

Guideline for submission of quotation

MNRE scheme for development of Solar Park & Ultra Mega Solar Power Projects in India.

Ministry of New and Renewable Energy (MNRE), New Delhi; GoI has declared a scheme for development of Solar Park & Ultra Mega Solar Power Projects in India vide notification no. 30/26/2014-15/NSM dated 12.12.2014. As per the scheme mandate, at least 25 solar parks each having capacity of 500 MW and above with a target of over 20,000 MW of solar power installed capacity in a span of 5 years from 2014-15 to 2018-19.

Further, MNRE vide notification no. 30/26/2014-15/NSM dated 21.03.2017 has enhance the capacity of Solar Park & Ultra Mega Solar Power Projects from 20,000 MW to 40,000 MW for setting up of at least 50 solar parks each with a capacity of 500 MW and above by 2019-20.

MNRE in its notification no. 30/26/2014-15/NSM dated 21.03.2017 has mentioned following –

Mode - 4

Private entrepreneurs promote solar parks without any equity participation from SECI, but may have equity participation from the State Government or its agencies.

SECI would not take up solar projects in its own name in the solar parks in new cases, where SECI is a partner in the SPPD.

If the State Government decided to develop solar park through private entrepreneurs (under Mode 4) then in order to give fair and equal treatment to all the bidders, the State Government must give open advertisement. The State Government would develop transparent guidelines consisting of financial & technical aspects for selection of private entrepreneurs for development of solar parks. The selection of private entrepreneurs is to be made in a transparent manner on the basis of location and availability of land with the park developers, feasibility of power evacuation system and availability of necessary infrastructure.

MNRE vide Office Memorandum dated 22.5.2018 has furnish the following modification in selection of Solar Power Park Developers (SPPDs) for development of solar parks under the solar park scheme -

Mode - 4 A -

If the land is made available by the State Government or any Government agency, then the Solar Power Park Developers (SPPD) may be selected based on open bidding on development and O&M charges. The lowest bidder would be selected based on the lowest NPV of park

development cost plus O&M charges per MW and the SPPD would be allowed to sell / lease land to solar projects developer (SPDs) at a cost arrived at by adding the land cost as fixed by the State Government and his quoted development charge.

Mode - 4 B -

If the land is to be provided by the solar park developer itself then the bidding for selection of the SPPD would be based on his quoted price of developed land per MW and O&M charges. That is, bidder would have to quote the price of developed park land and the O&M charges Per MW, they would be charge to the SPDs. The park developer who quotes the lower NPV of developed land price plus O&M charges per MW would be the successful bidder for solar park development.

Considering above, it is informed all to go through with MNRE Guidelines dated 12.12.2014 & 21.3.2017 and thereafter all amendment in Scheme Guidelines (available in MNRE website) and submit your quotation physically or through courier in sealed envelope from 03/09/2024 @11.00 am to 09/09/2024 @3.00 PM. The said quote is inclusive of all i.e. GST, travelling, two hard copy & soft copy of draft guidelines / presentation etc.

Following are the eligibility criteria for consultant: -

- i) The consultant shall be individual Firm or Company.
- ii) The consultant shall have a minimum 5 years of experience in consultancy in development of solar power project / park in Govt / Private solar power project / park.
- iii) The consultant should not have been blacklisted by any Central or State Government or Public sector undertaking in India.

Additional Director General, MEDA reserve the rights to accept or reject anyone or all quotations without assigning reasons thereof.

No. 30/26/2014-15/NSM
भारत सरकार Government of India /
नवीन और नवीकरणीय ऊर्जा मंत्रालय / Ministry of New & Renewable Energy
(NSM Coord. Group)

Block NO. 14, CGO Complex, Lodi Road,
New Delhi-110 003, Dated: 12th December 2014

To
The Pay & Accounts Officer
Ministry of New and Renewable Energy
New Delhi.

Subject: Implementation of a Scheme for Development of Solar Parks and Ultra Mega Solar Power Projects in the country commencing from 2014-15 and onwards (i.e. from the year 2014 – 15 to 2018 – 19).

Sir,

I am directed to convey sanction of the President for implementation of a Scheme for setting up at least 25 solar parks each with a capacity of 500 MW and above with a target of over 20,000 MW of solar power installed capacity in a span of 5 years from 2014-15 to 2018-19; with an estimated Central Financial Assistance (CFA) of Rs.4050.00 crore (Rs. four thousand and fifty crore only), as per provisions of the Scheme enclosed at **Annexure**.

2. Objective

The scheme aims to provide a huge impetus to solar energy generation by acting as a flagship demonstration facility to encourage project developers and investors, prompting additional projects of similar nature, triggering economies of scale for cost-reductions, technical improvements and achieving large scale reductions in GHG emissions. It would enable States to bring in significant investment from project developers, meet its Solar Renewable Purchase Obligation (RPO) mandate and provide employment opportunities to local population. The State will also reduce its carbon footprint by avoiding emissions equivalent to the solar park's installed capacity and generation. Further, the State will also avoid procuring expensive fossil fuels to power conventional power plants.

3. Implementation arrangements

3.1 Applicability: All the States and Union Territories are eligible for benefitting under the scheme.

3.2 Implementation Agency: The solar parks will be developed in collaboration with the State Governments and their agencies. Solar Energy Corporation of India (SECI) would be MNRE's Agency for handling this Scheme. The choice of implementing agency for developing and maintaining the park is left to the State Government. The States, applying under the scheme, will have to designate an agency for the development of solar park. Solar parks are envisaged to be developed in the 4 modes as mentioned in the Scheme. The agency identified out of the above stated 4 modes shall be the Implementing Agency. The choice of implementing agency for developing and maintaining the park is left to the State Government.

3.3 Financial Model: Implementing agency may raise funds as per Financial model given in the Scheme.

4. Projects of any solar technology may come up in the Solar Park. The flexibility in choosing technology by the Project Developer will ensure adoption of cost effective and state-of-the-art technology which is commensurate with the dynamic requirements of the project.

P.t.o.

5. **Power Purchase Agreement:**

The solar power developer(s) for project(s) within the solar park shall enter into Power Purchase Agreement(s) (PPAs) with Central Utilities/State Utilities/Discoms/Third Parties/Captive Users who are willing to buy power from the developer(s). The tariff for the sale of power through PPAs could be either Central Electricity Regulatory Commission (CERC)/State Electricity Regulatory Commission (SERC) regulated price or that determined through bidding process. The projects can come up under any Central/State/UT Government Schemes/Programmes or can be for third party sale, captive use or merchant sale.

6. **Fund for power evacuation**

The power evacuation arrangement will consist of two parts i.e. pooling stations and network within Park to collect power from each project and transmitting it to the transmission sub-station at the park boundary as the first part and the transmission sub-station along the transmission line upto Central Transmission Utility (CTU)/State Transmission Utility (STU) existing grid as the second part. The implementing agency would be responsible for the first part and the CTU/STU would be the responsible for the second part. For both these parts i.e. entire evacuation arrangement, MNRE grant may be used. Loan from multilateral/bilateral agencies may also be used as a component to fund the power evacuation infrastructure by the implementing agency and CTU/STU. If the capital expenditure for the evacuation network is high then a separate proposal may also be considered for funding from National Clean Energy Fund (NCEF), Green Corridor Programme or any other source.

7. **Central Financial Assistance (CFA):**

- CFA @ Rs.25.00 lakh (Rs. twenty five lakh) per park would be released by MNRE to SECI for DPR preparation of the Solar Park, conducting surveys, etc.
- Besides, CFA of up to Rs.20.00 lakh (Rs. twenty lakh) per MW or 30% of the project cost, including Grid-connectivity cost, whichever is lower, would be released to SECI on achieving the milestones given under para 7 of the Scheme. For release of requisite funds, the State Government will send a formal proposal to MNRE.
- The grant will be managed and released by SECI, on behalf of MNRE, for which SECI will be given a fund handling fee of 1% of the grant released.

8. If there is need for making any amendment to this Scheme for better implementation or any relaxation is required in the norms for Solar Parks, MNRE will be competent to make such amendments with the approval of Minister-in-charge, without increasing the financial requirements.

9. The funds for implementation of the above scheme would be met from Demand No.69-Ministry of New & Renewable Energy; Major Head:2810-New & Renewable Energy; 101-Grid Interactive & Distributed Renewable Power, 01-Grid Interactive Renewable Power, 04-Solar Power, 31-Grants-in-aid General during 2014-15 (Plan).

10. This sanction issues in exercise of powers delegated to this Ministry and with the approval of competent authority and concurrence of IFD *vide* their Dy. No. IFD/1763/2014-15 dated 12th December 2014.

Yours faithfully,


(K.G. Suresh Kumar)

Under Secretary to the Govt. of India
Phone: 011-24360707, Extn. 1912

Encl: As above

Contd.....

Copy for information and necessary action to:-

1. All Central Government Ministries/Departments;
2. Principal Director of Audit, Scientific Audit-II, DGACR Building, I.P. Estate, Delhi-02
3. All State/UT Energy Secretaries
4. All Heads of State/UT Nodal Agencies
5. All State/UT Utilities
6. All Municipal Commissioners
7. CMD, IREDA, August Kranti Bhawan, Bhikaiji Cama Place, New Delhi
8. Managing Director, SECI, New Delhi-110017

Internal Distribution:

1. PS to Hon'ble Minister, NRE & PSO to Secretary, MNRE
2. All Advisers & Group Heads/ JS (TK)/JS(VJ)/ JS&FA, MNRE
3. DG, NISE, Gwalpahari, Gurgaon
4. All Directors/Scientists/ Dy. Secy.(Fin.)/ Under Secretaries in MNRE
5. Dir. (NIC) to upload this on the Ministry's website.
6. CA, MNRE / Consultant(NSM) / Cash Section
7. Hindi Section for Hindi version
8. Sanction folder



(K.G. Suresh Kumar)

Under Secretary to Govt. of India

Scheme for development of Solar Parks and Ultra Mega Solar Power Projects

1. Background

India, with its large population and rapidly growing economy, needs access to clean, cheap and reliable sources of energy. India lies in the high solar insolation region, endowed with huge solar energy potential with most of the country having about 300 days of sunshine per year with annual mean daily global solar radiation in the range of 4 - 6 kWh/m²/day. Solar power projects can be set up anywhere in the country, however the scattering of solar power projects leads to higher project cost per MW and higher transmission losses. Individual projects of smaller capacity incur significant expenses in site development, drawing separate transmission lines to nearest substation, procuring water and in creation of other necessary infrastructure. Also it takes a long time for project developers to acquire land, get change of land use and various permissions, etc. which delays the project.

The solar park is a concentrated zone of development of solar power generation projects and provides developers an area that is well characterized, with proper infrastructure and access to amenities and where the risk of the projects can be minimized. Solar Park will also facilitate developers by reducing the number of required approvals.

Starting with the 'Charanka Solar Park' in Gujarat, and closely followed by the 'Bhadla Solar Park' in Rajasthan, solar parks have quickly emerged as a powerful mechanism for the rapid development of solar power projects in the country. These parks have obtained their initial impetus from the Jawaharlal Nehru National Solar Mission (JNNSM), which provided the policy framework and roadmap for solar power development in the country.

Charanka Solar Park in Gujarat is the first-of-its-kind large scale solar park in India with contiguous developed land, transmission connectivity and provision of other amenities and infrastructure. A solar power developer can get fully developed land along with transmission and other facilities and can, therefore, set up a power project immediately. The Charanka Solar Park has a capacity of 590 MW, out of which 224 MW has already been commissioned by 20 developers.

The solar parks in Gujarat and Rajasthan not only enable the states to meet their policy targets for solar power and solar renewable purchase obligations, they also contribute towards the ambitious targets put in place by the JNNSM. In addition, the clean power generated by these solar projects play a role in reducing India's carbon footprint, promote high end technology investments, provide employment and empower local communities. MNRE, through this scheme will target development of similar solar park across India.

Large size projects have a potential to bring down the cost of Solar Power. Therefore, Ultra Mega Solar Power Projects having capacity of 500 MW or above have been planned in India. Large chunks of land are available in some States for solar park development. There are some developers who are keen to individually take up very large projects. Land has so far been identified in Gujarat, Madhya Pradesh, Telangana, Andhra Pradesh, Karnataka, Uttar Pradesh, Meghalaya, J&K (Leh and Kargil), Punjab and Rajasthan.

2. Proposal

MNRE through this scheme plans to set up 25 solar parks, each with a capacity of 500 MW and above; thereby targeting around 20000 MW of solar power installed capacity. These solar parks will be set up within in a span of 5 years commencing from 2014-15 and the solar projects may then come up as per demand and interest shown by developers.

At the State level, the solar parks will enable the States to bring in significant investment from project developers, meet its Solar Renewable Purchase Obligation (RPO) mandate and provide employment opportunities to local population. The State will also reduce its carbon footprint by avoiding emissions equivalent to the solar park's installed capacity and generation. Further, the State will also avoid procuring expensive fossil fuels to power conventional power plants.

