be subject to the approval/license from the relevant authorities, for the issuance of which First Party shall assist.
- 4.9 Explosives:-** The First Party shall provide due assistance to the Second Party, under the Law and regulations, to obtain permission to procure, store and use such explosives which are required for the execution of Project; provided that the responsibility of obtaining such a clearance and making the necessary arrangements rests with the Second Party.
- 4.10 Import License:-** The First Party shall provide due assistance to the Second Party in obtaining all necessary import licenses for the Project from the relevant GoI authorities to the extent permissible by Law. The Second Party shall submit a list of such equipment required to be imported for the Project to the First Party for approval.
- 4.11 Upstream/Downstream Projects:-** The First Party, through its departments/Boards or IPPs shall be entitled to survey, investigate and implement any River Valley Power Generation Scheme upstream or downstream of the Project. The First Party shall, as and when required, put in place a Committee comprising of experts from the relevant field for determining the impact, if any, on the existing Project due to allotment of any upstream and/or downstream Project. In the event of a dispute, the decision of First Party in the matter shall be final and binding on all the parties.
- 4.12 Commitment towards social/environmental concerns:** First Party reserves the right to reduce capacity/discharge or abandon the project for meeting the commitment towards social / environmental concerns.
- 4.13 Monitoring Committee:-** First Party shall review and address various issues faced by the Second Party during the implementation of the project. State Level Committee under the chairpersonship of Hon'ble Power Minister of Himachal Pradesh shall review the progress from time to time.
- 4.14 Authority of Hydro Project Safety, Quality Control & Water Management:-** First Party has constituted an Authority for Hydro-Electric Project's Safety, Quality Control & Water Management at Directorate of Energy, GoHP. The authority shall be entrusted with roles and responsibilities for developing monitoring mechanism for the safety, quality and management of water flows of HEPs ensuring long term generation capability and residual life of Hydro-electric projects as per the guidelines provisioned in the State Energy Policy. The authority shall also act as Dam Safety cell to carry out Dam safety programme in accordance with standard guidelines laid down by Dam Safety Organization of Centre Water Commission

~~(CWC) and recommendations of Dam Safety Monitoring Directorate, CWC, Government of India.~~ The Second Party agrees to abide by the guidelines of above authority.

- 4.15 **Declaration of Date of Commercial Operation (COD):-** First Party will grant permission for declaration of COD of the generating unit/project, as the case may be, by the Second Party after ensuring successful trial run of the project and fulfillment of codal formalities and procedures laid down by the appropriate authorities, in line with the guidelines defined as per provision under Clause 4.1.1.1 A – xxxvi) of the State Energy Policy.
- 4.16 **Local Area Development Committee:-** First Party shall constitute Local Area Development Committee (LADC) of concerned District immediately after signing of the Implementation Agreement in line with the provisions of Energy Policy to administer Pre- commissioning LADF and Post -commissioning LADF as per provisions contained in the Energy Policy of the State.
- 4.17 **Infrastructure Development Works:-** The Second Party shall build such infrastructural development works in the vicinity of the Project area that may be essentially required for the benefit of local population. The expenditure on such works shall be incurred by the Second Party. These developmental works may be mutually decided with the First Party.
- 4.18 **Trees in the Land transferred to the Second Party:-** The First Party shall be responsible for felling and removing of the trees which are necessarily required to be felled or damaged trees during the execution of project on receiving the payment by Forest Department from Second Party on account of price of such trees at prevailing market rates as may be notified by the First Party from time to time. The net sale proceeds of the trees shall be made over to the Second Party.
- 4.19 **Aerial Ropeway:-** First Party shall allow the Second Party to set up temporary aerial ropeways / cable ways of any type for transporting material, men & machinery without the requirement of NOC of Gram Panchayat subject to adherence of safety parameters as per prevailing rules and regulations.
- 4.20 **Construction Power:-** First Party through HPSEBL shall provide electricity connection for the construction power required for execution of Project to the Second Party on priority basis wherever feasible.
- 4.21 **Evacuation Arrangement:-** The First Party through State Utilities – HPPTCL or HPSEBL as the case may be, shall create the required evacuation infrastructure for the project as per the terms and conditions of the connectivity agreement strictly as per the CERC/HPERC regulations.
- 4.22 **Recruitment of Staff:-** The implementation of the provisions in respect of recruitment of staff on the Project made under Clause 5.4 of this agreement shall be monitored strictly by the Labour Commissioner and Director, Employment as well as by the Department of Labour & Employment and in case of infringement of provisions of employment Clauses by the Second Party, the Labour and Employment Department shall initiate any stringent legal action as they may deem fit.
- 4.23 **Comprehensive Insurance:-** The First Party shall monitor from time to time, the validity of the Comprehensive Insurance executed by the Second Party during the construction and O&M stage of the Project.



