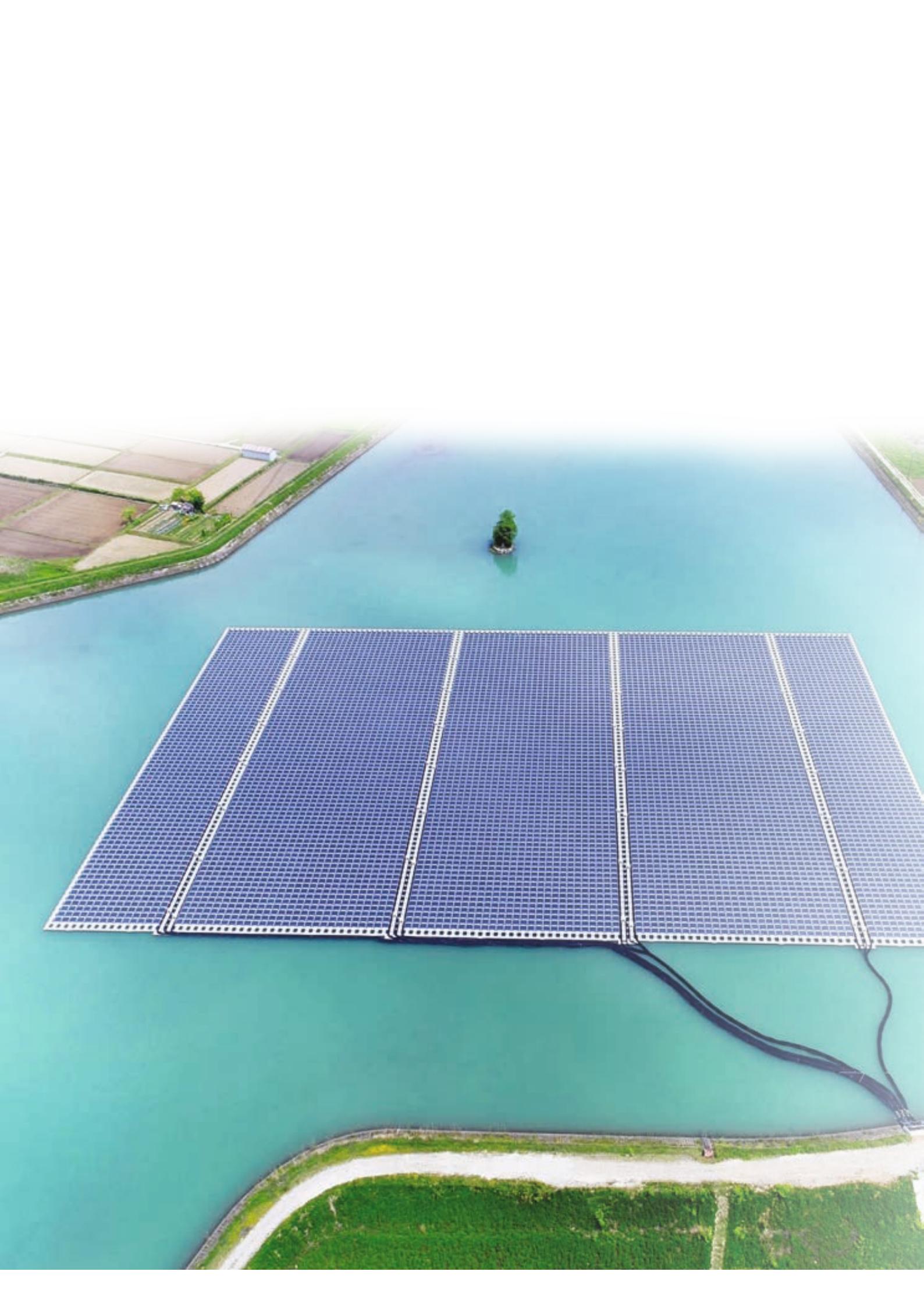




**ODISHA**  
NEW OPPORTUNITIES

# RENEWABLE ENERGY POLICY 2022







## Government of Odisha Department of Energy

# RENEWABLE ENERGY POLICY 2022

Resolution No.11757/  
ENG-HYD-HYDRO-0009/2022/En.

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## PREAMBLE

Climate change is the most pressing issue of present times. Mitigating the risks of climate change requires urgent action at all levels and there is a need for concerted efforts to support the global action against climate change. Decarbonisation of the energy sector will be a key component of our actions for climate protection.

This Policy envisions to establish a robust framework that can enable Odisha to undertake an inclusive journey towards energy transition through higher adoption of renewable energy (RE) in our power system. Apart from power sector, it is also required to have parallel and concerted measures around electric mobility, green buildings, low carbon or carbon-free agricultural practices, industrial & mining activities .

Odisha is endowed with vast and largely untapped renewable energy potential. Although the techno-commercial viability of the entire potential capacity needs to be ascertained, a large part of the potential can be brought to life with proper technology, Policy and Regulatory framework and market mechanism. With RE becoming commercially viable and growing trend towards adoption of low carbon and sustainable ways of development, citizens and businesses are now focused on RE to meet their energy needs.

As per the Nationally Determined Contribution (NDC) submitted to United Nations Framework Convention on Climate Change (UNFCCC), India stands committed to reduce Emissions Intensity of its GDP by 45 percent by 2030, from 2005 level and generate about 50 percent of electricity from non-fossil sources by 2030.

Odisha is among the leading industrialised states in the country and a continuous increase in energy demand from all sectors is expected in the years to come. There is clear demand for RE from the DISCOMs and the industries due to RPO and Net Zero commitments. It is desirable that these obligated entities meet most of their RE requirement from projects developed inside the State. Hence, the Government has formulated a new RE Policy to facilitate development of commercially viable projects across multiple RE technologies within the State both for captive and open access consumption.

The Government through this Policy aims to encourage State sector power utilities to foray into RE development in multiple technologies, apart from enabling participation from private sector and Central PSUs.

As Industries and Governments embark upon the journey of energy transition, it is essential to ensure that the transition is 'just'. Proper training will be required for the youth and working population to take up jobs in RE sector. The Policy aims to create skilled and semi-skilled manpower for the RE sector.

With this primary objective to create an enabling environment for harnessing maximum potential of Renewable Energy in the State through Government, private sector and individual efforts, the Odisha Renewable Energy Policy 2022 has been developed.

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## **SECTION A : INTRODUCTION**

### **1. Vision**

To harness the renewable energy (RE) potential of Odisha and accelerate investment in the RE sector for ensuring energy security, promoting socio - economic growth and protecting the environment.

### **2. Objectives**

The Policy aims to achieve following objectives:-

- A. To accelerate adoption of clean energy alternatives and decarbonize the energy sector which includes both grid-based electricity consumption and captive consumption of industrial consumers in the State
- B. To harness the clean energy potential of the State and make best use of the available resources by facilitating development of green energy projects in the State
- C. To attract investment in the clean energy sector, create job opportunities and develop the State economy
- D. To facilitate R&D and promote new initiatives & emerging RE technologies in the State

### **3. Legal Framework**

The legal basis for this Policy inter alia includes the following:

1. The Electricity Act, 2003 (“the Act”) & the Rules made thereunder.

Section 86(1)(e) of the Act mandates State Electricity Regulatory Commissions (SERCs) to promote generation of electricity from renewable sources of energy.

2. Tariff Policy notified by Ministry of Power, Government of India.

### **4. Policy period**

The Policy shall come into operation with effect from the date of its publication in the Official Gazette of the State and shall remain in force till 31st March 2030 or until a new policy is announced by the State Government.

This Policy will be evaluated on regular basis to assess its impact, and to ensure inclusion of any new RE technology/guidelines of Government of India (GoI)/Government of Odisha (GoO) that may evolve during the Policy period.

The Government of Odisha may amend/modify/ review this Policy as and when deemed necessary.

## **5. Scope of the Policy**

- A. All large hydro, small hydro, ground mounted solar, roof top solar, floating solar, canal top solar, wind, biomass, energy storage (including pumped storage hydro, battery energy storage system), waste-to-energy, green hydrogen/green ammonia projects or any other renewable energy technology and new initiatives/ pilot projects commissioned in the State of Odisha during the Policy period shall be guided by this Policy.
- B. Any individual or company or body corporate or association or society or body of individuals, whether incorporated or not, shall be eligible for setting up Renewable Energy (RE) projects, either for the purpose of captive use and/or for selling of electricity to the distribution licensee or third party including under the Renewable Energy Certificate (REC) mechanism subject to provisions of this Policy and in accordance with the Electricity Act 2003, as amended from time to time and the Rules made thereafter.
- C. The benefits under this Policy shall not be applicable to projects sanctioned prior to the date of notification of this Policy or which is commissioned post the policy period. This Policy also does not cover the projects for which PPAs have already been signed.