The solar park will provide a huge impetus to solar energy generation by acting as a flagship demonstration facility to encourage project developers and investors, prompting additional projects of similar nature, triggering economies of scale for cost-reductions, technical improvements and achieving large scale reductions in GHG emissions. Some Ultra Mega Solar Power Projects may be set up in these Parks or the entire park may individually be an Ultra Mega Solar Power Project.

2.1 Applicability: All the States and Union Territories are eligible for benefits under the scheme.

2.2 Capacity: Park to be taken up for development should be of capacity of 500 MW and above. Smaller parks in Himalayan & other hilly States where contiguous land may be difficult to acquire in view of the difficult terrain will also be considered. Smaller parks may also be considered in States where there is acute shortage of non-agricultural lands.

3. Implementing agency

The solar parks will be developed in collaboration with the State Governments & their agencies. The MNRE Nodal Agency would be Solar Energy Corporation of India (SECI) on behalf of Government of India (GOI). SECI will handle funds to be made available under the scheme on behalf of GOI. SECI will administer the scheme under the direction from MNRE.

The States applying under the scheme will have to designate an agency for the development of solar park. Solar parks are envisaged to be developed in the following four modes:-

(i) **Mode 1:** The State designated nodal agency undertakes the development & management of the solar park. This agency could be a State Government Public Sector Undertaking (PSU) or a Special Purpose Vehicle (SPV) of the State Government.

(ii) **Mode 2:** A Joint Venture Company is set up between State designated nodal agency and SECI for the development & management of solar park with 50% equity from SECI and 50% equity from the State Government Agency (State Government may also allow more than one agency provided total equity from State Government remains 50%).

(iii) **Mode 3:** The State designates SECI as the nodal agency and SECI undertakes the development and management of solar park on behalf of State Government on mutually agreed terms.

(iv) **Mode 4:** Private entrepreneurs promote solar parks without any equity participation from SECI, but may have equity participation from the State Government or its agencies.

The Implementing Agency or Special Purpose Vehicle (SPV), as identified under the provisions at (i) to (iv) above, shall undertake following activities to achieve the objective of speedy establishment and implementation of Solar Power Parks in the States:-

- i. Plan, finance, develop, execute, operate and maintain the Solar Power Park
- ii. Identify potential site and acquire/leasehold/possess land for Solar Power Park
- iii. Carry out site related studies/investigations
- iv. Obtain statutory & non statutory clearances and to make area development plan within Solar Power Park.
- v. Design a plan for sharing development cost between the developers.
- vi. Create necessary infrastructure like water, transmission lines, roads, drainage etc. to facilitate Solar Power Project developer for faster implementation of Solar Power Projects
- vii. Frame out transparent plot allotment policy and specify procedures pursuant to the relevant State policies and their amendments thereof.
- viii. Provide directives for technology-specific land requirements
- ix. Engage the services of national agencies/global experts/consultants to promote Solar Power Park and related activities.
- x. Facilitate the State Government to establish educational institutions/training facilities within Solar Power Park for development of manpower skill related to Solar Power

- xi. Include any other activity related to Solar Power Park, such as manufacturing as per the directives from MNRE and the State Government.
- xii. Conduct necessary evaluation of environmental and social impacts of utility scale solar deployment as per law and before allocating the land to prospective developers.

All infrastructural requirements outside the park such as connecting road, provision of water supply, construction electricity, etc. to make the park functional, will be the sole responsibility of the concerned State Government.

4. Land acquisition / site selection

Land for the setting up of the solar park will be identified by the State Government unless the implementing agency has its own land. It will be the responsibility of the State Government to make the land available. States are encouraged to identify sites receiving good solar radiation and sites which are closer to CTU (i.e. Power Grid Corporation of India Limited), preferably locations with spare transmission capacities and water availability. The park must have at least 5 Acres per MW towards installation of solar projects and will give opportunity for all technologies in a technologically agnostic fashion.

In order to provide for such a large tract of contiguous land with appropriate insolation levels, the state government may prioritize the use of government waste/non-agricultural land in order to speed up the acquisition process. It will be preferred if most of the required land is Government owned and very little private land is to be acquired. The price of the land is to be kept as low as possible in order to attract the developers and, therefore, the site should be selected in such a manner so that inexpensive land can be made available. If land cannot be made available in one location, then land in few locations in close vicinity may be taken. Possibility of using cold and hot deserts, sides of highways can also be actively explored.

5. Facilities to be provided

The solar park will provide specialized services to incentivize private developers to invest in solar energy in the park. These services while not being unique to the park, are provided in a central, one-stop-shop, single window format, making it easier for investors to implement their projects within the park in a significantly shorter period of time, as compared to projects outside the park which would have to obtain these services individually.

On the Charanka pattern, the implementing agency is tasked with acquiring the land for the Park, cleaning it, levelling it and allocating the plots for individual projects. Apart from this, the agency will also be entrusted with providing the following facilities to the solar project developers for the development of the solar park:-

- i. Land approved for installation of solar power plants and necessary permissions including change of land use etc.
- ii. Road connectivity to each plot of land
- iii. Water availability for construction as well as running of power plants and demineralization plant

- iv. Flood mitigation measures like flood discharge, internal drainage etc.
- v. Construction power
- vi. Telecommunication facilities
- vii. Transmission facility consisting pooling station (with 400/220, 220/66 KV switchyard and respective transformers) to allow connection of individual projects with pooling station through a network of underground cables or overhead lines.
- viii. Housing facility for basic manpower wherever possible
- ix. Parking, Warehouse etc.

The solar park will be a large contiguous stretch of land with high insolation levels, saving the private developer from making the effort of identifying the ideal site for the plant. In addition, the site within the park is already levelled and developed reducing these costs for the project developer.

In addition, the Park will provide road access (both approach roads and smaller access roads to individual plots), water (via a dedicated reservoir located within the premises), boundary fence and security, each of which would have entailed additional costs for the developer outside the park.

Each of these specialized services offer significant benefits to the developers but come at a premium. Land plots within the solar park are more expensive than outside. But this premium is easily justifiable by these services, which are bundled into the land cost. However, the most important benefit from the park for the private developer is the significant time saved. The centralized, single window nature of the services within the park reduces the time between project conceptualization and operations, translating into economic and real monetary gains for the private developers and the State.

Centralized Weather Monitoring Station would be set-up by the implementing agency so as to provide weather data to the projects in the solar parks.

6. Financial model

The implementing agency, entrusted with implementing the programme will get the land developed and provide necessary infrastructure like road connectivity, transmission infrastructure etc. Significant investments will also be made in the operation & maintenance of the solar park, employing staff and other activities like marketing etc. The entire cost of development including cost involved in acquisition of land will form the total cost for the project for which an estimate will be prepared beforehand by the nodal agency. Based on this estimate the implementing agency will formulate a recovery model to ensure the sustainability of the park. The implementing agency may raise the funds as follows:-

- The implementing agency may give wide publicity and have a process of registration for prospective developers to register so that the demand for the solar park can be assessed.
- The implementation agency may sell/lease out the plots to prospective project developers. Lease period shall be of 30 years or as per State land

policy. The Allotment Price per metre square (inclusive of all applicable taxes, duties, cess etc.) payable by the plot applicant for the applications must be specified in a transparent manner. The allotment price may be reviewed annually and an annual increment may also be specified. The maximum stretch of plot to be allotted will be decided as per the benchmarks finalized by the implementing agency.

- A one-time registration fee (per project or per MW) may be collected by inviting applications from the prospective buyers when the scheme is finalized, land identified and marked. An advance may be collected from the prospective buyers when 50% of the land is acquired. This advance will be 10% of the sale price or lease amount. Another instalment of 25% of the price of land or lease amount may be taken when full land is acquired. Further instalments of 10% each time may be collected while plot are being developed. Final 15% of the price of land or lease amount may be collected at the time of allotment of the plot to the buyer.
- The implementing agency may put in some of its own equity and can raise loans, depending on the availability of funds and requirement. The subsidy of MNRE under the scheme would bring down the cost of the project to that extent. The SPV will also create a small corpus for working capital to ensure upkeep and maintenance in the future, which may be supplemented with some annual charges. The implementing agency may change the above plan if it is in the interest of the solar park.

7. MNRE support

The State Government will first nominate the implementing agency for the solar park and also identify the land for the proposed solar park. It will then send a proposal to MNRE for approval along with (or later) the name of the implementing agency. The implementing agency may be sanctioned a grant of upto Rs.25 Lakhs for preparing Detailed Project Report (DPR) of the Solar Park, conducting surveys etc. The DPR must be prepared in 60 days.

Thereafter, application may be made by the implementing agency to SECI for the grant of up to Rs.20 lakhs/MW or 30% of the project cost including Grid-connectivity cost, whichever is lower. The approved grant will be released by SECI as per the following milestones:-

Sl. No.	Milestone	% of subsidy disbursed
1	Date of issue of administrative approval	5%
2	Land acquisition (not less than 50% land acquired)	20%
3	Financial Closure	20%
4	Construction of Pooling Substation, Land Development and other Common facilities as per DPR	25%
5	Construction of transmission line and Grid Connectivity	20%
6	Final instalment on completion	10%
	Total	100%

The grant will be managed and released by SECI on behalf of MNRE for which SECI will be given a fund handling fee of 1%. If the park is developed in phases, grant will also be phased out in proportion to expenditure in each phase.

Based on above, the estimated cost has been worked as under:-

	(Rs. in Crores)
(i) Cost of 20,000 MW @ Rs.20 Lakh/MW	4000.00
(ii) 1% fund handling fee for SECI on above amount	40.00
(iii) Cost of DPR preparation etc. for 25 Solar Parks @ Rs. 25 Lakh each park	6.25
(iv) Training, consultancy & other related Expenditure (to be incurred by MNRE, SECI, implementing agency)	3.75
Total	4050.00

8. Transmission and evacuation of power from solar park

Interconnection of each plot with pooling stations through 66 KV /other suitable voltage underground or overhead cable will be the responsibility of the solar project developer.

The designated nodal agency will set up the pooling stations (with 400/220, 220/66 KV or as may be suitable switchyard and respective transformers) inside the solar park and will also draw transmission to transmit power to 220 KV/400 KV sub-station.

The responsibility of setting up a sub-station nearby the solar park to take power from one or more pooling stations will lie with the Central Transmission Utility (CTU) or the State Transmission Utility (STU), after following necessary technical and commercial procedures as stipulated in the various regulations notified by the Central/State Commission.

If the State Government is willing to buy over 50% of the power generated in the solar park, preference will be given to STU, which will ensure setting up of sub-station and development of necessary infrastructure for transmission of power from substation to load centres.

The designated implementing agency will intimate POWERGRID and CEA at least 6 months before so that the planning and execution can be carried out in time.

If the state is not willing to buy at least 50% of the power generated in the solar park, then CTU may be entrusted with the responsibility of setting up 400 KV or bigger sub-station right next to the solar park and its connectivity with the CTU. For setting up of this transmission & evacuation infrastructure, Power Grid may prepare a separate project to be funded from NCEF / external funds / Green Corridor project, if the cost is very high. The system would be planned in such a manner so that there is no wheeling charge applicable on solar power in accordance with the CERC Regulation or reduce the wheeling charges to affordable level.

To build this infrastructure using the highest possible standards, the whole solar power evacuation network scheme may be designed using latest technologies like SCADA, GIS, Bay controller, online monitoring equipment for dissolved gas analysis, OPGW, PLCC etc.

9. Power Sale Arrangement:

Acceptance for development of solar park under the Scheme does not guarantee power purchase agreement (PPA) or tariff for the power to be produced. The project developers need to have their own arrangement for a PPA or get selected in any Government of India or State Government Scheme. The developer will be free to set up projects under any scheme or for third party sale.

10. Loan

MNRE will also put in efforts to tie up with multilateral/ bilateral funding agencies to finance the entire or a part of the cost of the solar parks. The MNRE grant will be treated as the implementing agencies' contribution to get this loan. The loan tenure and the moratorium period will be set in accordance with the banks' terms and conditions while the annual interest will be set in accordance with banks' LIBOR-based lending facility.

11. Fund for power evacuation

The connectivity with grid i.e. 220/400 kv substation and transmission line to connect with CTU / STU's existing network is a very important component. For power evacuation network, MNRE grant may be used. Loan from multilateral/bilateral agencies may also be used to the power evacuation network. If the expenditure is high then a separate proposal may also be considered for funding from National Clean Energy Fund (NCEF), Green Corridor Programme or any other source.

12. Equity Contribution

The implementing agency whether single company or JV may not require a high equity infusion as most of the cost will be covered through as MNRE grant and loan. Most of the land is expected to be Government land. The total expenses on development of park will be worked out by the implementing agency in a transparent manner.