## ARTICLE-5

### 5. OBLIGATIONS OF THE SECOND PARTY

#### 5.1 Equity Participation:-

##### 5.1.1 The equity participation in implementation of the Project as under:-

Sr. No.	Name of Company/Consortium	Equity participation

##### 5.1.2 The Second Party agrees that Principal Promoters of the Second Party with prior approval of First Party are allowed to sell/transfer their equity up to 100% during the implementation of project and in the name of Third Party, which is possessing better technical and financial strengths, subject to the fulfillment of the below mentioned terms & conditions. However, there will be no restriction in respect of transfer of the project after commissioning;

- A detailed proposal showing competence in terms of financial and technical credentials of the new entity willing to acquire the project, is submitted by the Second Party for consideration of the First Party by either of the parties, along with the firm letter of consent and valid resolutions duly passed by the Board of Directors of both the concerned parties, stating that all liabilities and responsibilities assigned in favour of the Second Party shall be acceptable to the new entity.
- An undertaking to the effect that all liabilities as well as payments due in favour of the Second Party are duly accepted by the new entity.
- The new entity should possess adequate financial as well as technical competence in such a manner that the credential of the new entity should meet the strengths required for Qualification as per the allotment terms and conditions.
- For allowing change / transfer of equity of Principal Promoters, a fee @ Rs.50,000/- per MW subject to maximum of Rs.50 lakh is to be deposited at the time of signing of Tripartite Agreement for transfer of project along with all liabilities / responsibilities in the name of new entity.

##### 5.1.3 The Second Party agrees that if they change / dilute equity participation of the constituent member(s) or change the name of the Second Party (whether it is a Company / Limited Liability Partnership (LLP) firm / Body Corporate) without the prior approval of the First Party, a penalty at the rates described below shall be levied. Accordingly, a Supplementary IA/TA to this effect shall be signed within two months from the conveyance of approval. The Second Party agrees that they shall intimate to the First Party about the above changes as early as possible on priority within 6 months.

Sr. No.	Description	Penalty Charges
1	For any equity change without the prior approval of the First Party.	Rs.20,000 per MW subject to maximum of Rs.20 lakh.
2	For change of name of the Second Party without	Rs.20,000 per MW subject to

	the prior approval of the First Party.	maximum of Rs.20 lakh.
3	For change in equity as well as change in name of the Second Party without prior approval of the First Party.	Rs.20,000 per MW subject to maximum of Rs.20 lakh.

**5.1.4** The First Party may consider the request of the Second Party for changing the name of the Second Party or Consortium subject to the condition that the Principal promoter shall retain the controlling interest i.e. 51% equity in the new entity. In the event of any contravention, the First Party shall terminate this Agreement forthwith at any stage.

## **5.2 MILESTONES**

### **5.2.1 Milestones achieved till date**

Sr. No	Milestones	Details of achievement
1.	Deposit of 1 <sup>st</sup> Installment of Upfront Premium	Deposited on-----
2.	Allotment Letter	Issued on -----
3.	Signing of Pre Implementation Agreement (PIA)/Memorandum of understanding (MOU)	Signed on -----
4.	Submission of DPR	Submitted on -----
5.	Grant of Technical Concurrence (TC)	Granted on-----

### **5.2.2 Milestones To Be Achieved**

The Second Party agrees to implement the Project strictly as per the milestones stipulated by the First Party.

Following milestones shall be achieved by the Second Party, failing which consequential action as mentioned shall be taken by the First Party:-

Sr. No	Milestones	Time Period	Consequential Action
1.	Date of Signing of this Agreement (Implementation Agreement)	(Date) -----	-----
2.	Application for connectivity & Long Term Open Access (LTOA) Agreement with HPPTCL.	Within 1 month from the date of signing of IA.	Extension up to a maximum period of 1 month for the reasons beyond the control of Second Party. If the Second Party fails to achieve the milestone even within extended time, allotment of Project shall be cancelled with the forfeiture of all deposits.
3.	Signing of Connectivity Agreement & Long Term Open Access	Within 4 months from the date of signing of IA.	Extension up to a maximum of 3 months for the reasons beyond the control of project developer. If project developer fails to achieve