## **6. Project Facilitation**

- 1. The Government of Odisha through the Nodal Agency shall provide a single window facility for approval of all RE projects in the State. The Nodal Agency shall facilitate approval/allotment of all RE projects in a time-bound manner.
- 2. The Nodal Agency shall assist the project developer in obtaining the consents, clearances, and permits, by providing letters of recommendation to the concerned authorities, as may be requested by the project developer. However, the Nodal Agency shall not be accountable for any delays in obtaining the consents, clearances, and permits required for development of RE projects. It is the responsibility of the developer to acquire all statutory clearances required for the project development.
- 3. Captive RE projects shall be provided approvals in fast-track mode.
- 4. All Government of India incentives under MNRE (or any others), such as Central Financial Assistance, VGF, etc. as applicable shall be extended to the project developer and the Nodal Agency shall facilitate seamless transfer of all Central Government benefits.

## **7. Definitions:**

The definitions provided in the Electricity Act, 2003, the Odisha Electricity Reforms Act, 1995, the Odisha Electricity (Duty) Act, 1961 and the Rules made under these acts, various policies of Ministry of New and Renewable Energy (MNRE) and Odisha Renewable Energy Policy, 2016 shall apply to this Policy.

## **SECTION B : GENERAL FRAMEWORK FOR IDENTIFICATION AND AWARD OF ALL RE PROJECTS**

### **8. Mode of Implementation of RE projects**

After notification of this Policy, the Nodal Agency shall solicit Pre-Feasibility Report (PFR) of Large Hydro, Pumped Storage Hydro, Small Hydro, Floating Solar and Solar Park / Non park solar projects already identified by the SPSUs/any other entity of the State Government. All entities shall submit the PFR for the identified site/project to the Nodal Agency within 1 (one) month of solicitation post notification of this policy. If found to be satisfactory, the Nodal Agency shall register such projects as an identified project and shall publish the list of all such projects within 3 (three) months of notification of this Policy. The Nodal Agency / SPSUs / any other entity of the State Government shall continue to identify feasible sites/projects across all technologies, conduct pre-feasibility studies and register the project/sites as identified projects on an ongoing basis.

All identified projects will ordinarily be awarded through International/National Competitive Bidding mechanism.

The State Government may also award any identified projects to SPSUs or CPSUs or any JVs thereof, through MoU route. Procurement of power by GRIDCO/DISCOMS from such projects shall be guided by the prevailing Regulations.

GRIDCO/DISCOMS may invite bids for procurement of power from projects to be set up in the state through tariff based competitive bidding. Where generic tariff is notified by OERC, GRIDCO/DISCOMS can procure power from projects set up in the state at such generic tariff.

### **9. Project Allotment/Selection of Developers**

#### **Award of identified projects**

Identified projects can be awarded for any of the following purpose generally:

1. Procurement of power by GRIDCO/DISCOMS:
  - a. Allocation of project to SPSU or CPSU or JVs- thereof where procurement of power including tariff shall be guided by prevailing Regulations
  - b. Awarded to private sector / CPSUs / SPSUs through competitive bidding
2. Captive consumption / Sale of power to third parties / OA consumers / Exchange sale / sale to DISCOMS outside State:
  - a. Awarded to private sector / CPSUs / SPSUs through competitive bidding.
  - b. Allocated to CPSUs/SPSUs/JV thereof

The State Government may award any identified projects to SPSUs/CPSUs or JV of SPSUs and CPSUs through an MoU for any purpose including sale of power to third parties. Many CPSUs have shown their interest to form JV with SPSUs for large hydro, PSH & floating solar projects. When more than one CPSU is interested in any particular project, the CPSU offering the highest equity participation to the SPSU, shall be selected as the JV partner.

GRIDCO has contracted RE capacity of 2,420 MW including 1,941 MW from solar sources till 31.10.2022 out of which only 460 MW is within the State. Hence, it is incumbent upon GRIDCO to take proactive measures for development of RE potential in the State. For this purpose, it shall invite tenders for procurement of power from projects to be set up in the state at a tariff discovered through competitive bidding.

The Nodal Agency shall prepare the list of identified sites which can be awarded to private sector / CPSUs / SPSUs through competitive bidding for the purpose of Captive consumption / Sale of power to third parties / OA consumers / Exchange sale / sale to DISCOMS outside State. The Nodal Agency or any bid process coordinator notified by Nodal Agency shall initiate competitive bidding process through issuance of RFP to seek potential bidders. Interested Bidders should submit applications before the Nodal Agency or any bid process coordinator notified by Nodal Agency, accompanied with other required documents as mentioned in the RfQ/RFP. Eligible bidders will be technically and financially evaluated, and projects will be allotted to the bidders making the highest or lowest bids or such criteria as may be mentioned in the RfQ/RFP.

As part of the competitive bidding mechanism, the Nodal Agency may define pre-qualification criteria on a project-to-project basis including but not limited to a) past experience with development, construction and operations of similar projects and b) financial capacity to mobilize required resources for development of the projects.

Bidding parameters for selection of developer through competitive bidding for each specific RE technology is mentioned in the respective chapters of this Policy.

Wherever, award of a project / site is through a competitive bid process, the bidding criteria for the competitive bid process is mentioned separately for each of the specific RE technologies under Section-C.

## **10. Exemptions and Incentives**

India has an installed generation capacity of 404 GW (July 2022), of which 168 GW (41.6%) is from non-fossil fuels. The total share of renewable energy (including hydro) was about 22% in overall energy mix for the country in FY 2021-22. Renewables (especially wind and solar) have been growing very strongly in recent years (39 GW in 2015 to 110 GW by 2022). However, most of that development has happened in only 7-8 RE resource rich states. The policy of waiver of ISTS charges has created market distortion and discouraged development of RE projects in Odisha. The Government of India has decided to phase out the waiver of ISTS charges in the following manner:

<b>Period of Commissioning</b>	<b>Applicable ISTS charges</b>
Up to 30/06/2025	Nil
01/07/2025 to 30/06/2026	25% of applicable ISTS charges
01/07/2026 to 30/06/2027	50% of applicable ISTS charges
01/07/2027 to 30/06/2028	75% of applicable ISTS charges
01/07/2028 onwards	100% of applicable ISTS charges

Hence, the State Government shall extend the following incentives to promote development of RE projects in the State:

1. Exemption of fifty (50) paisa per unit on Electricity Duty shall be provided to captive / open access consumers on consumption of energy from RE projects set up inside the State during the policy period. Such ED exemption shall be available for consumption of energy from the project for a period of fifteen (15) years from the date of commissioning of the project. In case a project is commissioned before 31.03.2026, the exemption shall be extended for five (5) more years, i.e., twenty (20) years in total.
2. Energy Storage Projects based on any technology shall be exempted from payment of Electricity Duty on input energy at the rate of fifty (50) paisa per unit for a period of fifteen (15) years from the date of COD, provided such energy is sourced from RE projects in Odisha.
3. Fifty percent (50%) exemption of Cross-Subsidy Surcharge shall be provided to open access consumers, on consumption of energy from RE projects commissioned in the State during the Policy period for fifteen (15) years. The OERC shall issue necessary orders in this regard.
4. Exemption of twenty (20) paisa per unit on STU charges shall be provided to captive / open access consumers on consumption of energy from RE projects commissioned in the State during the Policy period for fifteen (15) years. In case a project is commissioned before 31.03.2026, the exemption shall be extended for five (5) more years, i.e., twenty (20) years in total. The OERC shall issue necessary orders in this regard.
5. Twenty-five percent (25%) exemption of wheeling charges shall be provided to captive / open access consumers on consumption of energy from RE projects commissioned in the state during the Policy period for fifteen (15) years. The OERC shall issue necessary orders in this regard.
6. Stamp duty on purchase/lease of land, land conversion charges and registration charges shall not be applicable for RE projects. The Revenue and Disaster Management Department shall issue necessary notifications in this regard.

7. Project developer is permitted to connect the RE project with State Transmission Utility (STU), subject to the evacuation feasibility. Grant of connectivity approval from OPTCL will be provided preferably within 15 days from the date of receipt of requisite documents for registration.
8. No clearance from State Pollution Control Board, Odisha would be required for RE projects except for Hydro, PSH, biomass and waste to energy projects.

## **11. Land**

Government land earmarked for industry under the "Land Bank" scheme of IDCO and other Government land, wherever available, shall be allotted for the RE projects on priority at the rates specified in the IPR.