The expenses after taking into account MNRE subsidy, may be recovered through sale or lease charges of land from the developers.

The implementing agency can generate a reasonable amount of surplus which can be profit for the agency or its promoters which may preferably be converted in to equity of the JV partners or the implementing agency so that the implementing agency gets financial strength for long term sustenance.

13. Ultra Mega Solar Power Projects

Ultra Mega Solar Power project is a single power project with capacity of over 500 MW. These projects may be set up in some of these Solar Parks. The projects may be bid out after developing the park or simultaneously with park developments. In some cases, the full park may be one Ultra Mega Project.

In such cases the JV set up to develop the Ultra Mega Solar Power Project may become the implementing agency also.

14. Hybrid Projects

Some other forms of RE like wind, biomass etc. may also be allowed to come up in the park wherever feasible. Projects with CSP technology may in these parks have upto 15% of auxiliary fuel of gas or biomass.

15. Timelines

Scheduled timelines for setting up of Solar Power Park is as under:-

Sl. No.	Milestone	Timelines
1	Date of issue of administrative approval	Zero Date
2	Land acquisition and Financial Closure	6 months from zero date
3	Construction of Pooling Substation, Land Development and other Common facilities as per DPR	15 months from zero date
4	Transmission line and Grid Connectivity	18 months from zero date
5	Final instalment on completion	18 months from zero date

16. Manufacturing

Manufacturing of solar products and components may also be allowed in the parks.

17. Interpretation

In case of any ambiguity in interpretation of any of the provisions of the Scheme, the decision of the Minister-in-Charge, MNRE shall be final.

18. Arbitration

Any dispute that arises out of any provision of the scheme shall be settled by an Arbitrator appointed by this Ministry for the purpose and his decision shall be final and binding.

19. Power to remove difficulties

Given that the scheme is new, if there is need for any amendment to this Scheme for better implementation or any relaxation is required in the norms for Solar Parks due to operational problems, MNRE will be competent to make such amendments with the approval of Minister-in-charge.

20. State Government's obligation to purchase power:

The State Government in which the solar park is developed must agree to buy at least 20% of the power produced in the park through its Discom. The States which agree to buy higher percentage of power will be given preference. In such cases, where the State refuses to buy at least 50% power, the park should preferably be connected with CTU system. If STU system has to be used to evacuate power to other states, the STU/State Government concerned will agree to waive off the wheeling charges or reduce the wheeling charges to affordable level.

21. Monitoring progress of Scheme:

MNRE will appoint a Nodal Officer in the Ministry to help, guide, handhold and closely monitor progress of the scheme to ensure that timeliness as envisaged for completion of various activities are adhered to for development of solar parks. MNRE will extend all possible help to ensure that the investors complete their task on time.

Format for Proposal for Solar Park(s)

1.	Name of the State	
2.	Name of the Solar Park	
3.	Capacity of Park (MW)	
4.	Location of the proposed park	
5.	Name of the Solar Power Park Developer (SPPD)	
5.1	Contact persons from SPPD: i) Name & Designation: ii) Telephone/Mobile No.: iii) Postal Address: iv) Email ID:	
6.	Whether SPPD is a JVC? If yes, is JVC formed?	
7.	Land	
7.1	Area of Land identified (in acres): a) Government Land: b) Assigned land: c) Private Land, if any:	
7.2	Area of land acquired: a) Government Land: b) Assigned land: c) Private Land, if any:	
7.3	Date by which land can be handed over to the SPPD:	
8.	Water	
8.1	Whether source of water readily available for the park? If yes, give details. If no, then plan to make water available for the solar park.	
9.	Approach Road	
9.1	Whether approach road is available up to the site? If not, then what is the approx. distance of the approach road from the proposed site? The plan for road connectivity up to the proposed site	
10.	Power Evacuation Infrastructure	
10.1	Is spare capacity already available in existing nearest sub-station, then capacity that can be evacuated i) At 400 kV, _____ MW, Distance from Park _____ Kms ii) At 220 kV, _____ MW, Distance from Park _____ Kms iii) At 132 kV, _____ MW, Distance from Park _____ Kms iv) At 66 kV, _____ MW, Distance from Park _____ Kms	

	v) At 33 kV, _____ MW, Distance from Park _____ Kms	
10.2	If spare capacity is not readily available, then plan for evacuation of solar power from the proposed Solar Park: through STU or CTU	
11.	Enclosures:	
	i) Letter from State Government allowing setting up of Park.	
	ii) Site map.	
	iii) Satellite image, if available.	
	iv) Location of site on map of State.	
	v) Other relevant documents.	

नवीकरणीय ऊर्जा मंत्रालय

Ministry of New and Renewable Energy

MINISTRY OF NEW AND RENEWABLE ENERGY

Commitment of the State Government

Block No. 14, C.O.D. Complex, Lodi Road, New Delhi - 110 003

BLOCK NO. 14, C.O.D. COMPLEX, LODI ROAD, NEW DELHI - 110 003

The Government of (name of the State) hereby agrees to buy at least 20% of the power produced in the (name of the Solar Park) Solar Park, located in (name of Taluka, District) through its DISCOM(s).

12th April, 2017

Shri Ajay Jain,

Principal Secretary to Government

Energy, Infrastructure & Investment Department

Government of Andhra Pradesh

Secretariat, Hyderabad-500 027

Pr. Secretary/Secretary

Department of Renewable Energy / Power / Energy

Subject: Development of Solar Parks: Request for sanction of three new solar parks to Andhra Pradesh - Regd.

Sir,

This is with reference to your D.O. letter no. 1460/Energy/Sec(Pri. II)/Dept./2016 dated 02-11-2016 vide which request has been made for sanction of three new solar parks to Andhra Pradesh.

2. In this regard, it is to inform that Ministry vide its order no. 30/2670/Pr. II/MSM dated 21-03-2017 notified the Scheme for enhancement of capacity from 20,000 MW to 40,000 MW for Development of Solar Parks and Ultra Mega Solar Power Project.

3. In view of above, it is requested to submit proposals for three new solar parks in the enclosed format separately along with the commitment of the State Government to purchase at least 20% of power produced in these solar parks through the DISCOMs.

Yours faithfully,



(A.S. Partha)

Scientist-C (MSM)

Tele: 2436 3546

TABLE OF CONTENTS FOR DETAILED PROJECT REPORT FOR SOLAR PARK

1 EXECUTIVE SUMMARY

- Solar Power Park Developer and Ownership (Shareholders)
- Location & Approach Roads
- Size of the Land
- Total Solar Power Capacity to be Developed (MW_{AC})
- Plot Sizes and Capacity Planned as per plot sizes
- Transmission Infrastructures to be constructed
- Road infrastructures to be constructed
- Water source & infrastructures to be constructed
- Green belt to be planted
- Common facilities to be developed
- Corporate Social Responsibility (CSR) Activities
- Environmental (Endangered Fauna And Flora Being Affected) and Social Impacts (Displacement of people and livelihoods)
- Total cost of development of solar park envisaged
- Likely off-takers and/or under which scheme the park is going to be allotted
- Value requested as a grant Vs value permitted as grant /subsidy as per scheme, if any
- Onetime charges and annual charges to be levied on solar project developers
- Estimated cost of solar power (per kWh) in the park
- Time schedule for execution of the solar park (internal infrastructures, bidding, solar power developers, commissioning of the park and of the plants)
- Availability of transmission capacity up-to destinations for both within state and interstate. If any capacity augmentation activity in external network may be required and connectivity details
- Socio economic value (number of jobs to be created during the construction of the solar park and during operation & maintenance; number of jobs to be created during the construction of the solar plants and during the operation & maintenance; potential GDP impact of the project at the state level; avoided CO₂ emissions)

2. PURPOSE AND SCOPE OF REPORT

- Introduce the concept of solar park
- Brief description of the solar park being planned
- Purpose of the DPR

3. SOLAR SECTOR OVERVIEW

- Include briefly the PV technologies (2 pages)

3.1 INSTALLED SOLAR CAPACITY IN INDIA

- Capacity installed and under construction per state (may not be exhaustive)
- Schemes available and capacity per scheme

3.2 INSTALLED SOLAR CAPACITY IN THE STATE

- Capacity installed and under construction in the state
- Schemes being implemented
- RPO obligations and current status

3.3 SOLAR PARKS SCHEME IN INDIA AND THE RATIONALE FOR THE SOLAR PARK

- Briefly include the solar park scheme
- Include how the intended solar park meets the requirements

4. PROJECT DETAILS

- Land size
- Total power capacity (in AC) to be located within the park
- Number of solar plots envisaged
- Internal Transmission infrastructure requirements within park and up to the sub-station of STU / CTU.
- External Transmission infrastructure requirements, capacity already available, augmentation required up to target destinations.
- Road infrastructure requirements
- Water pipeline/supply/reticulation & recirculation requirements, if any
- Common facilities planned
- CSR activities

4.1 SOLAR PARK LOCATION AND LAND OWNERSHIP

- Location and Approach
- GPS coordinates (or UTM) of the boundaries of the land
- Proximity of rail, port, major highways and major cities
- Land nature (Government land, Private Land, Assigned land etc.)
- Land ownership status (data from the collector's office) including any land to be purchased or leased (clearly marked in the drawing with measurements and scales)
- Land Acquisition process
- Land allocation process to SPDs
- Google image with the boundaries
- AutoCAD or technical drawing with the topography

4.2 SOLAR IRRADIATION AND WEATHER DATA

- Include average monthly GHI from the nearest met station or the MNRE network of SRRAs stations or other reliable sources
- Include ambient temperature, wind speed, wind direction, humidity and rainfall

4.3 ANNUAL ENERGY YIELD ASSESSMENT

- Simulation using reputed PV software
- Orientation and tilt angle of solar PV modules

- Capacity Utilization Factor (CUF)
- Annual degradation

4.4 LAND ASSESSMENT

4.4.1 GEOTECHNICAL ASSESSMENT OF SITE

Main results of the geotechnical assessment including:

1. Geotechnical Analysis
 - a) Standard Penetration Test (tests to determine the capacity of the soil to bear the structures)
 - b) Laboratory Testing (testing of the extracted samples in terms of the composition of the soil until at least 3 to 4 meters deep)
 - c) Local Geologic Settings (description of the geological type of the ground and soil)
 - d) Seismic activity (what is the type of potential seismic activity of the area)
 - e) Groundwater (depth of the groundwater)
 - f) Geologic Hazards
 - i) Landslides (potential for a landslide in case of a natural disaster)
 - ii) Flooding and Erosion (proneness of the site to flooding and erosion)
 - iii) Subsidence (possibility of the soil collapsing downwards)
 - iv) Poor Soil Conditions
 - v) Primary Ground Rupture (possibility of such event in case of a major natural disaster, e.g. earthquake)
 - vi) Strong Ground Motion (whether the site is located in less than 50 km of earth faults)
 - vii) Liquefaction (potential for a soil to loose strength and stiffness and collapsing)
2. Foundations (what is required in depth of foundations for the PV mounting structures to hold)
3. Earthworks (how easy or difficult are earthworks, namely earth moving)
4. Soil resistivity analysis (level of corrosiveness of the ground)

4.4.2 TOPOGRAPHIC SURVEY

Provide the topographic survey for the identified land (assess the size of the land before gridding the land; the usual method will not work well for a large piece of land like 1000 hect or more: requires a preliminary study using google earth and identifying the flat areas over the non flat areas and thus inform the survey on the needs to reposition the gridding according to the results of the preliminary study)

4.4.3 HYDROLOGICAL STUDY

- Water requirements for the park (PV plants, park, green belt, common facilities, CSR activities)
- Water availability: if boreholes: ground extraction potential to be investigated; if canal, water allocation to be investigated; if other source to be stated.

4.4.4 LAND PREPARATION

- State if the land is ready to be used or requires flattening, removal of objects, soil reconditioning, rezoning, etc.
- Define the activities required for the land to be deemed suitable for solar power development: maximum, minimum and average slope of the land to be indicated
- If fencing is envisaged, provide the perimeter
- Indicate where the green belt will be placed and created

4.5 INFRASTRUCTURE DEVELOPMENTS

4.5.1 ELECTRICAL INFRASTRUCTURE

- Electrical interface point (scope of SPPD and SPD to be identified)
- Existing electrical infrastructure (load of existing substation and lines)
- Internal Transmission infrastructure: Laying of power cables at suitable voltage level for interconnection between individual solar projects with the pooling stations, New electrical infrastructure required (33/66 kV or 132 kV for solar plant evacuation; 132 or 220 kV pooling stations) and construction of transmission line for connection to STU/CTU
- External Transmission infrastructure requirements, capacity already available, augmentation required up to target destinations.