	(LTOA) Agreement with HPPTCL.		the milestone even within extended time, allotment of project shall be cancelled with the forfeiture of all deposits.
4.	Achieving Zero Date	Within 6 months from the date of signing of IA	Extension up to maximum period of 6 months for the reasons attributable to the Second Party subject to deposit of an extension fee Rs 20,000 per MW per month (extension for the period of delay on account of reasons beyond the control of Second Party shall be allowed without imposition of extension fee subject to satisfaction of the First Party) failing which, allotment of Project shall be cancelled with forfeiture of all deposits.
5.	Scheduled Commercial Operation Date (SCOD) of the Project	Zero date plus construction period allowed as per TC plus extension of time granted by First Party, if any.	Delays during construction period on account of the reasons beyond the control of Second Party shall be considered if applied with full justification within 6 months from COD of the Project and shall be condoned / adjusted only after satisfaction of the appropriate competent authority of the First Party within six months from the receipt of application. SCOD of the project shall not be revised beyond synchronization of any one unit.
6.	Commercial Operation Date (COD) of the Project	Actual date when last unit of the project commences commercial operation.	Incentive / Disincentive as per Clause No.....
7.	Handing over of the Project to the Government	The date determined on completion of 40 years from the Scheduled Commercial Operation Date (SCOD)..	Action as deemed fit

**Notes:**

- a) In case, the Second Party is unable to achieve Financial Closure within the time limit specified above for achieving zero date, the Second Party agrees to start construction work on the project positively within the time limit specified above by investing from its equity component. The Financial Closure shall be concluded within six months of start of the construction work on the project after achieving Zero Date.

- b) In case, unit-wise construction schedule approved is different for different units of the project, then unit wise SCOD will be considered and it will be for calculation of disincentive / penalty only and it will not redefine the project's SCOD as defined above. The Second Party shall not be entitled for any benefit with respect to transfer of project after completion of the agreement period by referring to unit wise SCOD.
- c) Reasons for condonation of delays in achieving various milestones not attributable to the Second Party shall be considered and decided by the First Party.

**5.3 Submission of reports/documents:-** The Second Party shall submit the following reports and documents to the First Party at the time start of construction, during construction and at O&M stage of the Project:

**5.3.1 At the time of start of construction:**

- i. Project related agreements including in particular the Construction Contracts / EPC Contract, if any, the Financing Documents and the O&M Contract, if any, in a soft copy.
- ii. The Second Party shall ensure that these Project related agreements do not in any way hold the First Party liable to the Second Party or any Contract in any manner whatsoever and shall be without prejudice to the rights of the First Party.
- iii. Documents on Quality Plan and Safety measures to be adopted at site indicating the procedure, organization charts depicting the hierarchy of personnel deployed for Safety, QA and QC with their designated role both internal and an independent third party. The third party inclusion is particularly required in respect of hydro-mechanical components (Gates, Hoisting Arrangement etc.), Steel Liner & Penstock w.r.t. Ultra-Sonic/ Radiographic, DPT (Dye Penetration Test), Spectroscopy and Hardness Test etc. and for Electro-mechanical components.
- iv. Important design parameters/specifications for civil works of the project.

**5.3.2 During Construction Stage:**

- i) Monthly hydrological and meteorological data at the end of every calendar month.
- ii) Quarterly Status of Employment at the end of every calendar quarter on the prescribed format.
- iii) Quarterly physical and financial progress report at the end of every calendar quarter on the prescribed format along with videography covering various construction activities of the Project in that quarter. Such progress report and video recording shall be provided not later than fifteen days after the close of each quarter.
- iv) Quarterly reports on quality and safety measures undertaken / adopted, supported with documentary proofs in the form of photographs, videography and test reports etc. at the end of every calendar quarter.
- v) Inventory of hydro mechanical and electromechanical equipment with manufacturer manuals indicating the specifications to be followed strictly during construction, Operation & Maintenance stage.

### 5.3.3 O&M stage:

- i) Monthly Discharge data at the end of every calendar month on the prescribed format.
- ii) Monthly report on release of environmental flow at the end of every calendar month.
- iii) Quarterly Status of Employment at the end of every calendar quarter on the prescribed format.
- iv) Pre & Post Monsoon mandatory safety inspection/ audit reports in case of large Dam project.

### 5.4 EMPLOYMENT TO HIMACHALIS

- 5.4.1 The project developer shall have to provide employment to bonafide himachalis in respect of all the unskilled / skilled staff and other non-executives as may be required for execution, operation and maintenance of the project. However, the first preference will be given to oustees. In the event of non-availability of the requisite skilled manpower at various levels with requisite qualification and experience, the project developer will be free to recruit such persons from outside the state.
- 5.4.2 The project developer shall satisfy that the contractors/sub-contractors engaged by them for the project shall give employment to local people / himachalis for appointment as supervisors, workmen and labourers / workers in the project. The engagement of minimum himachalis in the project shall be as per the Industrial Policy of the State Government.
- 5.4.3 In regard to direct recruitment of engineers and other executives, other things being equal in terms of eligibility criteria, qualification, experience etc., the project developer shall give preference to the candidates well conversant with customs, culture, language and dialects of Himachal Pradesh.
- 5.4.4 The project developer shall ensure that during the deployment of himachalis in respect of executive/non-executive/workmen (skilled / unskilled) categories at any stage of the project implementation, if it is not possible to recruit 100% staff from himachalis for justifiable reasons, only then the project developer shall maintain not less than 80% of the total employees/officers/executives from bonafide himachalis persons as per State Industry Policy.
- 5.4.5 The project developer shall provide employment as per the provision of R&R plan duly approved by the competent authority.
- 5.4.6 The petty contracts of the road work, retaining walls, buildings construction, carriage of construction material like sand, aggregate, cement, steel etc, engagement of all categories of other service providers, taxis for the staff deployed to the sites, engagement of other light and heavy vehicles, running of canteens / mess engagement of security personnel through ex-servicemen shall normally be awarded to locals / Himachalis.
- 5.4.7 The project developer shall also provide training programme to the locals affected by the project so that they are in a position to get employment in respect of various technical/administrative jobs in the Project.