However, projects with an operational life of 25-30 years shall also be allotted Government land on lease basis at an annual lease rent of 2% of the prevailing IPR rate. The duration of lease shall coincide with the duration of PPA/life of the project and some additional time allotted for development, construction and decommissioning of the project as applicable i.e., for a duration of 30-35 years.

The Nodal Agency shall work in coordination with the District Collectors/IDCO to identify land parcels suitable for RE project development.

In case the land is to be purchased / taken on lease from a private landowner, the developer will acquire the land directly from the landowner by adequately compensating the landowner. The Collectors shall facilitate purchase/lease of private land for the purpose of developing RE projects. The SWC, in consultation with the Department of Revenue & Disaster Management, may notify the minimum lease rental at which private land can be taken on lease by the RE developers. The Nodal Agency may also float an 'Expression of Interest (EoI)' for aggregation of private land to facilitate development of RE projects.

The land used for development of grid connected RE projects shall be deemed to be converted for Non-Agricultural use. No charges as per Land Reforms Act (1960) of Odisha shall be applicable for such deemed conversion.

Exemption from ceiling on land holdings as per the Land Reforms Act (1960) of Odisha and its amendments shall be applicable for RE projects. The Nodal Agency shall facilitate clearance to this effect for RE project developers from the competent authority.

## **SECTION C: POLICY MEASURES FOR SPECIFIC TECHNOLOGIES**

All the technology-agnostic Policy measures mentioned in Section-B shall be applicable to all the RE technologies over and above the technology-specific Policy measures mentioned in this section.

### **12. Large Hydro**

#### **12.1 Introduction**

Odisha has an estimated 3,314 MW Large Hydro potential. Odisha currently has 2099.80 MW of large hydro plants in operation – 6 plants under operation by OHPC and 1 plant in joint operation with Andhra Pradesh Power Generation Corporation (APGENCO).

#### **12.2 Bidding Criteria for Competitive Bidding of identified projects**

Unless a project is awarded on nomination basis to any SPSU/CPSU or their JV, the Nodal Agency or any other bid coordinator nominated by the State Government shall undertake a transparent competitive bidding process for selecting the developer to develop the identified projects. All private developers/ SPSUs/ CPSUs either on their own or through a JV may participate in the bidding process, subject to meeting the qualification criteria that may be mentioned in the RfP/RfQ.

Bids shall be invited for revenue shared/unit of net saleable power (saleable power net of free power to State as per prevailing Policies as applicable) or free equity share to the Government of Odisha, subject to a minimum threshold as decided by the Nodal Agency below which the bid will be rejected. The Nodal Agency may also specify any other bid parameters in the RfP/RfQ.

#### **12.3 Sale of Power**

GRIDCO may decide to procure entire saleable power from identified projects at the tariff determined by OERC for meeting the energy requirement of DISCOMs. GRIDCO may exercise the right of first refusal (ROFR) to procure upto 20% of the saleable power in identified projects which have been allotted to the developers through competitive bidding. The intent of GRIDCO to procure power would be made known to the prospective bidders/ investors at the time of bidding/allocation. The tariff of such power shall be determined by OERC.

#### **12.4 Incentives**

To ensure the financial viability of hydropower projects and make the projects investor friendly, no free power shall be charged for the projects which intend to sell the entire power or consume the entire power within the State.

For projects intending to sale power outside the State 12% free power +1% LADF will be charged in accordance with the National Hydropower Policy. However, the free power will be staggered for the initial 12 years to improve the viability of the project.

## **12.5 Mode of Development and Concession Period**

The projects shall be offered for the Concession Period of 40 years from the scheduled COD which shall be fixed while according of Techno Economic Clearance (TEC) by CEA after allowing for suitable construction period from the date of award of the project. The Concession Period may be extended by up to 30 more years in line with the prevailing rules and Regulations and with approval of the State Government.

At the end of the Concession Period, the projects without any encumbrances shall be ordinarily transferred to the State Government.

# **13. Pumped Storage Hydro**

## **13.1 Introduction**

The share of renewables in the energy mix of the State is expected to be at least 43% by 2030, as per the RPO trajectory issued by the Ministry of Power dated 22.07.2022 and all the obligated entities will meet or exceed the RPO trajectory. With increase in share of renewable energy in the overall energy mix of the State, there is going to be issues of intermittency which will affect grid stability. Therefore, to maintain grid stability and ensure reliable power to the consumers, it will be imperative to deploy large scale storage solutions. Pumped Storage Hydro (PSH) plants are envisioned to play a crucial role in this regard in the upcoming years. Hence, it is felt necessary to promote development of PSHs, including off-the-river closed loop pumped storage projects, in the State.

## **13.2 Bidding Criteria for Competitive Bidding of identified projects**

Unless a project is awarded on nomination basis to any SPSU/CPSU or their JV, the Nodal Agency or any other bid coordinator nominated by the State Government shall undertake a transparent competitive bidding process for selecting the developer to develop the identified projects. All private developers/ SPSUs/ CPSUs either on their own or through a JV may participate in the bidding process, subject to meeting the qualification criteria that may be mentioned in the RfP/RfQ.- Bids shall be invited for revenue shared/unit of net saleable power, subject to a minimum threshold as decided by the Nodal Agency below which the bid will be rejected. The Nodal Agency may also specify additional bid parameters in the RfP/RfQ.

Whenever, Viability Gap Funding scheme for PSH projects is formulated, the projects shall be eligible for VGF from the Central Government and/or State Government as per the Policy decisions of the Government. However, no VGF from State Government shall be made available to projects set up for captive consumption / third party sale. VGF from State Government may be available and consequently VGF based bids can be conducted, only when the entire power from the PSH is to be procured by GRIDCO/DISCOMs of Odisha.

### **13.3 Sale of Power**

GRIDCO may decide to procure entire saleable power from identified projects at the tariff determined by OERC for meeting the energy requirement of DISCOMs. GRIDCO may also exercise the right of first refusal (ROFR) to procure up to 20% of the generation in identified projects which have been allotted to the developers through competitive bidding. The intent of GRIDCO to procure power would be made known to the prospective bidders/ investors at the time of bidding/allocation. The tariff of such power shall be determined by OERC.

### **13.4 Mode of Operation**

All projects are to be developed in Build-Own-Operate-Transfer (BOOT) model. Initial concession period to be 40 years and may be extended by upto 30 more years in line with the prevailing rules and Regulations and with approval of the State Government.

At the end of the Concession Period, the projects without any encumbrances shall be ordinarily transferred to the State Government.

### **13.5 Other Charges**

- A. The Department of Water Resources shall allocate water to off-the-river closed loop PSH projects on payment of such charges as may be decided subject to availability to water.
- B. LADF shall be charged as per the National Hydropower Policy, or any related policies, office orders, as applicable.
- C. No free power is required to be provided to the State

## **14. Small Hydro**

### **14.1 Introduction**

Odisha is endowed with significant small hydro potential a large portion of which is yet to be commercially harnessed. Private participation is crucial for exploiting the small hydro potential of the State and this Policy aims to encourage large scale private participation for development of Small Hydro Projects (SHPs) in the State.

### **14.2 Bidding Criteria for Competitive Bidding of identified projects**

Unless a project is awarded on nomination basis to any SPSU/CPSU or their JV, the Nodal Agency or any other bid coordinator nominated by the State Government shall undertake a transparent competitive bidding process for selecting the developer to develop the identified projects. All private developers/ SPSUs/ CPSUs either on their own or through a JV may participate in the bidding process, subject to meeting the qualification criteria that may be mentioned in the RfP/RfQ.

GRIDCO may desire to procure entire saleable power from certain SHP projects for meeting the energy requirement of DISCOMs. In such cases, a tariff based competitive bidding process

would be undertaken and bids shall be invited for a discount below the generic tariff. Else, bids shall be invited for revenue shared/unit of net saleable power with the Government of Odisha, subject to a minimum threshold as decided by the Nodal Agency below which the bid will be rejected. Projects shall also be eligible for VGF from the Central Government and/or State Government as per the Policy decision of the Government. However, no VGF shall be made available to projects set up for captive consumption or third-party sale. The Nodal Agency may also specify additional bid parameters the details of which shall be furnished in the RfP/RfQ.

### **14.3 Sale of Power**

GRIDCO may decide to procure entire saleable power from identified projects for meeting the energy requirement of DISCOMs, at the tariff discovered through a competitive bidding below the Generic tariff as determined by OERC.

If GRIDCO does not procure entire power from the project, the developers shall be free to sell the power within or outside the State or use it for meeting captive needs.

No free power or LADF shall be applicable on SHP projects.