4.5.1.1 CONTROL INFRASTRUCTURE

- Facility for gathering data on monitoring, forecasting, scheduling & despatching (should monitor all solar plants) for submission to the load dispatch centre.
- Metering and connectivity arrangements as per CEA guidelines

4.5.2 ROAD INFRASTRUCTURE

- Existing and/or upgradation of road infrastructure required (impact during construction)
- New road infrastructure required (minimum 10 meters with shoulder for main access roads and 7.5 m for secondary roads)

4.5.3 WATER INFRASTRUCTURES

- Water supply provisions and needs (consider 2 to 3 liters per m² of modules to be installed; 1 washing per month, 12 months per year; for states/regions that are water starved or water depleted, reduction to the value above should be considered and described; higher number of washings must be thoroughly justified)
- Water interface point (scope of SPPD and SPD to be identified)
- Existing water sources (quantities and sustainability of the extraction potential)
- If extraction from public canal, allocation for power sector and solar power to be mentioned
- Planned water reticulation (this is always recommended and if not followed, it must be justified)
- Planned water harvesting, storage (if considered)

4.5.4 GREEN BELT

- Determination of prevailing winds (directions and speeds)
- Plan for the green belt (indicating its location, suitable types of trees, number of trees, water needs and maintenance needs)

4.5.5 COMMON FACILITIES

- Lighting (Required)
- Developing access road to each plot (required)
- Solar Radiation Resource Assessment station (should be installed immediately if no station is available within 10 km)
- Drainage System (required)
- Fencing (optional)
- Construction of offices, housing and common building infrastructure (optional)
- Security (optional)
- Telecommunication infrastructures (required)
- Medical facilities (optional)
- Warehouses (required)
- Waste disposal and liquid sewage treatment plant
- Solid waste collection, recycling and storage (required)
- Any other envisaged

4.6 CSR ACTIVITIES

- Proposed budget for CSR activities
- Scope for the CSR activities
- Impact in the local livelihoods
- Schedule of implementation

5. SOLAR PARK DEVELOPMENT

5.1 SOLAR POWER PARK DEVELOPER (SPPD)

- Details of SPPD
- Shareholders of the company
- Stakeholders involved

5.2 TIME SCHEDULE OF IMPLEMENTATION

Activity-Time Schedule to be provided in respect of the following milestones

- Preparation Detailed Project Report (DPR)
- Land acquisition
- Financial Closure
- Tender for the Electrical infrastructures
- Tender for the Road infrastructures
- Tender for the Water infrastructures
- Tender for the Telecommunication infrastructures

- Completion of all above works
- Tendering of solar projects inside solar park
- Allotment of the solar plots to the Solar Project Developers (SPDs)
- Commissioning of the solar plants

5.3 SOLAR PARK DEVELOPMENT FRAMEWORK

- How will the solar park be implemented?
- How will it be financed?
- How will it be rolled out (off takers, schemes etc.)

6. INDICATIVE ENVIRONMENTAL & SOCIAL IMPACTS

6.1 ENVIRONMENTAL SETTING (in and around the site-10 Km radius)

6.2 ENVIRONMENTAL IMPACTS (Positive and negative)

- Environmental positive impacts (on fauna and flora)
- Environmental negative impacts (on fauna and flora)

6.3 SOCIAL IMPACTS (Positive and negative)

- Social Impacts (positive)
- Social impacts (displacement of people and livelihoods)

6.4 MITIGATION MEASURES

- Environmental action/management plan for construction phase and operation phase
- Recommendations on Environmental Impact Assessment
- Social action/management plan
- Recommendations on Social Impact Assessment

7. STATUTORY & LEGAL FRAMEWORK

- Relevant solar policy from the State
- Compliance of the solar park with the solar policy
- All Statutory Clearances, Licenses, permissions required for development solar park and time frame (list them and the agencies issuing them)
- List of clearances/licenses/permissions to be obtained by SPDs and issuing agency

8. PROJECT FINANCIALS

Explain the methodology to be followed

8.1 SOLAR PARK- COST ESTIMATES

- Cost of the land
- Cost of the electrical infrastructure
- Cost of the road & drainage infrastructure
- Cost of the water infrastructure
- Cost of street light
- Cost of Admin Building and other infrastructure

- Cost of the green belt
 - Cost of the common facilities
 - Any other costs
- i) Summary of project cost under essential and optional activities heads
 - ii) Assumed equity returns for the solar park development
 - iii) Determination of the one-time charges, the yearly O&M charges, any other charges

8.2 FINANCIAL VIABILITY

- State policy initiative for solar promotion leading to bankability
- Equity participation of the JV company of the SPPD
- Solar Park Assumptions & Financing Assumptions
- Revenue & Expense Timelines
- Capital cost & Project IRR

8.3 PROJECTION OF THE COST OF SOLAR POWER IN THE SOLAR PARK

Projected costs of solar power inside solar park as per recent trends solar power tariff in the concerned state

8.4 SENSITIVITY ANALYSIS

9. SOCIAL-ECONOMIC IMPACT

- Estimates of the job creation potential during the solar park construction
- Estimates of the job creation potential during the solar park operation and maintenance
- Estimates of the job creation potential during the solar plants construction
- Estimates of the job creation potential during the solar plants operation and maintenance
- GDP impact in the state
- Estimated reduction of CO₂ emissions

Annexures

- General Lay Out Plan of Park
- Land Drawing (Google Map also)
- Infrastructure Details
- Internal Power Map
- Substation Drawing/Single Line Diagram
- External Transmission Link Drawing (Single Line Diagram)
- Power Evacuation System Design
- Power Map of State

F. No. 30/26/2014-15/NSM

Government of India

Ministry of New and Renewable Energy

Block-14, CGO Complex
Lodhi Road, New Delhi-110003
29th September, 2016

OFFICE MEMORANDUM

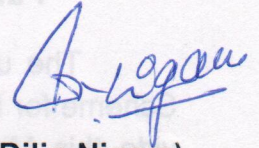
Subject: Guidelines for implementation of Scheme for Development of Solar Parks and Ultra Mega Solar Power Project-Clarification red.

The undersigned is directed to refer to the Guidelines for implementation of Scheme for Development of Solar Parks and Ultra Mega Solar Power Project, issued vide this Ministry's sanction order no. 30/26/2014-15/NSM dated 12th December, 2014 and to furnish the following clarification of the provision under clause 7 thereof:

Clause No.	Existing Provision	Clarification
7.	<p>MNRE Support</p> <p>.....</p> <p>Thereafter, application may be made by the implementing agency to SECI for the grant of up to Rs. 20 lakhs/MW or 30% of the project cost including Grid-connectivity cost, whichever is lower.</p>	<p>The CFA for development of solar park and for development of external transmission system will be apportioned in the ratio of 60:40 i.e. Rs. 12 lakh per MW or 30% of the project cost, whichever is lower may be provided to the Solar Power Park Developers (SPPDs) towards development of solar parks and Rs. 8 lakh per MW or 30% of the project cost, whichever is lower will be provided to the CTU or STU towards development of external transmission system.</p> <p>The eligible CFA for SPPD will be established on the basis of DPR submitted by them, whereas the eligible CFA to the CTU or STU will be established on the basis of detailed cost estimation and investment approval of their Board to be provided by the CTU or STU directly to MNRE with a formal request for release of funds.</p>
	<p>The approved grant will be released by SECI as per</p>	<p>The approved grant to the SPPDs will be released by SECI as per the milestones given</p>

Clause No.	Existing Provision	Clarification
	the milestones given in the Solar Park Scheme.	in the Solar Park Scheme, whereas CFA to CTU or STU will be released by SECI as per the following milestones: i) 50% of eligible CFA on award of work; ii) Balance 50% on successful commissioning.

2. This issues with the approval of the Competent Authority.



(Dilip Nigam)

Adviser (NSM)

Tele/Fax: 2436 8911

To:

- 1) Principal Secretary (Power/Energy/Renewable Energy) of the concerned States
- 2) All Solar Power Park Developers (SPPDs)
- 3) Chairman and Managing Director, Power Grid Corporation of India Limited, Saudamini, Plot No.2, Sector 29, Near IFFCO Chowk, Gurgaon-122001; Haryana
- 4) Managing Director, Solar Energy Corporation of India, 1st Floor, D-3, A Wing, Religare Building, District Centre, Saket, New Delhi – 110017
- 5) All State Transmission Utilities of the concerned States

Copy to:

- 1) PSO to Secretary, MNRE
- 2) PPS to AS, MNRE
- 3) PS to JS&FA, MNRE

No. 30/26/2014-15/NSM

भारत सरकार/Government of India

नवीन और नवीकरणीय ऊर्जा मंत्रालय/Ministry of New & Renewable Energy
(National Solar Mission Division)

Block NO. 14, CGO Complex
Lodi Road, New Delhi-110 003
Dtd. 21st March, 2017

To

The Pay & Accounts Officer
Ministry of New and Renewable Energy
New Delhi

Subject: Administrative sanction for implementation of the Scheme for Enhancement of capacity from 20,000 MW to 40,000 MW for "Development of Solar Parks and Ultra Mega Solar Power Projects"

Sir,

I am directed to convey the sanction of the President of India for implementation of a Scheme for Enhancement of capacity from 20,000 MW to 40,000 MW for "Development of Solar Parks and Ultra Mega Solar Power Projects" for setting up of at least 50 solar parks each with a capacity of 500 MW and above by 2019-20; with an estimated Central Financial Assistance (CFA) of Rs. 8100.00 crore (Rs. Eighty One Thousand Crore only), as per provisions of the Scheme enclosed at Annexure.

2. Objective

The scheme aims to provide a huge impetus to solar energy generation by acting as a flagship demonstration facility to encourage project developers and investors, prompting additional projects of similar nature, triggering economies of scale for cost-reductions, technical improvements and achieving large scale reductions in GHG emissions. It would enable States to bring in significant investment from project developers, meet its Solar Renewable Purchase Obligation (RPO) mandate and provide employment opportunities to local population. The State will also reduce its carbon footprint by avoiding emissions equivalent to the solar park's installed capacity and generation. Further, the State will also avoid procuring expensive fossil fuels to power conventional power plants.

3. Implementation arrangements

3.1 **Applicability:** All the States and Union Territories are eligible for benefits under the scheme. States with good solar potential which have not yet submitted proposals would be encouraged for setting up of solar parks.

3.2 **Implementation Agency:** The solar parks will be developed in collaboration with the State Governments & their agencies. The Nodal Agency of Ministry of New and Renewable Energy (MNRE), Government of India (GOI) would be Solar Energy Corporation of India (SECI). SECI will administer the scheme under the direction of MNRE and will also handle funds to be made available under the scheme on behalf of GOI.

The States applying under the scheme will have to designate an agency for the development of solar park. Solar parks are envisaged to be developed following four the modes as mentioned in Para (3) of the Scheme (guidelines annexed). The agency identified for the development of the

Devendra Singh
21.3.17

solar parks shall be termed as Solar Power Park Developer (SPPD). The choice of SPPD for developing and maintaining the park is left to the State Government.

3.3. **Financial Model:** SPPDs may raise funds as per the financial model given in the Scheme.

4. Projects of any solar technology may come up in the solar park. The flexibility in choosing technology will lie with the Solar Project Developers (SPDs) to ensure adoption of cost effective and state-of-the-art technology which is commensurate with the dynamic requirements of the project.

5. **Power Purchase Agreement**

The SPDs within the solar park shall enter into Power Purchase Agreement(s) (PPAs) with Central Utilities/State Utilities/Discoms/Third Parties/Captive Users who are willing to buy power from the developer(s). The tariff for the sale of power through PPAs could be either based on the tariff determined by Central Electricity Regulatory Commission (CERC)/State Electricity Regulatory Commission (SERC) or as determined through bidding process. The solar projects may come up under any schemes/programmes of the Central/State/UT Government or can be for third party sale, captive use or merchant sale.

6. **Fund for power evacuation**

The power evacuation arrangement will consist of two parts i.e. pooling stations and network within Park to collect power from each project and transmitting it to the transmission sub-station at the park boundary as the first part and the transmission sub-station along with the transmission line up to the existing grid of Central Transmission Utility (CTU)/State Transmission Utility (STU) as the second part. The SPPD would be responsible for the first part and the CTU/STU would be responsible for the second part. For both these parts i.e. entire evacuation arrangement, MNRE grant may be used. Loan from multilateral/bilateral agencies may also be used as a component to fund the power evacuation infrastructure by the SPPDs and CTU/STU. If the capital expenditure for the external power evacuation network is high, then a separate proposal may also be considered for funding from National Clean Energy Fund (NCEF), Green Corridor Programme or any other source.