**5.5 Rehabilitation and Resettlement Plan:-** The Second Party shall execute the Rehabilitation and Resettlement Plan prepared by the First Party, pursuant to Clause 4.7 at its cost and also pay for the cost of preparation of the same to the First Party as stipulated under Clause 4.7. The amount so incurred shall form part of the Project cost.

**5.6 Consultancy:-** The Second Party agrees to contract engineering services of a reputed design consultancy organization to oversee the Project planning, its layout design of various project components and quality of construction to ensure safety of the project components/structures during execution and operation of the project in such a way that there is no loss of human life, property of the people, energy generation etc.

**5.7 Free Flow/Riparian distance:-** For projects more than 25 MW capacity, the Second Party shall maintain free flow distance between two consecutive projects as per recommendations of MoEF & CC, Cumulative Environment Impact Assessment (CEIA) studies and Carrying Capacity Studies (CCS).

**5.8 Site investigations:-** The Second Party shall be deemed to have conducted a due diligent exercise in respect of all the aspects of the Project, including a detailed survey of the site. The failure to investigate fully the Site or sub-surface conditions shall not relieve the Second Party from its responsibility for successfully implementing the Project.

**5.9 Compensatory Afforestation:-** The Second Party shall pay to the First Party the cost of raising compensatory afforestation and its maintenance for a period and the extent of area, as may be determined by MoEF & CC, GoI.

**5.10 Catchment Area Treatment Plans:-** The Second Party shall make suitable financial provisions in the project cost for the Catchment Area Treatment Plans, as may be determined by the MoEF & CC, GoI. The cost involved on this account shall be paid by the Second Party to the First Party as per Forest and Environment clearance accorded by the GoI.

**5.11 Environmental Impact Assessment:-** The Second Party shall obtain the consent of HPPCB under the Water (Prevention and Control of Pollution) Act, 1974 or any other environmental law(s), Wild Life Protection Laws as may be applicable.

The Second Party shall be responsible for mitigation of adverse impacts as per the approved EIA Plan and mitigation of degradation of environment due to disturbance of eco-system in watershed area. The cost of the same will be entirely borne by the Second Party.

**5.12 Water Requirement for Construction:-** The Second Party shall ensure that the water requirement for construction of the Project including potable water shall be generally arranged and harnessed by them from the river source.

**5.13 Maintaining Ecological Balance:-** The Second Party shall be responsible for maintaining the ecological balance by preventing deforestation, water pollution and defacement of natural landscape in the vicinity of Works. The Second Party shall take all reasonable measures to prevent any unnecessary destruction, scarring or defacement of the natural surroundings in the vicinity of the Works.

**5.14 Existing / Alternative facilities:-** In case any existing facilities including, but not limited to, irrigation systems, water supplies, roads, bridges, buildings, communication system(s), power systems and water mills are adversely affected because of the implementation of the Project, the Second Party shall be responsible for taking remedial measures to mitigate such adverse effects. The cost of the above remedial measures shall become a part of the Project cost. Such

facilities shall be as mutually identified and agreed upon between the Second Party and the First Party. The Second Party shall not interfere with any of the existing facilities till an alternate facility, as identified, is created.

The Second Party shall make suitable financial provisions for mitigation of adverse impacts as per the approved EIA plan and mitigation of degradation of environment due to disturbance of eco-system in watershed area, at the cost of project.

The Second Party shall be responsible for mitigation of adverse impacts as per the approved EIA Plan and mitigation of degradation of environment due to disturbance of eco-system in watershed area. The cost of the same will be entirely borne by the Second Party.

**5.15 Improvement of Existing Roads:-** The Second Party shall bear the cost of improvement/widening of the existing roads, which are essentially required to be used for the construction of the Project.

**5.16 Consumptive Use of Water:-** The First Party shall have the right for withdrawal of water from the river course for the consumptive use by pumping or by gravity for the purpose of potable water supply and irrigation to the affected population.