### **14.4 Mode of Operation and Concession Period**

All projects are to be developed in Build-Own-Operate-Transfer (BOOT) model. Initial concession period will be for a period of 40 years and may be extended in line with the prevailing rules and Regulations and with approval of the State Government.

At the end of the Concession Period, the projects without any encumbrances shall be ordinarily transferred to the State Government.

### **14.5 Dam-Toe based Projects**

OHPC will be the sole developer for Dam-Toe based projects.

## **15. Floating Solar**

### **15.1 Introduction**

Odisha receives about 300 sunny days a year. The Government of Odisha recognises the enormous potential of solar energy in the State and the role it can play in achieving the clean energy targets and reduce dependency on fossil fuels.

Odisha has vast stretches of water bodies and multiple reservoirs that can be utilised to set up large scale floating solar projects/parks in the State. In the first phase, the state has prepared pre-feasibility report (PFR) for more than 5,000 MW floating solar potential. The Government of Odisha through this Policy aims to facilitate development of floating solar projects. The Nodal agency shall coordinate with the Department of Water Resources to identify suitable sites for development of floating solar projects. The Department of Water Resources shall allow the development of floating solar projects on the water bodies under its administrative

control on payment of a nominal annual lease rent/ upfront payment. Industries shall also be allowed to set up floating solar plants to meet their captive need.

Floating solar offers several benefits over ground-mounted solar like:

- Approximately 2% reduction in evaporation resulting in more water availability for irrigation and hydropower generation.
- Land not used for erecting ground mounted solar projects may be utilized for other purposes.

All potential sites except private water bodies shall be considered as identified projects.

### **15.2 Bidding Criteria for allocation of identified projects**

Unless a project is awarded on nomination basis to any SPSU/CPSU or their JV, the Nodal Agency or any other bid coordinator nominated by the State Government shall undertake a transparent competitive bidding process for selecting the developer to develop the identified projects. All private developers/ SPSUs/ CPSUs either on their own or through a JV may participate in the bidding process, subject to meeting the qualification criteria that may be mentioned in the RfP/RfQ.

The Nodal Agency shall conduct a tariff based competitive bidding for capacities that GRIDCO commits to off-take for meeting energy requirement of DISCOMs. Else, bids shall be invited for revenue shared/unit of net saleable power or quantum of lease rental to be paid by the developer, subject to a minimum threshold as decided by the Nodal Agency below which the bid will be rejected. The Nodal Agency may also specify additional bid parameters the details of which shall be furnished in the RfP/RfQ.

### **15.3 Sale of Power**

GRIDCO may decide to procure requisite capacity at a tariff discovered through Competitive Bidding for meeting the energy requirement of DISCOMs.

Considering the additional benefits of floating solar over ground-mounted solar, limited availability of land for development of solar parks and the relative higher cost of floating solar projects, it is desirable to allow GRIDCO to purchase such power at a tariff which is relatively higher than the prevailing tariff of ground mounted solar.

For projects for which no off-take of power by GRIDCO is envisaged, the developer shall be free to sell the entire saleable power within or outside the State or use it for meeting captive needs.

### **15.4 Mode of Operation and Concession Period**

All projects are to be developed through Build-Own-Operate (BOO) model. The sites will be awarded for a period of 30 years (covering period of development, construction, PPA and decommissioning) and may be extended by up to 5 more years in line with the prevailing rules and Regulations and with approval of the State Government.

## **15.5 Canal Top solar**

When any canal-top solar projects are identified in the State, the provisions of floating solar shall apply to them.

# **16. Solar (Land Based & Roof top)**

## **16.1 Introduction**

This Policy intends to promote and develop utility scale as well as distributed Solar applications. It is proposed to promote solar parks having minimum capacity of 25 MW to reduce the cost of generation & associated infrastructure.

## **16.2 Solar Parks (>=25 MW)**

Solar Park is a dedicated area earmarked for development of solar power projects. The Solar Park developer shall create proper civil and power system infrastructure including power evacuation systems, water arrangements, internal roads and administrative facilities.

### **16.2.1 Development of Solar Parks**

#### **Development of Solar Parks by State entities**

Any SPSU/CPSU either on its own or through a JV with other SPSUs/CPSUs may develop Solar Park projects in the State.

#### **Development of Solar Parks by Private Solar Park Developers**

The State will also promote development of Solar Parks by Private Developer. The Private Sector Solar Power Park Developer(s) shall be obliged to create common infrastructure facilities for development of Solar Park(s) such as creation of power evacuation system, development of roads, lights, water supply systems and other administrative support systems.

#### **16.2.2 Sale of Power**

All entities setting up projects in the Solar Parks shall be free to sell the entire saleable power within or outside the State or use it for meeting captive needs. GRIDCO may procure power from projects set up in the Solar Parks through a tariff based competitive bidding mechanism to meet energy requirement of DISCOMs.

#### **16.2.3 Mode of Development**

All projects are to be developed through Build-Own-Operate (BOO) model. The sites will be awarded for a period of 30 years (covering period of development, construction, PPA and decommissioning) and may be extended by upto 5 more years in line with the prevailing rules and Regulations and with approval of the State Government.

#### **16.2.4. Allotment of Land**

Government land/ land available with IDCO shall be made available to the developers as per Section 11 of Part B of this Policy.

### **16.3 Non-Park Solar Projects (>1 MW)**

The minimum capacity for projects under this category would be 1 MW. The State shall promote setting up of non-park solar power projects for the below purposes:

1. Sale of power to GRIDCO at a tariff discovered through competitive bidding process.
2. For captive use within and outside the State
3. For sale of power within and outside the State through open access

#### **16.3.1 Sale of Power**

The project developer shall be free to sell the entire saleable power within or outside the State or use it for meeting captive needs.

GRIDCO, if required, may invite tenders for procurement of power from projects to be set up in the state. This would involve power procurement through a tariff based competitive bidding process.

#### **16.3.2 Mode of Development**

All Non-Park solar projects are to be developed in Build-Own-Operate (BOO) model.

### **16.4 Rooftop Solar**

The Government of Odisha shall promote grid connected rooftop solar PV projects to be set up on public buildings, domestic buildings, commercial and industrial establishments. All Government buildings with available roof space shall be encouraged to set up Rooftop Solar facilities.

OREDA will facilitate development of Rooftop PV under net metering or gross metering, as applicable, on Govt. buildings through RESCO model.

#### **16.4.1 Project Implementation**

Large scale installation of solar roof top projects may be implemented through competitive bidding.

OREDA will aggregate demand from different Government departments and conduct bids to facilitate rooftop solar deployment on Government buildings.

DISCOMs will conduct bids for residential consumers under MNRE subsidy scheme. Bids will be invited under Capex/RESCO model. The subsidy provided by MNRE for Rooftop Solar for such consumers shall be administered through the DISCOMs.

#### **16.4.2 Sale of Power**

All DISCOMs in the State would procure the power at OERC determined tariff through net metering or gross metering arrangements as applicable, as per the OERC Regulations.

Project developers may also sell power to third parties within or outside the State or use power for captive purposes.

#### **16.4.3 Incentives**

Following incentives shall be extended to promote large scale adoption of Rooftop Solar:

1. Rooftop consumers will be provided subsidies/incentives as per the guidelines of Central/State Government
2. Single window clearances & standard timelines shall be followed in registration and approvals.

### **16.5 Other Policy measures to promote solar power in the State**

#### **16.5.1 Support for Promotion of Distributed Solar Generation**

The State will promote:

- A. Deployment of distributed solar generation facilities to meet the energy needs in remote/inaccessible areas in a sustainable manner.
- B. Solarisation of existing grid connected Irrigation pumps through feeder Solarisation i.e., as per the guidelines or prevailing State Government/Central Government schemes like PM-KUSUM or any other forthcoming schemes/programs.
- C. Installation of feeder level solar power plants for a single or multiple agriculture feeders and connect them to distribution sub stations
- D. Deployment of technologically advanced solutions like Agri PV to allow maximum utilization of land by combining the agricultural production with energy generation on the same piece of land.
- E. Large scale deployment of solar applications like solar cooker, solar water heater, solar desalination, solar food dryer, etc. to generate solar energy locally and in a decentralized manner.
- F. Use of solar energy for livelihood activities shall be actively encouraged

#### **16.5.2 Solar Based EV Charging Stations**

- A. This Policy envisions to further reduce the carbon footprint of Electric Vehicles (EV) by providing access to cheap and clean solar electricity for EV charging.
- B. The nodal agency in consultation with OERC, OREDA and DISCOMs, will propose appropriate mechanisms to avail solar power for EV charging under non-park solar and rooftop solar mechanisms etc.