7. **Central Financial Assistance (CFA)**

- CFA @ Rs. 25.00 lakh (Rs. Twenty Five Lakh) per solar park would be released by MNRE to SECI for preparation of DPR of the Solar Park, conducting surveys, etc.
- Beside above, CFA of up to Rs. 20.00 lakh (Rs. Twenty Lakh only) per MW or 30% of the project cost, including Grid-connectivity cost, whichever is lower, would be released on achieving the milestones given under para 7 of the Scheme. The distribution of eligible grant between the SPPD for works within the park and CTU/STU for works outside the park would be as decided by MNRE. For release of requisite funds, the State Government will send a formal proposal to MNRE.
- For administering the scheme and management of fund, SECI will be entitled a management fee @ 1% of the grant released.
- If the park is developed in phases, grant will accordingly be phased out in proportion to the expenditure in each phase.

8. If there is need for any amendment to this Scheme for better implementation or any relaxation is required in the norms for Solar Parks due to operational problems, MNRE will be competent to make such amendments with the approval of Minister-in-charge.

 Devendra Singh
21-3-17

9. The funds for implementation of the above scheme would be met from Demand No.69-Ministry of New & Renewable Energy; Major Head 2810-New & Renewable Energy, Minor Head: 101-Grid Interactive & Distributed Renewable Power, Sub Head 01- Grid Interactive Renewable Power; 04-Solar Power, 01.04.35 – Grants for Creation of Capital Assets during the year 2016-17 (Plan) and onwards.

10. This sanction issues in exercise of powers delegated to this Ministry and concurrence of IFD vide their Dy. No. 2163 dated 8.3.2017 and with the approval of competent authority on 20.3.2017.

Enclosure: As above

Yours faithfully,


(Devendra Singh) 21.3.17

Under Secretary to the Govt. of India
Phone: 011-2436 0625

No. 30/26/2014-15/NSM

Dtd. 21.03.2017

Copy for information and necessary action to:

1. All Central Government Ministries/Departments;
2. Principal Director of Audit, Scientific Audit-II, DGACR Building. I.P. Estate, Delhi-02
3. All State/UT Energy Secretaries
4. All Heads of State/UT Nodal Agencies
5. All State/UT Utilities
6. All Solar Power Park Developers
7. CMD, IREDA, August Kranti Bhawan, Bhikaiji Cama Place, New Delhi
8. Managing Director, SECI, New Delhi-110017

Copy to:

1. PS to Hon'ble Minister, New and Renewable Energy
2. PSO to Secretary, MNRE
3. All Advisers & Group Heads/ JS (ANS)/JS (SV)/JS&FA, MNRE
4. Director (NIC), MNRE to upload this on the Ministry's website.
5. CCA, MNRE / Cash Section
6. Hindi Section for Hindi version
7. Sanction folder


(Devendra Singh) 21.3.17

Under Secretary to the Govt. of India

Scheme for Development of Solar Parks and Ultra Mega Solar Power Projects

1. Background

India, with its large population and rapidly growing economy, needs access to clean, cheap and reliable sources of energy. India lies in the high solar insolation region, endowed with huge solar energy potential with most of the country having about 300 days of sunshine per year with annual mean daily global solar radiation in the range of 4-6 kWh/m²/day. Solar power projects can be set up anywhere in the country, however the solar power projects scattered in multiple locations lead to higher project cost per MW and higher transmission losses, due to drawing separate transmission lines to nearest substation, procuring water and in creation of other necessary infrastructure. Also it takes a long time for project developers to acquire land, get change of land use and various permissions, etc. which delays the project.

The solar park is a concentrated zone of development of solar power generation projects and provides developers an area that is well characterized, with proper infrastructure and access to amenities and where the risk of the projects can be minimized. Solar Park will also facilitate developers by reducing the number of required approvals. Assured availability of land and transmission infrastructure are the major benefits of the Solar Park Scheme.

Starting with the 'Charanka Solar Park' in Gujarat, and closely followed by the 'Bhadla Solar Park' in Rajasthan, solar parks have quickly emerged as a powerful mechanism for the rapid development of solar power projects in the country. These parks have obtained their initial impetus from the National Solar Mission (NSM), which provided the policy framework and roadmap for solar power development in the country.

Under Phase I of the the Solar Park scheme, 34 solar parks were sanctioned by the Ministry, having an aggregate capacity of 20,000 MW in 21 states. These parks are at different stages of development. Recent downward trends in solar tariff may be attributed to the factors like economies of scale, assured availability of land and power evacuation systems under the Solar Park Scheme. Based on the excellent response to the Phase-I of the scheme, the capacity of the scheme is enhanced on the similar lines.

2. Proposal

MNRE through this scheme plans to set up at least 50 solar parks, each with a capacity of 500 MW and above; thereby targeting around 40,000 MW of solar power installed capacity including the solar parks sanctioned under the existing scheme. These solar parks would be set up by 2019-20 and the solar projects may come up as per demand and interest shown by developers. Any extension of time beyond 2019-20, may be considered without any financial liability/additional financial implications.

At the State level, the solar parks will enable the States to bring in significant investment from project developers, meet its Solar Renewable Purchase Obligation (RPO) mandate and provide employment opportunities to local population. Further, the State will also avoid procuring expensive fossil fuels to power conventional power plants.

The solar park will provide a huge impetus to solar energy generation by acting as a flagship demonstration facility to encourage project developers and investors, prompting additional projects of similar nature, triggering economies of scale for cost-reductions, technical improvements and achieving large scale reductions in GHG emissions. Some Ultra Mega Solar Power Projects may be set up in these Parks or the entire park may individually be an Ultra Mega Solar Power Project.

2.1 Applicability: All the States and Union Territories are eligible for benefits under the scheme. Solar parks could be set-up in all States/UTs blessed with good amount of solar radiation. States/UTs with good solar potential which have not yet submitted proposals would be encouraged for setting up of solar parks.

2.2 Capacity: Park to be taken up for development should be of capacity of 500 MW and above. However, smaller parks in Himalayan & other hilly States where contiguous land may be difficult to acquire in view of the difficult terrain will also be considered. Further, smaller parks may also be considered in States/UTs where there is acute shortage of non-agricultural lands.

3. Solar Power Park Developer (SPPD)

The solar parks will be developed in collaboration with the State Governments & their agencies. The Nodal Agency of Ministry of New and Renewable Energy (MNRE), Government of India (GOI) would be Solar Energy Corporation of India (SECI). SECI will administer the scheme under the direction from MNRE and will also handle funds to be made available under the scheme on behalf of GOI.

The States/UTs applying under the scheme will have to designate an agency for the development of solar park. The agency identified for the development of the solar parks shall be termed as Solar Power Park Developer (SPPD). Solar parks are envisaged to be developed in the following four modes:

(i) **Mode 1:** The State designated nodal agency undertakes the development & management of the solar park. This agency could be a State Government Public Sector Undertaking (PSU) or a Special Purpose Vehicle (SPV) of the State Government.

(ii) **Mode 2:** A Joint Venture Company is set up between State designated nodal agency and SECI for the development & management of solar park with 50% equity from SECI and 50% equity from the State Government Agency (State Government may also allow more than one agency provided total equity from State Government remains 50%).

(iii) **Mode 3:** The State designates SECI as the nodal agency and SECI undertakes the development and management of solar park on behalf of State Government on mutually agreed terms.

(iv) **Mode 4:** Private entrepreneurs promote solar parks without any equity participation from SECI, but may have equity participation from the State Government or its agencies.

SECI would not take up solar projects in its own name in the solar parks in new cases, where SECI is a partner in the SPPD.

If the State Government decides to develop solar park through private entrepreneurs (under Mode 4) then in order to give fair chance to all, the State Government must give open advertisement. The State Governments would develop transparent guidelines consisting of financial and technical aspects for selection of private entrepreneurs for development of solar parks. The selection of private entrepreneurs is to be made in a transparent manner on the basis of location and availability of land with the park developers, feasibility of power evacuation system and arrangement of water system etc. This will not apply to solar parks approved already under the existing scheme.

The SPPD, as identified under the provisions at (i) to (iv) above, shall undertake following activities to achieve the objective of speedy establishment and implementation of Solar Power Parks in the States/UTs:

- i) Plan, finance, develop, execute, operate and maintain the Solar Park;
- ii) Identify potential site and acquire/leasehold/possess land for Solar Park;
- iii) Carry out site related studies/investigations;

- iv) Obtain statutory & non-statutory clearances and to make area development plan within Solar Park;
- v) Design a plan for sharing development cost between the developers;
- vi) Create necessary infrastructure like water, transmission lines, roads, drainage etc. to facilitate Solar Project Developer(s) for faster implementation of Solar Power Projects;
- vii) Make water harvesting arrangements in the park area in consultation with Soil Conservation Department/Agricultural Department/Ground Water Department present in the State/UT;
- viii) Measures to be taken to monitor water table through the existing dug-well and in consultation with the Mining and Geology Department of the State or any other Departments that monitors the ground water levels;
- ix) Frame out transparent plot allotment policy and specify procedures pursuant to the relevant State/UT policies and their amendments thereof;
- x) Provide directives for technology-specific land requirements;
- xi) Engage the services of national agencies/global experts/consultants to promote Solar Park and related activities;
- xii) Facilitate the State Government to establish educational institutions/training facilities within Solar Park for development of manpower skill related to Solar Power;
- xiii) Include any other activity related to Solar Park, such as manufacturing as per the directives from MNRE and the State Government;
- xiv) Conduct necessary evaluation of environmental and social impacts of utility scale solar deployment as per law and before allocating the land to prospective developers.

All infrastructural requirements outside the park such as connecting road, provision of water supply, electricity during construction, etc. to make the park functional, will be the sole responsibility of the concerned State/UT Government.

4. Land acquisition / Site selection

Land for the setting up of the Solar Park will be identified by the State/UT Government unless the SPPD has its own land. It will be the responsibility of the State/UT Government to help in making the land available if the SPPD selected by the State/UT Govt. needs help. States/UTs are encouraged to identify sites receiving good solar radiation, water availability and sites which are closer to Central Transmission Utility (CTU)/State Transmission Utility (STU), preferably locations with spare transmission capacities. However, private entrepreneurs selected by the State/UT Government as SPPD may be allowed to arrange their own land for setting up the Solar Park. Land can also be taken on long term lease from Government as well as private sources. In such cases, the State Government/State Nodal Agency (SNA) will ensure that the land is free from any dispute. The park must have approximately 5 acres per MW for setting up solar projects and will give opportunity for all technologies in a technologically agnostic fashion.

In order to provide for such a large tract of contiguous land with appropriate insolation levels, the State/UT Government may prioritize the use of government waste/non-agricultural land in order to speed up the acquisition process. It will be preferred if most of the required land is Government owned and very little private land is to be acquired. The price of the land is to be kept as low as possible in order to attract the solar project developers and therefore, the site should be selected in such a manner so that inexpensive land can be made available. If land cannot be made available in one location, then land in few locations in close vicinity may be taken. Possibility of using cold and hot deserts, water surface in big reservoirs, canal bunds and sides of highways can also be accepted if found suitable.

The land conversion charges and stamp duty charges for Solar Parks comes under the domain of the State/UT Government. The State/UT Government may be requested to exempt the land conversion charges and stamp duty charges for Solar Parks.

5. Facilities to be provided

The Solar Park will provide specialized services to incentivize solar project developers to invest in solar energy in the park. These services while not being unique to the park, are provided in a central, one-stop-shop, single window format, making it easier for investors to implement their projects within the park in a significantly shorter period of time, as compared to projects outside the park which would have to obtain these services individually.

The SPPD is tasked with acquiring the land for the Park, cleaning it, leveling it and allocating the plots for individual projects. Apart from this, the SPPD will also be entrusted with providing the following facilities to the solar project developers for the development of the Solar Park:

- i. Land approved for installation of solar projects and necessary permissions including change of land use etc;
- ii. Road connectivity to each plot of land;
- iii. Water availability for construction as well as running of power plants and demineralization plant;
- iv. Flood mitigation measures like flood discharge, internal drainage etc;
- v. Construction power;
- vi. Telecommunication facilities;
- vii. Transmission facility consisting of pooling stations (with 220kV/66kV or suitable voltage level) to allow connection of individual solar projects with pooling station through a network of underground/overground cables or overhead lines;
- viii. Housing facility for basic manpower wherever possible;
- ix. Parking, Warehouse etc.

The Solar Park will be a large contiguous stretch of land with high insolation levels, saving the solar project developers from making the effort of identifying the ideal site for the projects. Where large contiguous land is not available, non-contiguous land is also permitted. In addition, the site within the park is already levelled and developed reducing these costs for the project developer.

In addition, the Park will provide road access (both approach roads and smaller access roads to individual plots), water (via a dedicated reservoir located within the premises), boundary fence and security, each of which would have entailed additional costs for the developer outside the park.

Each of these specialized services offer significant benefits to the project developers but come at a premium. Land plots within the solar park are more expensive than outside. But this premium is easily justifiable by these services, which are bundled into the land cost. However, the most important benefit from the park for the project developer is the significant time saved. The centralized, single window nature of the services within the park reduces the time between project conceptualization and operations, translating into economic and real monetary gains for the project developers and the State.