**5.17 Local Area Development:-** The Second Party shall build such infrastructural development works in the vicinity for the project area that may be essentially required for the benefits of local population. The expenditure on such works shall be incurred by the Second Party. These developmental works may be mutually decided with the First Party.

**5.18 Police Station/Chowki and Labour Office:-** The Second Party shall inform the local Police Station/Chowki and the Labour Office about the details of the work force engaged from within the State or outside regularly.

In respect of projects of capacity above 100MW, the Second Party shall facilitate and fund opening of a temporary Police Station / Chowki in the project area. The Second Party also bear the cost of deployment of Police Personnel during the construction phase of the project.

**5.19 Protection of water rights:-** The Second Party shall ensure protection of the water rights of the local inhabitants for drinking and irrigation purposes etc. by verifying the revenue entries and activities of Jal Shakti department so as to ensure that such rights are not infringed upon. Any dispute in the matter shall be referred to a committee headed by Deputy Commissioner to be appointed by the First Party involving Jal Shakti and Revenue departments. Thereafter, The decision of the First Party shall be final and binding on all the parties.

**5.20 Upstream and Downstream Projects:-** The project developer shall have no claim on any project upstream or downstream of the allotted project. There shall be a stream / basin wise coordination committee of various project developers of concerned stream/ basin under the chairmanship of Director Energy to resolve any issue arising with the upstream and downstream project with respect to construction, water availability, transmission, sharing of cost/ obligation/ benefit etc. as referred.

**5.21 Dumping of Excavated Material:-**

**5.21.1** The Second Party shall be allowed to use the muck / mineral generated during the execution of the project work and also shall be allowed to set up captive stone crusher in the project area as per the HP Minor Mineral Rules provided the Second Party adheres to the prevailing

~~environmental safe-guards. The royalty on the usage of such minerals shall be payable to the State Industries department as per rules.~~

**5.21.2** The Second Party shall be required to follow environmental related regulations concerning disposal of muck and soil etc. The Second Party shall use such material for the project as may be found suitable for the construction and the remaining material shall be allowed to be used by other development departments of the State subject to the prevailing Rules and Regulations.

**5.21.3** The Second Party shall ensure that the material excavated from the site shall be dumped in the area duly approved by the MoEF& CC, GoI/HPPCB.

**5.22 Project inspection:-**

**5.22.1** The First Party shall carry out periodic inspections to the project site during construction stage, after studying and analyzing the information supplied by the Second Party.

**5.22.2** In case of notice of any deviation during inspection to the project site by the inspection team so deputed by the First Party, in relation to the approved norms including the size and location of various components such as Diversion Structure, Water Conductor System, Penstock, Power House, Electro-Mechanical installations etc. Inspection team shall seek a report from the Second Party to explain the reasons of such deviation. The inspection team shall examine the report so received and analyse each deviation noticed and clearly determine the reasons thereof including the compelling circumstances, such as geological surprises, design constraints, environmental and local issues etc., if any, and make a comprehensive report.

**5.22.3** The deviations undertaken without any compelling reasons or with mala-fide intentions shall invite levy of penalty to be computed by DoE in each case subject to maximum of the cost in proportion to the and to investigate any matter within their authority and upon reasonable notice, the Second Party shall provide to such persons reasonable assistance/necessary information to carry out their respective duties and functions with minimum disruption to the construction, operation and maintenance of the Project consistent with the purpose for which such persons have gained such access to the Site.

**5.23 Safety Measures:-**

**5.23.1** The Second Party shall share the detailed engineering drawings of the Project and equipment installed whenever directed by the First Party to do so, to ensure transparency, safety, quality control and timely remedial action in case of operational problems.

**5.23.2** The Second Party shall ensure proper quality control and safety measures during investigations / execution / Operation & Maintenance of the project keeping in view all quality control and safety measures as per relevant IS Codes / adopted standards and O&M Manual. Second Party shall also ensure essential first aid facilities at all Project sites.

**5.23.3** The Second Party shall ensure that the residential camps for all categories of manpower are situated at safer locations by taking into consideration the occurrence of probable flash floods and other eventualities like cloudbursts etc. The Second Party shall also ensure the well interconnectivity of the whole Project area through effective communication and transportation arrangements.

**5.23.4** The Second Party shall ensure that all the Project vehicles and the access to roads are properly maintained and fully safe for use.



**5.23.5** The Second Party shall be entirely responsible for detailed designs and working drawings of project components with regard to their structural, hydrological and mechanical performance & safety and ensure its compliance during execution of the Project.

**5.23.6** The Second Party shall abide by guidelines mentioned in the Energy Policy of the First Party regarding safety, quality, disaster management and risk reduction in respect of hydro electric projects.