- C. Solar installations for EV charging on Government land shall be eligible for a 50% concession on land lease payment for the first 50 MW of installation under the non-park solar category during the Policy period. Government land can be provided as per Section 11 of Part B of this Policy.

### **16.5.3 Development of Solar cities/Industrial Estates**

The State shall promote setting up solar cities/industrial estates preferably with BESS. The State will provide necessary financial support for preparing the DPR for developing solar cities/industrial estates.

### **16.5.4 Utilisation of vacant land**

Vacant land of various Government Departments/agencies shall be made available to State entities for installation of solar projects. Annual lease rent shall be 2% of the prevailing IPR rate.

## **17. Wind**

### **17.1 Introduction**

The State has limited assessed potential for both offshore and onshore wind projects. This Policy has provisions which aims at creating an enabling environment for prospective wind power plant developers to harness the available quantum of wind power in the best possible manner. Developing wind-based energy projects is expected to gain momentum in the upcoming years due to the latest RPO notification issued by Ministry of Power, Government of India which has specified a trajectory for Wind Power Obligation up to 2029-30.

### **17.2 Allotment of projects on first come first serve**

Considering the limited assessed wind potential of the State, Nodal Agency may allot development of wind power plants on First Come First Serve basis, subject to consent of the population in the vicinity of the project. No windmill shall be allowed to be set up within 1 km of any habitation having 10 or more households. Windmills shall not be allowed in the eco-sensitive areas identified by the Forest, Environment and Climate Change Department.

The Nodal Agency may allot such identified sites to public/ private sector with each entity getting a maximum capacity of 50 MW, on a first come first serve basis, up to a cumulative capacity of 500 MW. Such restriction of 50 MW for an entity shall not apply to SPSUs/CPSUs or their JVs.

### **17.3 Sale of Power**

OERC may determine a generic tariff for all wind projects allotted under the mechanism specified in 17.2 above and commissioned before 31<sup>st</sup> March 2028. To boost development of wind energy projects in the State, GRIDCO will initially procure entire power (up to an upper limit of 500 MW) from such stations at the generic tariff determined by OERC.

If GRIDCO wishes to purchase power from certain identified projects beyond its procurement through the mechanism provided in the above paragraph, the Nodal Agency or any other bid coordinator nominated by the State Government shall conduct a tariff based competitive bidding for capacities that GRIDCO commits to off-take.

If GRIDCO does not guarantee off-take of power from the project or for capacities beyond what is committed by GRIDCO, the developers shall be free to sell the entire saleable power within or outside the State or use it for meeting captive needs.

#### **17.4 Mode of Operation**

All projects are to be developed through Build-Own-Operate (BOO) model. The sites will be awarded for a period of 30 years (covering period of development, construction, PPA and decommissioning) and may be extended by up to 5 more years in line with the prevailing rules and Regulations and with approval of the State Government.

### **18. Biomass**

#### **18.1 Introduction**

Biomass energy is present in abundance in nature and if utilized optimally can be an excellent source of energy and can effectively replace conventional fuels used for energy/power generation.

Biogas energy, one of the most common forms of biomass energy, produced from bio-degradable organic materials/wastes such as cattle-dung, biomass from farms, agro residue, municipals waste, etc. has a tremendous potential in a State like Odisha.

This Policy shall promote generation of energy through biomass-based power/ biogas/ bio-CNG/ bio-manure/ biofuels etc. to enable development of Bio-energy based projects in the State.

#### **18.2 Bidding Criteria for Competitive Bidding of identified projects**

The Nodal Agency or any other bid coordinator nominated by the State Government shall undertake a transparent competitive bidding process for selecting the developer to develop the identified projects. All private developers/ SPSUs/ CPSUs either on their own or through a JV may participate in the bidding process, subject to meeting the qualification criteria that may be mentioned in the RfP/RfQ.

GRIDCO may desire to procure entire saleable power from certain projects for meeting energy requirement of DISCOMs. In such cases, a tariff based competitive bidding process would be undertaken and bids shall be invited for a discount on the Generic Tariff determined by OERC. Else, bids shall be invited for % of free power made available to GRIDCO out of net saleable power from the project or a capacity-based premium on INR/MW basis, subject to a minimum threshold as decided by the Nodal Agency below which the bid will be rejected.

### **18.3 Sale of Power**

GRIDCO shall notify a capacity up to which it will procure biomass power till 2030. GRIDCO may decide to procure entire saleable power from identified projects up to that capacity at the Generic Tariff determined by OERC for the purpose of meeting the energy requirement of DISCOMs on a first come first serve basis.

If GRIDCO does not guarantee off-take of power from the project, the developers shall be free to sell the entire saleable power within or outside the State or use it for meeting captive needs.

### **18.4 Incentives**

The State Government shall support development of Biomass plants in the State by providing the below incentives:

1. To ensure Feedstock availability, waste and fallow land shall be made available as per section 11 of Part B at suitable location for raising energy plantations to meet up to 20% of annual biomass fuel requirement.

### **18.5 Mode of Operation and Concession Period**

All projects are to be developed through Build-Own-Operate (BOO) model. The sites will be awarded for a period of 30 years (covering period of development, construction, PPA and decommissioning) and may be extended by up to 5 more years in line with the prevailing rules and Regulations and with approval of the State Government.

## **19. Waste-to-Energy**

### **19.1 Introduction**

This Policy will encourage use of biodegradable waste for generation of electricity to enable development of waste-to-energy projects in the State.

### **19.2 Project Allocation**

Concerned Urban Local Bodies (ULBs) shall identify the project sites that can be utilized to set up Waste-to-Energy generation facilities and the Nodal Agency shall publish a list of such sites. Developers may prepare a DPR and approach the Nodal Agency for developing such identified projects. The prospective Developers may also identify project opportunities, conduct feasibility studies, prepare DPR and approach the Nodal Agency for developing the project.

### **19.3 Sale of Power**

Whenever a WTE plant is developed in the State, GRIDCO shall purchase 100% power generated in accordance with section 6.4.1(ii) of National Tariff Policy 2016 from such projects at a tariff determined by OERC. Developers shall approach GRIDCO and sign PPA with GRIDCO for off-take of power from the project.

## **19.4 Mode of Operation**

All projects are to be developed in Build-Own-Operate (BOO) model.

## **20. Green Hydrogen and Green Ammonia**

The State Government recognizes the crucial role that Green Hydrogen/ Green Ammonia shall play in energy transition. The State Government is contemplating development of Green Hydrogen / Green Ammonia hubs to meet the demands of sectors like petrochemical / fertilizer/ steel industry, long haul transport, city gas distribution as well as for export.

The incentives and concessions for Green Hydrogen / Green Ammonia Projects shall be in accordance with the National Policy announced from time to time. In addition, GRIDCO / DISCOMs shall supply RE power for Green Hydrogen production at cost plus such margin as determined by the OERC.

The Government shall come up with a separate Policy for development of an ecosystem for Green Hydrogen / Green Ammonia in the State. Additional incentives may be provided for production of Green Hydrogen / Green Ammonia under the Industrial Policy Resolution until the State comes up with a separate Policy.

## **21. Banking**

### **21.1 Applicability**

Banking will be allowed for open access and captive consumers within the State on monthly basis, upon issuance of regulations by the OERC. Drawl of banked energy will not be allowed during peak hours of DISCOMs.

### **21.2 Charges and Payments**

The applicable Banking Charges for all OA /captive consumers shall be determined by OERC. The Banking Charges for production of green hydrogen/ green ammonia shall also be determined by OERC in line with National Green Hydrogen Policy.

The unutilized banked energy shall be considered as deemed purchase by GRIDCO/DISCOMs at the power purchase cost as maybe determined by OERC for the applicable year. The payment for the deemed purchase of unutilized banked energy shall be capped at a certain percentage of the total banked energy during the month. Any unutilized banked energy beyond that shall be treated as free power to GRIDCO.

### **21.3 Banking Regulations**

OERC may frame suitable Regulations for intra-state Banking to facilitate open access of RE. While framing such Regulations, OERC may take into consideration the seasonal and diurnal fluctuations in the State pool and technical feasibility, along with the Policy measures mentioned above.

## **SECTION D : FEES & CHARGES**

### **22. Fees and Charges for Competitive Bidding Projects within the State**

The fees and charges applicable for RE projects developed under competitive bidding shall be as per the tender conditions as may be decided by the Nodal Agency on a project-to-project basis in consultation with Department of Energy.

## **SECTION E: OTHER POLICY MEASURES TO PROMOTE INNOVATION AND ACCELERATE RE ADOPTION IN THE STATE**

The Government of Odisha shall promote innovation in renewables and is committed to be at the forefront of RE adoption in the country. The following Policy measures shall foster innovation and accelerate RE adoption:

### **23.1 Research & Development (R&D), New initiatives, pilot projects**

The Nodal Agency (NA) shall promote pilot projects, innovations, encourage R&D activities for advancement of new RE technologies, green micro grids etc. for research & demonstration purpose.