Centralized Weather Monitoring Station would be set-up by the SPPD so as to provide weather data to the projects in the Solar Parks.

6. Financial model

The SPPDs entrusted with developing the park will get the land developed and provide necessary infrastructure like road connectivity, transmission infrastructure etc. Significant investments will also be made in the operation & maintenance of the Solar Park, employing staff and other

activities like marketing etc. The entire cost of development including cost involved in acquisition of land will form the total cost of the project for which an estimate will be prepared beforehand by the SPPD. Based on this estimate the SPPD will formulate a recovery model to ensure the sustainability of the park. The SPPD may raise the funds as follows:

- The SPPD may give wide publicity and have a process of registration for prospective project developers to register so that the demand for the solar park can be assessed;
- The SPPD may sell/lease out the plots to prospective project developers. Lease period shall be of 30 years or as per State/UT land policy. The Allotment Price per meter square (inclusive of all applicable taxes, duties, cess etc.) payable by the plot applicant for the applications must be specified in a transparent manner. The allotment price may be reviewed annually and an annual increment may also be specified. The maximum stretch of plot to be allotted will be decided as per the benchmarks finalized by the SPPD.
- A one-time registration fee (per project or per MW) may be collected by inviting applications from the prospective project developers when the scheme is finalized, land identified and marked. An advance may be collected from the prospective project developers when 50% of the land is acquired. This advance will be 10% of the sale price or lease amount. Another installment of 25% of the price of land or lease amount may be taken when full land is acquired. Further installments of 10% each time may be collected while plot are being developed. Final 15% of the price of land or lease amount may be collected at the time of allotment of the plot to the project developers;
- The SPPD may put in some of its own equity and can raise loans, depending on the availability of funds and requirement. The subsidy of MNRE under the scheme would bring down the cost of the project to that extent. The SPPD will also create a small corpus for working capital to ensure upkeep and maintenance in the future, which may be supplemented with some annual charges. The SPPD may change the above plan if it is in the interest of the Solar Park.

7. MNRE support

The State/UT Government will first nominate the SPPD for the Solar Park and also identify the land for the proposed Solar Park. It will then send a proposal to MNRE for approval along with (or later) the name of the SPPD. The SPPD may be sanctioned a grant of up to Rs. 25 Lakhs for preparing Detailed Project Report (DPR) of the Solar Park, conducting surveys etc.

Thereafter, application may be made by the SPPD and CTU/STU to SECI and MNRE for the grant of up to Rs. 20 lakhs/MW or 30% of the project cost including Grid-connectivity cost, whichever is lower.

The Central Grant for development of solar park and for development of external transmission system will be apportioned in the ratio of 60:40 i.e. Rs. 12 lakh per MW or 30% of the project cost, whichever is lower may be provided to the Solar Power Park Developers (SPPDs) towards development of solar parks and Rs. 8 lakh per MW or 30% of the project cost, whichever is lower will be provided to the CTU or STU towards development of external transmission system. The eligible grant for SPPD will be established on the basis of DPR submitted by them, whereas the eligible grant to the CTU or STU will be established on the basis of detailed cost estimation and investment approval of their Board to be provided by the CTU or STU.

Further, the central grant towards development of external transmission system may exceed Rs. 8 lakh per MW subject to consent of the SPPD considering various park specific parameters, with corresponding reduction in percentage allocated towards development of internal infrastructure of solar park. However, the central grant towards development of external transmission system would not exceed 30% of its total cost.

The approved grant to the SPPDs will be released by SECI as per the following milestones:

Sl. No.	Milestone	% of subsidy disbursed
1.	Land acquisition (not less than 50% land acquired)	20%
2.	Financial Closure	20%
3.	Award of work for pooling stations	20%
4.	Receipt of material on site for pooling stations	25%
5.	Completion of construction of pooling stations & land development	15%
Total		100%

In case, in some solar parks pooling stations are set up in phases, then subsidy may be released proportionately.

The approved grant to CTU or STU will be released by SECI as per the following milestones:

Sl. No.	Milestone	% of subsidy disbursed
1.	On award of work	50%
2.	On successful commissioning	50%
Total		100%

For Solar Parks where some installments have been released as per milestones mentioned in the Administrative Approval no. 30/26/2014-15/NSM dated 12/12/2014; the further releases may continue as per the same Administrative Approval, if it is considered difficult to release as per the new milestones mentioned above.

Under the scheme for "Development of Solar Park and Ultra Mega Solar Power Projects" the "**Financial Closure**" may be defined as arrangement of 90% of the total project cost by the SPPD either by way of commitment of funds by the SPPD from internal resources of its own or of the promoters / Joint Venture partners of the SPPD or tie up of funds through a bank / financial institution by way of sanction of a loan or letter agreeing to finance; grants from Government or other sources or accruals from sale / lease / right to use of the land in the park. While commitment of funds from internal resources or loan may be by the way of letter, commitment for proceeds from sale / lease / right to use of land may come from the SPPD in the form of a statement giving year wise expected accruals. The inflow of funds expected over the years should be enough to cover expected expenses in developing the park.

SECI will administer the scheme under the direction from MNRE and will also handle funds to be made available under the scheme on behalf of GOI.

The grant will be managed and released by SECI on behalf of MNRE. For administering the scheme and fund management, SECI will be entitled a management fee @ 1% of the grant released. If the park is developed in phases, grant will also be phased out in proportion to expenditure in each phase.

Based on above, the estimated cost has been worked as under:

Sl. No.	Particulars	(Rs. in Crores)
(i)	Cost of 40,000 MW @ Rs. 20 Lakh/MW	8000.00
(ii)	1% fund handling fee for SECI on above amount	80.00

Sl. No.	Particulars	(Rs. in Crores)
(iii)	Cost of DPR preparation for 50 Solar Parks @ Rs. 25 Lakh each park	12.50
(iv)	Training, consultancy & other related Expenditure (to be incurred by MNRE, SECI, implementing agency)	7.50
(v)	TOTAL	8100.00

8. Transmission and evacuation of power from solar park

Interconnection of each plot with pooling stations through 66 kV/other suitable voltage underground, overground or overhead cable will be the responsibility of the solar project developer.

The SPPD will set up the pooling stations (with 220/66 KV or suitable voltage level) inside the Solar Park and will also draw transmission line to transmit power to sub-station (220 KV/400 KV or suitable voltage). This is termed as internal transmission system.

The responsibility of setting up a sub-station nearby the solar park to take power from one or more pooling stations will lie with the CTU/STU, after following necessary technical and commercial procedures as stipulated in the various regulations notified by the Central/State Commission. Setting up of sub-station nearby the solar park and creation of transmission line to connect with the existing network of CTU/STU is termed as external transmission system.

For both internal and external transmission system i.e. for entire evacuation arrangement, MNRE grant may be used.

The SPPD will intimate CTU/STU and CEA at least 6 months before so that the planning and execution can be carried out in time.

Wherever possible, CTU will be entrusted with the responsibility of setting up 400 KV or above sub-station right next to the Solar Park and its connectivity with the CTU. For setting up of this transmission & evacuation infrastructure, CTU/POWERGRID may prepare a separate project to be funded from NCEF / external funds / Green Corridor project, if the cost is very high. The system would be planned in such a manner so that there is no wheeling charge applicable on solar power in accordance with the CERC Regulation or reduce the wheeling charges to affordable level. Where it is not possible to evacuate power by CTU, then STU will ensure setting up of sub-station and development of necessary infrastructure for transmission of power from substation to load centers.

To build this infrastructure using the highest possible standards, the whole solar power evacuation network scheme may be designed using latest technologies like SCADA, GIS, Bay controller, online monitoring equipment for dissolved gas analysis, OPGW, PLCC, synchro-phasor technology i.e. PMU and WAMS on pooling stations and FACT devices at strategic locations in the grid etc.

9. Power Purchase Arrangement

Acceptance for development of Solar Park under the Scheme does not guarantee Power Purchase Agreement (PPA) or tariff for the power to be generated. The project developers need to have their own arrangement for PPA or get selected in any schemes under Government of India or State/UT Government. The project developer will be free to set up projects under any scheme or for third party sale.

10. Loan

MNRE will also put in efforts to tie up with multilateral/ bilateral funding agencies to finance the entire or a part of the cost of the Solar Parks. The MNRE grant will be treated as the SPPDs' contribution to get this loan. The loan tenure and the moratorium period will be set in accordance

with the Banks' terms and conditions while the annual interest will be set in accordance with Banks' LIBOR-based lending facility.

11. Fund for power evacuation

The connectivity with grid substation (220kV/400 kV or any suitable voltage level) and transmission line to connect with the existing network of CTU/STU is a very important component. For power evacuation network, MNRE grant may be used. Loan from multilateral/bilateral agencies may also be used to the power evacuation network. If the capital expenditure for the external power evacuation network is high, then a separate proposal may also be considered for funding from National Clean Energy Fund (NCEF), Green Corridor Programme or any other source.

12. Equity Contribution

The SPPD whether single company or JV may not require a high equity infusion as most of the cost will be covered through as MNRE grant and loan. Most of the land is expected to be Government land. The total expenses on development of park will be worked out by the SPPD in a transparent manner.

The expenses after taking into account MNRE subsidy may be recovered through sale or lease charges of land from the project developers.

The SPPD can generate a reasonable amount of surplus which can be profit for the SPPD or its promoters which may preferably be converted into equity of the JV partners or the SPPD so that the SPPD gets financial strength for long term sustenance.

13. Ultra Mega Solar Power Projects

Ultra Mega Solar Power project is a single power project with capacity of over 500 MW. These projects may be set up in some of these Solar Parks. The projects may be bid out after developing the park or simultaneously with park developments. In some cases, the full park may be one Ultra Mega Project.

In such cases the JV set up to develop the Ultra Mega Solar Power Project may become the SPPD also.

14. Hybrid Projects

Some other forms of renewable energy like wind, biomass etc. may also be allowed to come up in the park wherever feasible. Projects with CSP technology may also come up in these parks with up to 15% of auxiliary fuel as gas or biomass.

15. Timelines

All the solar parks of first phase with aggregate capacity 20,000 MW is envisaged to be set up by 2018-19. The enhanced capacity of 20,000 MW will be completed by 2019-20. Any extension of time beyond 2019-20, may be considered without any financial liability/additional financial implications.

16. Manufacturing

Manufacturing of solar products including solar cells/modules etc. and components may also be allowed in the parks.

17. Interpretation

In case of any ambiguity in interpretation of any of the provisions of the Scheme, the decision of the Minister-in-Charge, MNRE shall be final.

18. Arbitration

Any dispute that arises out of any provision of the scheme shall be settled by an Arbitrator appointed by this Ministry for the purpose and his decision shall be final and binding.

19. Liquidation of Shareholdings of the SPPD

Only inter se interchange of 100% shareholding between holding and subsidiary companies is allowed till completion of pooling stations inside the solar parks, connection of solar projects to the sub-station of CTU/STU and commissioning of solar projects of at least 75% of the total capacity of the solar park.

20. Power to remove difficulties

If there is need for any amendment to this Scheme for better implementation or any relaxation is required in the norms for Solar Parks due to operational problems, MNRE will be competent to make such amendments with the approval of Minister-in-charge.

21. State Government's obligation to purchase power

The State in which the solar park is developed must agree to buy at least 20% of the power produced in the park through its DISCOM(s). The States which agree to buy higher percentage of power will be given preference. If STU system has to be used to evacuate power to other states, the STU/State Government concerned will agree to waive off the wheeling charges or reduce the wheeling charges to affordable level.

22. Monitoring progress of Scheme

MNRE will designate a Nodal Officer in the Ministry to help, guide, handhold and closely monitor progress of the scheme to ensure that timeliness as envisaged for completion of various activities are adhered to for development of Solar Parks. MNRE will extend all possible help to ensure that the investors complete their task on time. The concerned monitoring division of CEA may be kept informed regarding progress of the solar parks, which will help them in development of generation and transmission facilities to formulate a comprehensive National Electricity Plan.

A Committee headed by the Principle Secretary / Secretary (Power/Energy/Renewable Energy) of the State Government having members from CEO of SPPD, head of the SNA and three experts in the field of renewable energy and power system will be constituted to monitor the progress of the Park and address the issues arising in implementation of the solar park scheme.

***** ***** *****

F. No. 30/26/2014-15/NSM
Government of India
Ministry of New and Renewable Energy
(National Solar Mission Division)

Block-14, CGO Complex
Lodhi Road, New Delhi-110 003
19th June, 2017

CORRIGENDUM

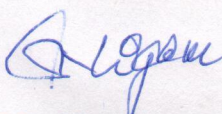
This is with reference to Administrative Guidelines of the Scheme for Enhancement of capacity from 20,000 MW to 40,000 MW for "Development of Solar Parks and Ultra Mega Solar Power Projects" vide this Ministry's order no. 30/26/2014-15/NSM dated 21st March, 2017.