**5.24 Project Performance:-** The Second Party shall ensure that the execution, operation and maintenance of the Project is in conformity with the Project concept as per Detailed Project Report (DPR), Prudent Utility Practices and the manufacturer's specifications. The Project/Unit(s) shall be capable of meeting the load dispatch requirements. The Second Party shall follow the directives of the HPSLDC/Control Centre/ NRLDC in the interest of integrated grid operation. Any dispute with reference to the directives of the HPSLDC/ Control Centre/ NRLDC shall be referred to State Electricity Regulatory Commission whose decision in such a matter shall be final. Pending the decision of State Electricity Regulatory Commission, HPSLDC's/Control Centre's/NRLDC's directives shall prevail in the interest of smooth operation of the grid.

**5.25 Free Power Royalty:**

**5.25.1** Provisions as per signed PIA, as the case may be, plus 1% additional free power towards LADF.

**5.25.2** In case the First Party levies any duty/tax on generation and supply of power, the same shall be borne by the Second Party except for free power royalty which shall be borne by the First Party.

**5.26 Maintenance of Project:-**

**5.26.1** The agreement shall remain in force up to a period of 40 years from the Scheduled Commercial Operation Date of the project. Thereafter, the project shall revert to the First Party free of cost and free from all encumbrances and liabilities. The project assets would be maintained by the Second Party in a condition that would ensure rated efficiency of the project and residual life of civil, mechanical and electro-mechanical components at any point of time. During the 10<sup>th</sup>, 20<sup>th</sup>, 30<sup>th</sup>, 35<sup>th</sup> & 40<sup>th</sup> years of operations, the First Party would carry out mandatory inspection of the project in this regard. After the inspection at 35<sup>th</sup> year decision will be taken by the First Party with respect to transfer / extension / maintenance of the project within 2 years of the inspection.

**5.26.2** If during such inspections it is found that the project capacity or life is being undermined by inadequate maintenance, the First Party reserves all the rights to terminate the agreement at any time.

**5.27 Ensuring Flow of Water:-** The Second Party shall ensure minimum environmental flow (e-flow) immediately downstream of the Diversion Structure of the project throughout the year, at a season-wise rates as recommended by MoEF & CC, GoI. E-flow discharge shall be monitored by the concerned departments/agencies.

The Second Party shall provide necessary arrangement/ mechanism in the civil structure including discharge measurement system for the release of laid down minimum flow immediately downstream of the diversion structure.

In case of violation by the Second Party, action will be taken by the First Party inline with the prevailing guidelines and laws.

**5.28 Protection of Fish Culture:-** The Second Party shall take appropriate steps, as may be required, for the protection of fish culture as per environmental requirements and promotion of rearing of fish, wherever feasible in the project area. The Second Party shall enter into a separate agreement on protection of fish culture with the First Party, if it is considered necessary by the Fisheries Department of the Government of Himachal Pradesh.

**5.29 Use of Facilities:-** Subject to availability, security, safety, law and order and operational factors being met, the Second Party shall permit free use, by the First Party and the general public, of all service roads/bridges constructed and maintained by it. Other facilities like hospitals, post offices, schools etc. shall also be extended to the local public in this regard based on the objective of providing such facilities.

**5.30 Revalidation of TEC:-** In case the Second Party fails to achieve the zero date and to start the construction work within 3 years of granting TC, the re-validation of the TC shall be mandatory keeping in view the latest hydrological data and permissible limit of CUF.

**5.31 Declaration of COD:-** After the Second Party ensures the successful trial run of the project and fulfillment of codal formalities and procedures laid down by the appropriate authorities for declaration of COD of the project, the First Party shall grant permission for declaration of COD to the Second Party as per the guidelines provisioned in the State Energy Policy.

**5.32 Mode of sale of power:-** The Second Party shall be free to dispose of power from the project(s), after allowing royalty in the shape of free power to the First Party in any manner they like in accordance with the provisions contained in the Electricity Act, 2003 and amendments thereof and the rules and regulations made there under.

**5.33 Incentive For Early Commercial Operation of The Project:-** In case the Commercial Operation Date (COD) of the project is achieved prior to the Scheduled Commercial Operation Date (SCOD) of the project, the Second Party shall be entitled for incentive as under:-

**5.33.1** From COD of the project up to the SCOD of the project, such percentage of project deliverable energy as agreed in respective agreements two tenth (0.2) percentage points for each period of seventy three (73) days (or part thereof) falling between the COD and SCOD of the project generating units.

**5.33.2** Incentive will be calculated and will be given in the form of energy with free power energy delivery and it will be decided within 6 months of the COD of the Project/ Generating Unit and will be adjusted in next 12 months in twelve equal installments.

**5.34 Disincentive For Delayed Commercial Operation of The Project:-** In case the Commercial Operation Date (COD) of the project is delayed beyond the Scheduled Commercial Operation Date (SCOD) of the project, the Second Party shall be liable for dis-incentive as under:-

**5.34.1** Dis-incentive shall not be imposed in the event that Synchronization of unit(s) achieved prior to Scheduled Commercial Operation Date (SCOD) subject to the condition that other generating unit(s) of the project shall achieve Commercial Operation Date of respective generating units within 3 months from the date of synchronization of first generating unit.