Innovative ideas and proposals shall be solicited from individuals, educational institutions and corporate entities to accelerate RE adoption. The Nodal Agency shall constitute a Project Screening Committee (PSC) which shall have the following responsibilities:

1. Approve proposals and provide single window clearance for prompt implementation of the proposals.
2. May decide to provide partial or full funding for such innovative projects / R&D initiatives on a case-to-case basis.
3. Approve allocation of land and/or water bodies at concessional lease (after due consultations with concerned departments and proper due diligence).

All the Departments, District Collectors and State Government entities shall abide by the approvals & decisions taken by the PSC, in a timely manner. In case of any issues, it shall be brought to the notice of Single Window Committee.

On-grid RE projects involving innovative/new technologies may be provided Viability Gap Funding (VGF) from RE Fund. This would be provided on case to case basis.

### **23.2 Renewable Energy Research Institute**

The Department of Energy, GoO shall sponsor and establish an RE Research Institute in collaboration with International Development Agencies, National and International Research/Academic Institutes, Central and State Government owned PSUs and Industry to promote research and innovation in new and existing RE technologies. The key functions of the RE Research Institute shall be as follows:

1. Carry out basic and applied research for development of RE technologies, nurture scientific talent within the State and provide an effective R&D platform for close interactions among stakeholders.

2. Undertake research activities in new RE technologies like biofuel, biogas, ethanol blending, geothermal, tidal, other oceanic energies, storage, energy efficiency, energy conservation, carbon capture & sequestration, etc.
3. Undertake research activities in existing RE technologies to improve their efficiency and increase cost savings.
4. Tie up with other national and international institutions for scientific study of power markets, collaboration, and exchange of knowledge.
5. Tie up with industries for joint research, deployment of pilot initiatives, research funding, prototyping, etc.
6. Render technical advice and consultancy services on various RE technologies and energy transition to Government entities and industry.
7. Undertake regular studies on usage of Green Hydrogen and determine the techno-economic viability of using Green Hydrogen for energy storage in Odisha and for mobility and industrial applications. It shall engage with national and international agencies to pursue research and support the Nodal Agency to create a roadmap for commercial usage of Green Hydrogen in Odisha.
8. Perform resource assessments for all technologies.
9. Assist industries in the State in their energy transition.
10. Identify suitable opportunities and monetize the research work.
11. Design courses focusing on RE component manufacturing, installation, and O&M in ITIs / Diploma Institutes / Engineering Colleges / Skill Development Centre.

The DoE, Govt. of Odisha shall be the administrator of the institute and shall frame detailed guidelines for its conceptualization and operation.

The DoE, Govt. of Odisha may earmark a certain portion of the RE fund for sponsoring the RE Research Institute. State Government shall provide grant to meet any shortfall of revenue earned from monetization of research and sponsorship.

### **23.3 Enabling 'Just Transition' through Capacity Building of workforce**

1. ITIs / Diploma Institutes / Engineering Colleges / Skill Development Centre are encouraged to design courses and impart trainings on RE component manufacturing, RE project development and O&M to bridge the skill gap and create a better employable work-force. The State Government shall evaluate grant of funding on a case-to-case basis for above training needs at ITIs and Skill Development Centers.
2. The State Government shall also introduce courses in ITIs / Diploma Institutes / Engineering Colleges / Skill Development Centre focusing on RE component manufacturing, installation and O&M. Specialization courses / subjects may be offered in design, development and operation of RE projects at Diploma and Graduation levels.

## **23.4 Formation of a Renewable Energy Fund**

A Renewable Energy Fund shall be constituted which can be utilized to provide VGF for floating solar projects/PSH/BESS set up for procurement of power by GRIDCO, for creating of power evacuation infrastructure, research on RE technologies/ energy transition and funding the RE Research Institute in the State. Department of Energy shall be the administrator of this fund.

The fund collected from the following shall go to the RE Fund:

1. Revenue shared with the State Government from RE projects.
2. General Budgetary Support from the Government of Odisha

## **23.5 Support to industries in the State**

To support adoption of RE by industries in the State, GRIDCO shall act as an aggregator to procure power as per prevailing Regulations from RE projects and to supply the same to industries. GRIDCO shall charge a trading margin. Aggregation of demand shall help in achieving better tariffs through economies of scale. No cross subsidy surcharge shall be applicable in this case. Profits out of trading business shall be used to set-off past losses of GRIDCO. OERC shall suitably consider this in the Regulations and orders.

## **23.6 Encourage use of green power by State Government entities**

In order to be at the forefront of RE adoption in the State, the State Government shall encourage procurement and usage of green power by all Government departments, municipalities and local bodies. Suitable directions in this regard shall be issued by the State Government from time to time.

## **23.7 Decarbonisation of the grid**

The OERC would determine tariff that encourages consumers to opt for 100% consumption of green energy. The State Government may consider extending the benefit of lower Electricity Duty to such consumers as per the provisions of the Odisha Electricity (Duty) Act, 1961.

## **23.8 Grid Balancing Assets**

The share of RE in the energy mix of the State is slated to rise to about 43% by 2030 as per the RPO trajectory notified by the MoP. The MoP has also notified Energy Storage Obligation (ESO) which is set to rise to 4% in 2030. There would be issues of intermittency in the grid due to the increase in share of RE in the energy mix.

SLDC shall hold consultations with all grid connected Renewable Purchase obligated entities to aggregate the total ESO requirement of the State and explore the possibility of procuring the service of developer(s) of PSH, BESS etc to provide storage as a service to meet the aggregate storage demand.

SLDC shall claim the cost of procuring such service in its ARR. OERC may frame suitable Regulations to enable SLDC to avail services of grid balancing assets and recovery of the costs associated with such services.

### **23.9 Round the Clock / Hybrid Renewable Power Projects**

As we make the transition from coal to clean energy, Round the Clock Renewable Energy (RE-RTC) would play an increasingly pivotal role in the coming years. The State Government may consider special incentives for such projects on a case-to-case basis, especially for meeting the DISCOMs' demand. While allocating identified projects, priority shall be given for development of Hybrid-RE projects such as combination of solar/floating solar & PSH, solar/floating solar & battery storage. Such projects shall receive priority in allocation of land / water body and development of STU connectivity.

### **23.10 RE Power Projects with Storage Systems**

1. To reduce the variability of output of RE power injected into the grid, the State will promote RE Power Projects with storage systems. The State will also promote RE projects with storage systems for captive consumption and third-party sale.
2. DISCOMs and OPTCL would be encouraged to install BESS to mitigate issues of intermittency and enhance grid stability.
3. VGF for BESS shall be provided as per the Policy of the State/Central Government.
4. Procurement and utilization of BESS shall be as per the prevailing guidelines issued by the Central/ State Government.
5. The State through the RE Research Institute shall promote Research and Development (R&D) in storage technologies.

### **23.11 Mini/Micro Grids**

The Policy shall promote the deployment of mini/micro grids in remote/inaccessible areas with intermittent supply. Further, focus would be on solarizing the mini/micro grids for efficient use of solar power.

DISCOMs shall explore grid connected solar and MW scale battery storage, solar plus biomass with kW scale battery storage mini grids for remote areas. The OERC shall support such endeavours with suitable and feasible promotional tariff design.

### **23.12 RE equipment manufacturing**

The State Government recognizes the importance of development of a holistic renewable energy ecosystem which inter-alia includes development of RE equipment manufacturing facilities. Various incentive for RE equipment manufacturing units shall be governed by the IPR.

### **23.13 Electric Vehicles and Associated Infrastructure**

The State Government has already promulgated a policy for promoting use of electric vehicles. The OERC has also determined a single part tariff for EV charging stations. All the EV charging stations and battery swapping stations would be powered through renewable energy to the extent possible. The OERC shall be requested to take necessary measures such as determination of Green Energy Tariff, Time of the Day tariff for use of green / solar energy for EV charging. The Department of Energy shall be the nodal department for development of EV charging infrastructure in the State. No Cross Subsidy Surcharge and Wheeling Charges shall be levied on purchase of power by the EV charging stations through open access from renewable energy plants located in Odisha for 10 years. The EV manufacturers shall be provided incentives as per IPR.

## **SECTION F: RENEWABLE PURCHASE OBLIGATIONS**

### **24.1 RPO Trajectory to be determined by OERC**

The Odisha Electricity Regulatory Commission (OERC) will mandate a trajectory for Renewable Purchase Obligation (RPO) and Energy Storage Obligations (ESO) till 2029-30, based on Ministry of Power Order dated 22.07.2022 titled “Renewable Purchase Obligation and Energy Storage Obligation Trajectory till 2029-30”.