2. The first line of Para 21 i.e. State Government's obligation to purchase power of the above Scheme may be read as:

"The State Government in which the solar park is developed must agree to buy at least 20% of the power produced in the park through its DISCOM. If the State Government has agreed to buy more than 20% of power in one or more solar parks in the State, then purchase of lower capacity of power in subsequent parks is allowed so that solar power of at least 20% of the aggregate capacity of all the solar parks in the State is purchased by the State Government"

instead of

"The State Government in which the solar park is developed must agree to buy at least 20% of the power produced in the park through its DISCOM(s)".



(Dilip Nigam)
Adviser (NSM)

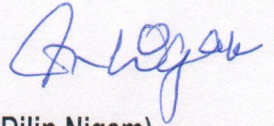
Tele/Fax: 2436 8911

Copy for information and necessary action to:

1. All Central Government Ministries/Departments;
2. Principal Director of Audit, Scientific Audit-II, DGACR Building I.P. Estate, Delhi-02
3. All State/UT Energy Secretaries
4. All Heads of State/UT Nodal Agencies
5. All State/UT Utilities
6. All Solar Power Park Developers
7. CMD, IREDA, August Kranti Bhawan, Bhikaiji Cama Place, New Delhi
8. Managing Director, SECI, New Delhi-110017

Internal Distribution:

1. PS to Hon'ble Minister, New and Renewable Energy
2. PSO to Secretary, MNRE
3. All Advisers & Group Heads/JS (ANS)/JS (JNS)/JS (VPY)/JS&FA, MNRE
4. Director (NIC) to upload this on the Ministry's website.
5. CCA, MNRE / Cash Section
6. Hindi Section for Hindi version
7. Sanction folder



(Dilip Nigam)

Adviser (NSM)

Tele/Fax: 2436 8911

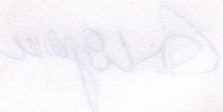
CORRIGENDUM

This is with reference to Administrative Guidelines of the Scheme for Enhancement of capacity from 20,000 MW to 40,000 MW for Development of Solar Parks and Ultra Mega Solar Power Projects vide this Ministry's order no. 301502014-15NSM dated 21st March, 2017.

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"The State Government in which the solar park is developed must agree to buy at least 20% of the power produced in the park through its DISCOM(s)."



(Dilip Nigam)
Adviser (NSM)
Tele/Fax: 2436 8911

Copy for information and necessary action to:

1. All Central Government Ministries/Departments
2. Principal Director of Audit, Scientific Audit, DGACR Building I.P. Estate, Delhi-02
3. All State/UT Energy Secretaries
4. All Heads of State/UT Nodal Agencies
5. All State/UT Utilities
6. All Solar Power Park Developers
7. CMD, IREDA, August Kranti Bhawan, Birla Karm Place, New Delhi
8. Managing Director, SECI, New Delhi-110017

320/14/207-NSM
Government of India
Ministry of New and Renewable Energy
National Solar Mission

Block 14, CGO Complex
Lodhi Road, New Delhi 110003
25th July, 2017

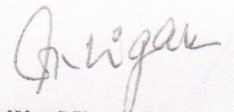
OFFICE MEMORENDUM

Subject: Verification of "Receipt of material at site for Pooling Stations" of Solar Parks-reg.

Reference is invited to this Ministry's Administrative Guidelines vide order no. 30/26/2014-15/NSM dated 21-03-2017; wherein the release of approved grant to the Solar Power Park Developers (SPPDs) is as per the milestones mentioned under Para 7 of the Scheme.

2. In order to verify that the milestone under Sl. No. 4 i.e. "Receipt of material on site for pooling stations" is achieved by the SPPD, SECI is required to physically verify at site and certify that the materials required for setting up of pooling stations have been received vis-à-vis milestone under Sl. No. 3 i.e. "Award of work for pooling stations". Further, the verification to be done by SECI for materials received at site would be based on power evacuation capacity of the pooling stations in order to ascertain whether the pooling stations are being set up at one go or in phases.

3. This is required for consideration of release of CFA by this Ministry.



(Dilip Nigam)
Adviser (NSM)
Tel: 2436 8911

Dr. Ashvini Kumar
Managing Director
Solar Energy Corporation of India
1st Floor, D-3, A Wing
Religare Building, District Centre, Saket New Delhi – 110017

Copy to:

All Solar Power Park Developers (SPPDs)

F. No. 320/14/2017-NSM
Government of India
Ministry of New and Renewable Energy
National Solar Mission Division

Block 14, CGO Complex
Lodhi Road, New Delhi 110003
14th August, 2017

OFFICE MEMORANDUM

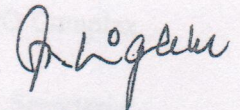
Subject: Clarification on applicability of Environment Impact Assessment (EIA) Notification, 2006 on Solar PV power projects, Solar Thermal power projects and Development of Solar Parks-reg.

This is with reference to OM no. J-11013/41/2006-IA.II(I) dated 7th July, 2017 (copy enclosed) of Ministry of Environment, Forest and Climate Change (MoEF&CC) on applicability of Environment Impact Assessment (EIA) Notification, 2006 on Solar PV power projects, Solar Thermal power projects and Development of Solar Parks.

2. MOEF&CC have clarified that the provisions of the EIA Notification, 2006 is not applicable to Solar PV power projects, Solar Thermal power projects and Development of Solar Parks, subject to such projects following the environmental and statutory stipulations made in the its OM no. No. J-11013/41/2006-IA.II(I) dated 30th June, 2011 (a copy enclosed for reference).

3. MOEF&CC have further clarified as under:

- i) The disposal of PV Cell attracts the provisions of the Hazardous and Other Waste (Management and Trans-Boundary Movement) Rules, 2016.
- ii) The development of Solar Parks shall attract the provisions of the Water (Prevention and Control of Pollution) Act, 1974 and the Air (Prevention and Control of Pollution) Act, 1981.



(Dilip Nigam)
Adviser (NSM)

Tele/Fax: 2436 8911

To

- 1) Addl. Chief Secretaries/Pr. Secretaries/Secretaries (Energy/Power/Renewable Energy) of all States
- 2) All SPPDs

No. J-11013/41/2006-IA.II(I)
Ministry of Environment, Forest and Climate Change
Government of India
(Impact Assessment Division)

ALSO SENT
THROUGH
E-OFFICE

Paryavaran Bhawan
Jorbagh Road
New Delhi-110003

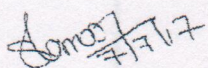
Dated: 7th July, 2017.

OFFICE MEMORANDUM

The Ministry is in receipt of references seeking clarification on the applicability of Environment Impact Assessment Notification, 2006 on Solar Photo Voltaic (PV) Power Projects; Solar Thermal Power Plants; and Development of Solar Parks.

2. The status on non-applicability of Environment Impact Assessment Notification, 2006 on Solar Photo Voltaic (PV) Power Projects has been clarified by O.M. No. J-11013/41/2006-IA.II(I) dated 13th May 2011. Similarly, the status on non-applicability of EIA Notification, 2006 has been clarified vide Ministry's O.M. No. J-11013/41/2006-IA.II(I) dated 30th June 2011. This notification also stipulates the general environmental norms to be followed by such projects.
3. The matter of applicability of item 8(a), 8(b) and 7(c) of the Schedule of EIA notification, 2006 on the projects of Solar Photo Voltaic (PV) Power Projects, Solar Thermal Power Plants and Development of Solar Parks has been further examined in the Ministry. It is clarified that the provisions of the Environment Impact Assessment Notification, 2006 is not applicable to the above projects subject to such projects following the environmental and statutory stipulations made in the above O.M. dated 30th June 2011.
4. It is also clarified that the disposal of Photo Voltaic Cells attracts the provisions of the Hazardous and Other Waste (Management and Trans-Boundary Movement) Rules, 2016.
5. The development of Solar Parks shall attract the provisions of the Water (Prevention and Control of Pollution) Act, 1974 and the Air (Prevention and Control of Pollution) Act, 1981.

This issues with the approval of Competent Authority


(Sharath Kumar Pallerla)
Director
sharath.kr@gov.in

Copy to:

1. **The Secretary**, Ministry of New and renewable Energy, Block No. 14, CGO Complex, Lodi Road, New Delhi - 110003
2. **The Secretary**, Department of Environment, Government of Rajasthan, Secretariat, Jaipur
3. **Shri. Bibhu Bishwal**, Vice President, Saurya Urja Company of Rajasthan Limited, 701-703, 7th Floor, Kailash Tower, Near Apex mall, Lalkothi, Tonk Road, Jaipur - 302015

E-Office-File/Receipt No.
...../ Adviser(NSM-DN)/20.
In Date..... Out Date o.

F. No. 329/14/2017-NSM
Government of India
Ministry of New and Renewable Energy
National Solar Mission Division

Fax No. 24367329

No. J-11013/41/2006-IA.II(I)
Government of India
Ministry of Environment & Forests

Paryavaran Bhavan,
C.G.O. Complex, Lodi Road,
New Delhi-110003.
Telefax: 24362434

Dated the 30th June, 2011

OFFICE MEMORANDUM

Sub: Environment Clearance for setting up of Solar Thermal Power Plants under JNNSM - applicability of EIA Notification, 2006 - Regarding.

Ministry of New and Renewable Energy (MNRE) has brought to the notice of this Ministry that the State Pollution Control Boards have been asking for obtaining prior environment clearance in respect of Solar Thermal Power Projects as according to them, these projects get covered under Category 8(b) of the schedule to the EIA Notification, 2006. The matter has been examined in the Ministry of Environment & Forests, in the light of the technical and scientific information provided by MNRE vide their letter no. 29/1(1)/2011-12/JNNSM(ST) dated 22.6.2011 (copy enclosed).

4. It is clarified that Solar Thermal Power Projects are not covered by the provisions of EIA Notification, 2006. However, keeping in view the extent of land required for such projects, it has been decided that:

- State Pollution Control Board / UTPCC before issuing consent to establish under Air and Water Act to such units may ensure and satisfy themselves by undertaking a site visit that the proposed area does not involve; (i) any wet land, (ii) any agriculture land, (iii) ecologically sensitive area, (iv) areas rich in bio-diversity, (v) areas with large habitation. In case, any displacement of habitation is involved, the requisite R&R and CSR should be put in place as per the norms of the respective State Government. Further, if the area involves any forestland, it needs to be ensured that the requisite prior forestry clearance for diversion of forestland has also been obtained under FC Act.
- In addition, the site should also conform to the provisions of the CRZ Notification, 2011. Under the CRZ Notification, 2011, this activity will be prohibited in the CRZ area.
- It also needs to be ensured that the requisite prior commitment from the Competent Authority for availability of requisite quantity of water for the project is available with the proponent.
- The land so made available for the solar thermal power plant will not be deviated for any other purpose and no change of land use what so ever will be permitted without obtaining requisite clearance from the Competent Authority as applicable.
- All other clearances as may be applicable from other Regulatory Authorities under various Rules and Regulations inter-alia consent under HSM Rules etc. should be available before issue of consent by the SPCB.

2/6

3. Further, CPCB will, separately, make a study on some illustrative aspects of the actual environmental impacts of these Solar Thermal Power Plants and Solar Photovoltaic Plants with a view to report to MoEF during and after setting up of these plants i.e. construction phase and implementation phase. The SPCBs may also be kept involve in such studies to be undertaken by CPCB.

This issues with the approval of the Competent Authority.

(Signature)
(Dr. S.K. Aggarwal)
Director

To

1. Secretary, Ministry of New and Renewable Energy, Block no. 14, CGO Complex, Lodi Road, New Delhi-110 003.
2. All the Officers of IA Division
3. Chairpersons / Member Secretaries of all the SEIAAs/SEACs
4. Chairman, CPCB
5. Chairpersons / Member Secretaries of all SPCBs / UTPCCs

Copy to:-

1. PS to MEF
2. PPS to Secretary (E&F)
3. PPS to SS(JMM)
4. Advisor (NB)
5. Website, MoEF
6. Guard File

F. No. 320/14/2017-NSM
Government of India
Ministry of New and Renewable Energy
(National Solar Mission Division)

Block-14, CGO Complex
Lodhi Road, New Delhi-110003
18th January, 2018

OFFICE MEMORANDUM

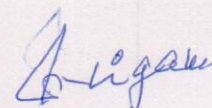
Subject: Introduction of new milestone for release of CFA to CTU/STU for development of external power evacuation systems of solar parks under the Scheme for "Development of Solar Parks and Ultra Mega Solar Power Project"-reg.