~~5.34.2~~ From SCOD of the respective generating units and up to the COD of the respective generating units, such percentage of project deliverable energy as agreed in respective agreements, two tenth (0.2) percentage points for each period of seventy three (73) days (or part thereof) falling between the COD and SCOD of the respective units.

**5.34.3** Dis-incentive will be calculated and will be given in the form of energy with free power energy delivery and it will be decided within 6 months of the COD of the Project/ Generating Unit and will be adjusted in next 12 months in twelve equal installments.

**5.35 Usage of Land:-** The Second Party shall ensure that the land is used exclusively for the activities related to the project. Any land exceeding the bonafide requirement of the project shall be surrendered to the First Party.

**5.36 Common Dedicated Transmission System:-** The project developers shall be at liberty to erect common dedicated transmission lines for joint evacuation of power from two or more projects by way of suitable Consortium, Agreements. HPSEBL/HPPTCL, as the case may be, will ensure availability of evacuation arrangement before commissioning of the project.

**5.37 Fishing, Recreational and Navigational Rights:-** The fishing, recreational and navigational rights in the river, water, channels, reservoirs, lakes shall remain vested in the First Party subject only to such restrictions as may be necessary for the operational requirements, safety and security of the Project.

**5.38 Precious material found during execution of Project:-** During the implementation of the Project, in case any object of archaeological importance is found by the Second Party or by any of its employees/ Contractors, the Second Party shall arrange to hand over the same to the First Party free of cost, provided that, in case any precious or semi-precious material is located, the Second Party shall inform the First Party immediately and shall then abide by the instructions of the First Party which shall be communicated within a period of two (2) months from the date of receipt of such intimation from the Second Party.

**5.39 Adherence to laws:-** The Second Party shall follow all the relevant laws, including, but/ without limitation, all labour laws, and shall also provide for safety provisions as per the Electricity Act, 2003, Factories Act, 1948, Mines Act, 1952 and such other statutory provisions relating to the safety of the Projects and any subsequent amendments made thereto.

**5.40 Trees in the Land transferred to the Second Party:-** The Second Party shall pay to the Forest Department of the First Party, the price of the trees as are required to be felled or are damaged in the execution of the Project, at prevailing market rates as may be notified by the First Party from time to time.

**5.41** The Second Party shall explore the possibility of converting the project in to Pump Storage/Pondage/Hybridization option and submit proposal for the approval of the First Party accordingly. The provisions regarding such options contained in the State Energy Policy shall be applicable.

**5.42 Tax Deduction at Source:-** The Second Party shall ensure that it makes the payments for works within the State of Himachal Pradesh and deposits the tax deducted at source with the offices of the Income Tax Department located within the State of Himachal Pradesh.

**5.43 Indemnity:-** The Second Party shall be fully responsible for any damage or loss arising out of the construction, operation or maintenance of the Project to any property or person.

**5.44 Misrepresentation:-** The Second Party assures the First Party that there is no misrepresentation in the information supplied by it to the First Party at any stage. The First Party reserves the right to cancel the IA after giving an opportunity to the Second Party in case it is found that there was some such misrepresentation by the Second Party and/or in the event of breach of any of the provisions of this IA.

**5.45 Comprehensive Insurance:-** The Second Party shall be bound to execute total comprehensive insurance of the whole Project covering loss of human life, property etc including third party losses, during construction and O&M of the Project.

**5.46** The Second Party agrees to abide by the provisions as contained in the Energy Policy of the Government of Himachal Pradesh.

## **ARTICLE 6**

### **6. TERMINATION AND TAKING OVER OF THE PROJECT:-**

**6.1** The First Party reserves the right to terminate the agreement if the Second Party fails to achieve the milestone as stipulated in Clause 5.2.

**6.2** In the event it is eventually confirmed as impossible or impractical to start construction work on the Project on or before the expiry of period mentioned in Clause 5.2 of this agreement, for the reasons other than those solely attributable to the First Party, the First Party reserves the right to terminate the agreement.

**6.3** In the event of continuous stoppage of construction on the main Project components by the Second Party for a period of more than three months for reasons not covered under Force Majeure and for reasons attributable to the Second Party, the First Party shall, after giving due opportunity to the Second Party, have the right to terminate this agreement. All deposits shall stand forfeited and the site shall revert to and vest in the name of First Party without any compensation. Notwithstanding any investment in the First Party under this Clause, the Second Party shall be liable to pay all the dues owed to the First Party by the Second Party in pursuant to this agreement.