The RPO and ESO trajectories shall be uniform for all the obligated entities including DISCOMs, captive users or open access consumers for all the years, as has been mandated under Electricity (Promoting Renewable Energy Through Green Energy Open Access) Rules, 2022.

### **24.2 Blending of Biomass Briquettes and Pellets with coal shall account for meeting other RPO**

OERC will, through consultative process and based on technical studies, suitably mandate blending of 5-7% biomass briquettes and pellets in coal based thermal generating stations in line with the MoP Policy on Biomass utilization dated 08-Oct 2021 and any revisions thereof.

The quantum of biomass blending shall account for meeting the RPO of the captive generators to the extent of blending. GRIDCO or DISCOMs shall be deemed to have met their RPO obligation to the extent of blending. This measure will help obligated entities to partially meet their RPO requirement while utilizing exiting thermal capacities.

## **SECTION G: POLICY ADMINISTRATION**

### **25.1 General Policy Administration**

Department of Energy will be responsible for smooth administration of the provisions of the RE Policy. A Single Window Committee shall be constituted under the chairmanship of Principal Secretary / Secretary, Department of Energy, Govt. of Odisha to track the progress and take decisions on project approvals as well as monitor the implementation of the RE Policy. Considering the energy transition goals of the State and the need to create a robust implementation framework, the Department of Energy shall designate a Nodal Agency to act as the Secretariat for the Single Window Committee. The Nodal Agency shall be responsible for implementation of all the provisions of this Policy. The detailed roles and responsibilities of Nodal Agency have been mentioned in this chapter.

### **25.2 Nodal Agency**

The Department of Energy shall designate an entity as the Nodal Agency who shall be responsible for implementation of this Policy and development of all renewable energy projects in the State.

The designated Nodal Agency shall perform the tasks specified in this Policy.

Until the notification of Nodal Agency under this Policy, the roles and responsibilities of the Nodal Agency will continue to be discharged by the designated Nodal Agency(s) under the Odisha Renewable Energy Policy,2016.

### **25.3 Key Roles and Responsibilities of the Nodal Agency**

The Nodal Agency and/or designated offices by the Nodal Agency shall be responsible for the following activities:

1. Continuously identify projects across all technologies in coordination with all State Government entities, departments, PSUs and create a pipeline of projects which are to be awarded/allotted.
2. Perform resource potential assessment of all technologies in coordination with other departments and update the same periodically.
3. Prepare, maintain and continuously update a registry of projects across all technologies.
4. Classify the projects and seek approval from Single Window Committee (SWC) on allotment/award of the projects.
5. Act as single window facilitator for allotment of projects / clearance of proposals received from Private sector/CPSUs/SPSUs.

6. Identify projects which are to be awarded through competitive bidding. Define the bid parameters/ other terms and conditions for the bidding, conduct the bid process, scrutinize applications, and select the developers.
7. Ensure proper pre-developmental work of identified projects till it is allocated / awarded to the developers.
8. Act as a facilitator to obtain all statutory clearances.
9. Facilitate allotment of Government Land for projects through IDCO/ Collectors.
10. Facilitate approval of power evacuation plan, allocation of bays and other related facilities for development of RE projects.
11. Facilitate and expedite access to various concessions and incentives provided by Govt of India/ Govt of Odisha.
12. Coordinate with State Government Departments and public sector undertakings/ agencies to facilitate adoption of RE as outlined in this Policy.
13. Resolution of Policy level issues for accelerating deployment of various RE technologies in the State.
14. Provide project development assistance, technical advice and assistance for implementation of Renewable energy projects in State.
15. Call upon various State Government entities, departments, PSUs, other entities like GRIDCO, OHPC, OPTCL, OCPL, TPCODL, TPWODL, TPNODL, TPSODL, OREDA, OPGC, GEDCOL, etc., wherever required to facilitate implementation of this Policy.
16. Monitor progress of projects at pre developmental and post allotment / award stages as per the bidding/ allotment terms and conditions.
17. Coordinate with and support the OERC in framing various Regulations and orders that are required for implementation of this Policy.
18. Impose penalties and/or deallocate projects in case of non-compliance/ non-performance by the developers in accordance with the terms and conditions of the bidding process/ MoU/ Agreement.
19. Manage the accounts for collection of royalty or any other charges to be paid by the developer as per the terms and conditions of the bidding process/ MoU/ Agreement.
20. Constitute a fund for development of Renewable Energy projects in the State and monitor the RE fund on behalf of DoE, GoO.
21. Frame draft Rules and detailed procedure for implementation of this Policy and submit to Department of Energy for finalization.
22. Solicit information regarding RE procurement, monitor RPO compliance of all obligated entities in the State and report the same to the Department of Energy and OERC.

## **25.4 Support to Nodal Agency**

1. All concerned departments and agencies such as Department of Water Resources, Revenue and Disaster Management Department, Housing and Urban Development Department, Municipal Corporations, IDCO, OHPC, OREDA, GEDCOL, EIC-Electricity and SLDC will support the Nodal Agency to identify potential RE projects and bring the same to pre-development levels in a time bound manner.
2. The Department of Energy shall allocate required funds for a period of at least 3 (three) years towards Capacity Building of the Nodal Agency and set-up a Project Monitoring Unit (PMU) for implementation of this Policy.

## **25.5 Project Approval Committees**

A Single Window Committee shall be constituted under the chairmanship of Principal Secretary / Secretary, Department of Energy, Govt. of Odisha to track the progress and take decisions on project approvals. The Nodal Agency shall examine and submit proposals with recommendations to the Single Window Committee. The responsibilities of the Single Window Committee are as follows:

1. Approve projects less than 50 MW capacity for allotment/award on recommendation of the Nodal Agency.
2. Refer projects between 50-200 MW capacity to a committee headed by the Chief Secretary and projects >200 MW capacity to the Cabinet Committee along with recommendations for allotment/award.
3. Resolution of Policy level issues for deployment of various RE technologies.
4. Monitoring the progress of project implementation cleared for allotment/award.

The Single Window Committee shall meet at least once every quarter to monitor the progress of the projects and make decisions in case of any issues in implementation of the Policy. The Nodal Agency may submit the progress report to the Single Window Committee by the first week of every quarter for review.

The committees constituted under the provisions of Odisha Renewable Energy Policy,2016 shall discharge the functions of the Single Window Committee until the same is constituted.

The State Level Single Window Clearance Authority (SLSWCA) and High Level Clearance Authority (HLCA) constituted under the provisions of Odisha Industries (Facilitation) Act, 2004 shall prevail as the designated committees mentioned at (2) and (3) above until separate committees are notified under this Policy.

## **25.6 Monitoring of Project Development**

- A. The Nodal Agency shall determine various milestones from project award/allotment till commissioning for each technology separately.
- B. Once a project site is awarded / allocated, the Nodal Agency shall continuously monitor

progress of development till it is commissioned. The project developer shall be obliged to allow unhindered access to the project site and provide requisite information to the Nodal Agency/ any other entity nominated by the Nodal Agency for proper monitoring of the project progress.

## **25.7 Operational Guidelines**

- A. The Department of Energy, Govt. of Odisha shall frame Rules and lay down detailed procedure for implementation of the Policy.
- B. The Nodal Agency shall, in coordination with other Government departments/entities like the Department of Water Resources, OHPC, OREDA, GEDCOL, OPGC, etc, prepare a registry of projects for all RE technologies, within 3 months of issuance of Policy and update the same from time to time.
- C. An online portal shall be created to facilitate development of RE projects in the State and provide information to the developers.

## **25.8 Policy Advocacy & Vision Group**

The Government shall constitute a Policy Advocacy & Vision Group (PAVG), to act as a think tank and key advisor on diverse Policy related issues.

The PAVG will be a body of intellectuals, professionals and practitioners from various fields such as academia, research, industry, commerce, administration, finance, marketing, international developmental financing etc.

The Nodal Agency shall serve as secretariat for the PAVG.

The PAVG would facilitate proper and timely implementation of the RE Policy and will ensure that the energy transition goals of the State are achieved, and the social and economic benefits of renewable energy development are available widely. In order to accomplish this, the PAVG will develop, in phases, systems and mechanisms to bring paradigm shift in the approach of RE project identification and implementation framework, investment promotion, financing, capacity building etc. The PAVG will be responsible for making recommendations to the State Government on priority areas for growth, adoption of new RE technologies, constitution of Special Task Forces from time to time, or in any aspect of promotion of RE project development in the State.

## **25.9 Regulations and Orders from the OERC**

Several enabling Regulations and Orders, which are in the purview of the Odisha Electricity Regulatory Commission, are required for implementation of this Policy and for achievement of the objectives of energy transition envisaged in this Policy. The OERC shall take action to notify the following Regulations and orders in a timely and consultative manner:

- a. Order for implementation of revised RPO Trajectory as per para 24.1 of this Policy.
- b. Regulation for Banking of Power as per para 21.3 of this Policy.

- c. Generic tariff for Small Hydro Plants till 2030 as referred to in para 14.3 of this Policy.
- d. Generic tariff for all wind projects awarded under para 17.2 and as referred to in para 17.3 of this Policy.
- e. Generic tariff for Biomass Plants till 2030 as referred to in para 18.3 of this Policy.
- f. Suitable Regulations to enable SLDC to avail services of grid balancing assets as per para 23.8 of this Policy, when policy, technology and market matures.
- g. Order for exemption on cross subsidy charges for RE power procured by industries in the State from GRIDCO (with GRIDCO acting as a demand aggregator) as per para 23.5 of this Policy.
- h. Determination of tariff that encourages consumers to opt for 100% consumption of green energy.
- I. Any other order/Regulations required to implement the Policy provisions

## **25.10 Policy Review, Removal of Difficulties and Interpretations**

Government of Odisha may undertake a mid-term review of this Policy as and when needed in view of any technological breakthrough or to remove any inconsistency with Electricity Act, 2003, Rules and Regulations made there under or due to any policy change made by Government of India or for any other purposes deemed necessary to meet the objectives of this Policy. The incentives and waivers provided under this Policy are being provided considering the overall RE investment environment in the State, current RE market in the country and the national policies/guidelines/rules. The incentives, waivers and concessions will be calibrated in line with any changes in national policies/rules/guidelines during the Policy period. Retrospective amendments to the incentives available under this Policy shall be avoided.

All waivers and incentives shall be in conformity with the Central and State Acts and Rules including the Electricity Act, 2003 and the Odisha Electricity (Duty) Act, 1961.

The Department of Energy shall amend or review or relax or interpret any of the provisions under this Policy as and when required. If any difficulty arises in giving effect to any provision of this Policy, Department of Energy shall issue clarifications and interpretations to such provisions of the Policy, as may appear to be necessary and expedient for removing the difficulties either on its own or after hearing those parties who have represented for change in any provision.

## GLOSSARY

APPC	Average Power Purchase Cost
BESS	Battery Energy Storage System
BOO	Build-Own-Operate
BOOT	Build-Own-Operate-Transfer
CERC	Central Electricity Regulatory Commission
CoD	Commercial Operation Date
CoP26	26 <sup>th</sup> Conference of Parties
CPSU	Central Public Sector Undertaking
CUF	Capacity Utilization Factor
GRIDCO / DISCOMs	GRIDCO Limited / Distribution Licensees of Odisha (Procurement of power by GRIDCO for DISCOMs & Procurement of power by DISCOMs is used inter-changeably)
DoE	Department of Energy, Government of Odisha
DPR	Detailed Project Report
ED	Electricity Duty
GEDCOL	Green Energy Development Corporation of Odisha
GENCO	Generating Companies
GoO	Government of Odisha
HPO	Hydro Purchase Obligation
IDCO	Odisha Industrial Infrastructure Development Corporation
IPR	Industrial Policy Resolution
ISTS	Inter State Transmission System
JV	Joint Venture
LADF	Local Area Development Fund
MNRE	Ministry of New and Renewable Energy, Government of India
MoP	Ministry of Power, Government of India
MoU	Memorandum of Understanding
NDC	Nationally Determined Contribution
NIWE	National Institute of Wind Energy
OCPL	Odisha Coal and Power Limited
OERC	Odisha Electricity Regulatory Commission
OHPC	Odisha Hydro Power Corporation

OPGC	Odisha Power Generation Corporation Limited
OPTCL	Odisha Power Transmission Corporation Limited
OREDA	Odisha Renewable Energy Development Agency
PFR	Pre-Feasibility Report
PPA	Power Purchase Agreement
PSC	Project Screening Committee
R&D	Research & Development
RE	Renewable Energy or Clean Energy or Green Energy
RPO	Renewable Purchase Obligation
RTC	Round-the-Clock
SHP	Small Hydro Projects
SLDC	State Load Dispatch Centre
SPD	Solar Power Project Developer
SPSU	State Public Sector Undertaking
STU	State Transmission Utility
SWC	Single Window Committee
TPCODL	TP Central Odisha Distribution Limited
TPNODL	TP Northern Odisha Distribution Limited
TPSODL	TP Southern Odisha Distribution Limited
TPWODL	TP Western Odisha Distribution Limited
ULB	Urban Local Bodies
VGF	Viability Gap Funding
WTE	Waste-to-Energy

## ANNEXURE:

### **Annexure -1: Demand for Renewable Energy to meet RPO of Obligated Entities in Odisha**

1. Ministry of Power, Govt. of India vide notification dated 22.07.2022 has notified a revised RPO trajectory with an aim to increase the penetration of RE in the overall energy mix. Separate trajectories have been notified for wind, hydro and other renewables and a uniform RPO has been mandated on all obligated entities. The revised RPO trajectory is as follows:

YEAR	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30
WPO	0.81%	1.6%	2.5%	3.4%	4.3%	5.2%	6.2%	6.9%
HPO	0.35%	0.7%	1.1%	1.5%	1.8%	2.2%	2.5%	2.8%
Other RPO	23.44%	24.8%	26.4%	28.2%	29.9%	31.4%	32.7%	33.6%
<b>TOTAL</b>	<b>24.60%</b>	<b>27.07%</b>	<b>29.91%</b>	<b>33.01%</b>	<b>35.95%</b>	<b>38.81%</b>	<b>41.36%</b>	<b>43.33%</b>

Note:

- a. Hydro Purchase Obligation (HPO): All large hydro projects and small hydro projects commissioned after 08.03.2019 shall be accounted as HPO.
- b. Wind Purchase Obligation (WPO): Procurement from all wind projects commissioned after 31.03.2022 shall be accounted towards WPO.
- c. Other RPO: Procurement from any renewable energy source apart from the ones considered under HPO and WPO shall be part of the Other RPO.
- d. Energy Storage Obligation (ESO): Starts from 1% in FY 24 and progressively increases by 0.5% each year to reach 4% by FY 30 for each obligated entity.
- 2. The RPO and ESO trajectories shall be uniform for all the obligated entities including DISCOMs, captive users or open access consumers for all the years, as has been mandated under Electricity (Promoting Renewable Energy Through Green Energy Open Access) Rules, 2022.
- 3. To meet the new RPO trajectory, the cumulative estimated capacity addition required by DISCOMs and Industries (Captive / OA) till FY 30 is as follows:

<b>Additional Requirement</b>	<b>Cumulative Capacity (MW)</b>		
	<b>DISCOMs</b>	<b>Captive/OA</b>	<b>TOTAL</b>
Wind	900	2,600	3,500
Hydro	300	900	1,200
Other	4,500	12,500	17,000
<b>Total Renewables</b>	<b>5,700</b>	<b>16,000</b>	<b>21,700</b>

**Note:** Based on assumptions of demand growth, PLF of RE projects and RPO trajectory compliance, actual numbers may vary by **+/- 15%** depending on the PLF/CFU of the RE projects

4. There is a large market for Renewable Energy procurement in Odisha over the next 7/8 years. The demand shall increase further when RPO increases further beyond 2030, when more and more Industries set up their units in Odisha or when Industries look to meet their energy demand from RE sources beyond their RPO.

#### **NOTES:**

1. GRIDCO Ltd. has been notified as the Nodal Agency vide Notification No. 12284 dated 15-12-2022 of Energy Department, Govt. of Odisha.
2. Single Window Committee has been constituted vide Notification No. 63 dated 03-01-2023 of Energy Department, Govt. of Odisha as follows:
  - Additional Chief Secretary, Energy Department : Chairman
  - CMD, OPTCL : Member
  - MD, IDCO : Member
  - MD, IPICOL : Member
  - Managing Director, GRIDCO : Member
  - EIC (Electricity)-cum-PCEI : Member
  - EIC (Water Resources) or any nominee of Department of Water Resources not below rank of Additional Secretary : Member
  - Nominee of Revenue and Disaster Management Department not below rank of Additional Secretary : Member
  - CEO of concerned DISCOM : Member
  - Director, GRIDCO : Member Convenor





**ODISHA**  
NEW OPPORTUNITIES

*For more information and investment enquiries :*

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