## **ARTICLE 7**

### **7. FORCE MAJEURE:-**

**7.1** For the purpose of this agreement, "Force Majeure" shall mean an event which is unforeseeable, beyond the control of the Second Party and not involving the Second Party fault or negligence. Such events may include acts of the First Party/GoI either in its sovereign or its contractual capacity, war, civil war, insurrection, riots, revolutions, fires, floods, epidemics, quarantine restrictions, freight embargoes, radioactivity and earthquakes.

**7.2** If a Force Majeure situation arises, the Second Party shall promptly inform the First Party in writing of such conditions and the cause thereof. Unless otherwise directed by the First Party in writing, the Second Party shall continue to perform its obligations under the agreement, as far as is reasonably practical, and shall seek all reasonable alternative means for performance, not prevented by the Force Majeure event.

**7.3** In the event, a Party is rendered unable to perform any obligation required to be performed by it under this agreement by Force Majeure, the particular obligations shall, upon information to

the other Party be suspended for the period of Force Majeure. The time for performance of the relative obligations suspended by Force Majeure shall be extendable by the period of delay which is directly attributable to Force Majeure.

#### **ARTICLE 8**

##### **8. CONFIDENTIALITY:-**

Each Party hereto agrees that it shall not divulge any trade, commercial or technical secrets or confidential matters of one another to any third party, except for the purpose of implementation, operation and maintenance of the Project.

#### **ARTICLE 9**

##### **9. GOVERNING LAW:-**

The rights and obligations of the Parties under or pursuant to this Agreement shall be governed by and construed according to Law. This Agreement shall be subject to the jurisdiction of the competent courts of Himachal Pradesh.

#### **ARTICLE 10**

##### **10. VIOLATION PENALTY:-**

Any violations of the above mentioned issues concerning Policy parameters, PIA/IA may result into monetary penalty including cancellation of the Project.

#### **ARTICLE 11**

##### **11. RESOLUTION OF DISPUTES:-**

**11.1** The Parties shall attempt to resolve any dispute in relation to, arising out of or in connection with the agreement (hereinafter referred to as the Dispute) by mutual discussions.

**11.2** Any difference and/or disputes arising at any time between the parties out of this IA or interpretation thereof shall be endeavored to be resolved by the parties hereto by mutual negotiations, failing which the matter shall be referred to a two tier Grievance Redressal Process. The matter shall be addressed by the Departmental Grievance Redressal Committee constituted by the First Party under the Chairmanship of Director Energy, GoHP, Shimla. In case the issue remains unresolved to the satisfaction of the Second Party, the matter shall be referred to a State Level Committee. If the Second Party is still not satisfied with the verdict, the dispute shall be subject of the jurisdiction of Civil Courts in Himachal Pradesh.

**11.3** During the pendency of the such proceedings, both Parties shall continue to perform their respective obligations under this agreement, unless the performance of such obligation itself is subject of such proceedings.

**11.4** No party shall be considered to be in default under this IA for any breach of any of the terms thereof due to the imposition of restrictions and onerous regulations by any Government or statutory authority or agency or other cause beyond its reasonable control.

- 11.5** All legal proceedings arising in connection with this agreement shall be subject to the jurisdiction of the Himachal Pradesh High Court and its subordinate courts in the State of Himachal Pradesh irrespective of the place of performance/execution of the Agreement.

## **ARTICLE 12**

### **12. ASSIGNMENT AND AMENDMENTS:-**

The Second Party may, only for the purpose of arranging or rearranging finance for the Project, assign or otherwise transfer all or any portion of its rights and benefits with prior written approval of the First Party, but not its obligations under the agreement to any other person or entity. No amendment or waiver of any provision of the agreement, and no consent to any departure by either Party here from, shall in any event be effective unless the same is in writing and signed by each of the parties.

## ARTICLE 13

### 13. COMMUNICATION:-

13.1 Any communication/notice by one Party to the other Party under this agreement shall be deemed to have been served if sent by cable, fax or Email followed by a confirmation letter delivered by hand or by mail to the respective addresses.

13.2 Communication should be addressed as below:-

If to the Company

If to the Government

Director Energy

Government of Himachal Pradesh,

Shimla, H.P. India.

Tele-Fax No.-----

13.3 Either Party may change the address and/or addresses to which such communications/notices are to be delivered or mailed by duly informing the other Party.

Any other terms and conditions deemed necessary shall form integral part of this Implementation Agreement as per provisions thereto.

In witness whereof, the Parties hereto have executed and delivered this agreement at Shimla, Himachal Pradesh on the date first written above.

For and on behalf of the  
Government of Himachal Pradesh

For and on behalf of Company  
M/s \_\_\_\_\_

Director Energy,  
Government of Himachal Pradesh  
Shimla (HP)-----

WITNESSED BY:

WITNESSED BY:

1.

1.

2.

2.