The undersigned is directed to refer to the Guidelines for implementation of Scheme for "Development of Solar Parks and Ultra Mega Solar Power Project" issued vide this Ministry's order no. 30/26/2014-15/NSM dated 21st March, 2017 and to furnish the following modification on the provision under clause 7 thereof:

"The approved grant to CTU or STU will be released by SECI as per the following milestones":

Sl. No.	Milestones in Existing Scheme vide order no. 30/26/2014-15/NSM dated 21st March, 2017	Modified Milestones
1.	On award of work: 50% of CFA	On award of work: 50% of CFA
2.	-	On receipt of material at site and upon verification by SECI: 20% of CFA
3.	On successful commissioning: 50% of CFA	On successful commissioning: 30% of CFA

2. This issues with the approval of the Competent Authority.



(Dilip Nigam)

Adviser (NSM)

Tele/Fax: 2436 8911

To:

- 1) Principal Secretary (Power/Energy/Renewable Energy) of the concerned States
- 2) Chairman and Managing Director, Power Grid Corporation of India Limited, Saudamini, Plot No.2, Sector 29, Near IFFCO Chowk, Gurgaon-122001; Haryana
- 3) All State Transmission Utilities of the concerned States
- 4) Managing Director, Solar Energy Corporation of India, 1st Floor, D-3, A Wing, Religare Building, District Centre, Saket, New Delhi – 110017
- 5) All Solar Power Park Developers (SPPDs)

Copy to:

- 1) PSO to Secretary, MNRE
- 2) PPS to AS, MNRE
- 3) PS to JS&FA, MNRE

F. No. 320/14/2017-NSM
Government of India
Ministry of New and Renewable Energy
(National Solar Mission Division)

Block-14, CGO Complex
Lodhi Road, New Delhi-110003
22nd May, 2018

OFFICE MEMORANDUM

Subject: Modifications in selection of Solar Power Park Developers (SPPDs) for development of solar parks under the Solar Park Scheme-reg.

The undersigned is directed to refer to the Guidelines for implementation of Scheme for "Development of Solar Parks and Ultra Mega Solar Power Project" issued vide this Ministry's order no. 30/26/2014-15/NSM dated 21st March, 2017 and to furnish the following modifications on the provision under clause 3 thereof:

2. In order to bring more transparency, in selection of private entrepreneurs for development of solar parks under Mode-4 of the Solar Park Scheme, the private entrepreneurs may be selected in following manner:

a) **Methods of Discovery of transparency:**

- i. **Mode 4A:** If the land is made available by the State Government or any Government agency, then the Solar Power Park Developer (SPPD) may be selected based on open bidding on development and O&M charges. The lowest bidder would be selected based on the lowest NPV of Park Development cost plus O&M charges per MW and the SPPD would be allowed to sell/lease land to Solar Project Developer (SPDs) at a cost arrived at by adding the land cost as fixed by the State Government and his quoted development charge.
- ii. **Mode 4B:** If the land is to be provided by the solar park developer itself then the bidding for selection of the SPPD would be based on his quoted price of developed land per MW and O&M charges. That is, bidders would have to quote the price of developed park land and the O&M charges per MW, they would charge from the SPDs. The park developer who quotes the lowest NPV of developed land price plus O&M charges per MW would be the successful bidder for solar park development.

b) In this case, the CFA of Rs. 12 lakh/MW to SPPD may be provided back-ended i.e. after issue of Letter of Award (LOA) of the solar power projects to come in the solar park and as per the milestones mentioned in the Solar Park Scheme dated 21-03-2017. Thus, the SPPD should have eligible as per both the parameters i.e. the milestones mentioned in the Administrative Guidelines vide order no. 30/26/2014-15/NSM dated 21st March, 2017 should have been achieved and LOA for solar power projects should have been issued by SECI/NTPC/MNRE designated agency for setting up of solar power projects. However, the CFA of Rs. 8 lakh/MW to CTU/STU may be released as per scheme guidelines applicable to existing Modes 1, 2 & 3.

c) If the solar park approved to private entrepreneurs is not completed within 18 months of in-principle approval, the approval may be cancelled and the grid connectivity allotted may be given to other. Extension may be given only in case of Force Majeure condition.

3. **Mode-5:** Further, Central Public Sector Undertakings (CPSUs) like SECI, NTPC etc., may also directly approach this Ministry for development of solar parks. The CPSUs may develop solar parks in the following manner:

- i. **Mode 5A:** CPSUs having its own land may approach this Ministry directly for setting up of solar parks. CPSUs will develop the park either on its own or through EPC mode and CPSUs will be the Solar Power Park Developer (SPPD). Further, the CPSUs may set up its own power plant in the solar park either through EPC mode or by calling for bids for developers. It may also offer the park to other institution (like SECI, NTPC etc.) for setting up of power projects by inviting bids from power project developers for the same. In such cases, CPSU (the SPPD) itself cannot participate in the bid for solar power projects so as to avoid conflict of interest.

In case of solar power projects coming under developer mode, CPSUs would sell/lease land to Solar Power Developer (SPDs) on cost plus basis as derived in Modes 1, 2 &3

- ii. **Mode 5B:** CPSUs having its own land may select Solar Power Park Developer (SPPD) based on open bidding on development and O&M charges.

The lowest bidder would be selected based on the lowest NPV of Park Development plus O&M charges per MW and the SPPD would be allowed to sell/lease land to Solar Project Developer (SPDs) at a cost arrived at by adding the land cost as fixed by the PSU and his quoted development charge. Here, the lowest bidder would be the SPPD.

- iii. **Mode 5C:** In case the CPSU does not have land then the CPSU may float tender for setting up solar parks by any third party having its own land. Since, the land is to be provided by third party then the bidding for selection of the SPPD would be based on his quoted price of developed land per MW and O&M charges. That is, bidders would have to quote the price of developed park land and the O&M charges, they would charge from the SPDs. The park developer who quotes the lowest NPV of developed land price plus O&M charges per MW would be the successful bidder for solar park development.

In case of 5B and 5C, as the CPSU will not itself be the SPPD, and there may not be any conflict of interest, they may be allowed to participate in bidding of solar power projects

4. **Mode 6: Solar Parks by private entrepreneurs without CFA**

- a) Private entrepreneurs may also develop solar parks without any CFA. In such cases, status of solar park will entitle them to in get the connectivity and LTA from CTU. The private entrepreneurs may submit proposals along with the Detailed Project Report (DPR) and documents in support of 100% land in possession. After examination of DPR and land documents, an “in principle” approval will be given. However, the status of SPPD for applying for connectivity and LTA etc. with CTU

may be issued by Ministry after financial closure, award of works for road, water and internal transmission infrastructure by the park developer.

- b) The minimum capacity of such solar parks will be 100 MW. However, smaller solar parks of capacity of 50 MW may be allowed in hilly states and states where there is acute shortage of non-agricultural land.
- c) If the park is not completed within 18 months of in-principle approval, the approval may be cancelled and the grid connectivity allotted may be given to other. Extension may be given only in case of Force Majeure condition.


5. Further, State Government's obligation of purchase power vide clause 21 of the Administrative Guidelines order no. 30/26/2014-15/NSM dated 21st March, 2017 i.e. the condition to buy at least 20% of the power produced in the park by the host state through its DISCOM(s) is deleted for all states and for all modes. Thus, it would no longer be required to get a commitment from the State Government to buy at least 20% of the power produced in the park.

6. The CFA of preparation of DPR as mentioned in clause 7 of the Administrative Guidelines order no. 30/26/2014-15/NSM dated 21st March, 2017 is revised on the basis of capacity of the solar park in the following manner:

Sl. No.	Capacity range of Solar Park	CFA for preparation of DPR (in Rs.)
1.	Up to 100 MW	Up to Rs. 10 lakh
2.	More than 100 MW & up to 500 MW	Up to Rs. 15 lakh
3.	More than 500 MW	Up to Rs. 25 lakh

The DPR must be prepared in 120 days from the date of in-principle approval accorded by this Ministry. The assistance to private entrepreneurs (SPPD) for preparation of DPR will be made after acceptance of DPR by this Ministry.

7. This issues with the approval of the Competent Authority.


(Anindya S. Parira)
Scientist-C (NSM)
Tele: 2436 3546

To:

1. **Principal Secretary** (Power/Energy/Renewable Energy) of all States
2. **Managing Director**, Solar Energy Corporation of India, 1st Floor, D-3, A Wing, Religare Building, District Centre, Saket, New Delhi – 110017
3. **CMD**, NTPC Limited, NTPC Bhawan, SCOPE Complex, Institutional Area, Lodhi Road, New Delhi - 110003
4. **All Solar Power Park Developers** (SPPDs)

Copy to:

1. PPS to Secretary, MNRE
2. PPS to AS, MNRE
3. PS to AS&FA, MNRE, PS to Adv. (NSM)
4. Dir, NIC for uploading on MNRE website

F. No. 320/14/2017-NSM
Government of India
Ministry of New and Renewable Energy
(National Solar Mission Division)

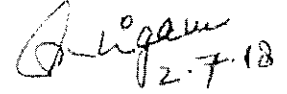
Block-14, CGO Complex
Lodhi Road, New Delhi-110003
02nd July, 2018

OFFICE MEMORANDUM

Subject: Extension of timelines of the Scheme for "Development of Solar Parks and Ultra Mega Solar Power Projects" from 2019-20 to 2021-22-reg.

The undersigned is directed to refer to the Guidelines for implementation of Scheme for "Development of Solar Parks and Ultra Mega Solar Power Project" issued vide this Ministry's order no. 30/26/2014-15/NSM dated 21st March, 2017. The timelines of the above Scheme is extended from 2019-20 to 2021-22 without any additional financial implication.

2. This issues with the approval of the Competent Authority.



(Dilip Nigam)

Adviser (NSM)

Tele/Fax: 2436 8911

Email: dilipnigam@nic.in

To:

- 1) **Principal Secretary** (Power/Energy/Renewable Energy) of the concerned States
- 2) **Managing Director**, Solar Energy Corporation of India, 1st Floor, D-3, A Wing, Religare Building, District Centre, Saket, New Delhi – 110017
- 3) **CMD**, NTPC Limited, NTPC Bhawan, SCOPE Complex, Institutional Area, Lodhi Road, New Delhi - 110003
- 4) **All Solar Power Park Developers** (SPPDs)

Copy.to:

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- 2) PPS to AS, MNRE
- 3) PS to AS&FA, MNRE,
- 4) PS to Adv. (NSM)
- 5) Dir, NIC for uploading on MNRE website

No. 30/26/2014-15/NSM

भारत सरकार/Government of India

नवीन और नवीकरणीय ऊर्जा मंत्रालय/Ministry of New & Renewable Energy
(National Solar Mission Division)

Block NO. 14, CGO Complex
Lodi Road, New Delhi-110 003
Dtd. 21st March, 2017

To

The Pay & Accounts Officer
Ministry of New and Renewable Energy
New Delhi

Subject: Administrative sanction for implementation of the Scheme for Enhancement of capacity from 20,000 MW to 40,000 MW for "Development of Solar Parks and Ultra Mega Solar Power Projects"

Sir,

I am directed to convey the sanction of the President of India for implementation of a Scheme for Enhancement of capacity from 20,000 MW to 40,000 MW for "Development of Solar Parks and Ultra Mega Solar Power Projects" for setting up of at least 50 solar parks each with a capacity of 500 MW and above by 2019-20; with an estimated Central Financial Assistance (CFA) of Rs. 8100.00 crore (Rs. Eighty One Thousand Crore only), as per provisions of the Scheme enclosed at **Annexure**.

2. Objective

The scheme aims to provide a huge impetus to solar energy generation by acting as a flagship demonstration facility to encourage project developers and investors, prompting additional projects of similar nature, triggering economies of scale for cost-reductions, technical improvements and achieving large scale reductions in GHG emissions. It would enable States to bring in significant investment from project developers, meet its Solar Renewable Purchase Obligation (RPO) mandate and provide employment opportunities to local population. The State will also reduce its carbon footprint by avoiding emissions equivalent to the solar park's installed capacity and generation. Further, the State will also avoid procuring expensive fossil fuels to power conventional power plants.

3. Implementation arrangements

3.1 **Applicability:** All the States and Union Territories are eligible for benefits under the scheme. States with good solar potential which have not yet submitted proposals would be encouraged for setting up of solar parks.

3.2 **Implementation Agency:** The solar parks will be developed in collaboration with the State Governments & their agencies. The Nodal Agency of Ministry of New and Renewable Energy (MNRE), Government of India (GOI) would be Solar Energy Corporation of India (SECI). SECI will administer the scheme under the direction of MNRE and will also handle funds to be made available under the scheme on behalf of GOI.

The States applying under the scheme will have to designate an agency for the development of solar park. Solar parks are envisaged to be developed following four the modes as mentioned in Para (3) of the Scheme (guidelines annexed). The agency identified for the development of the

Devendra Singh
21.3.17

solar parks shall be termed as Solar Power Park Developer (SPPD). The choice of SPPD for developing and maintaining the park is left to the State Government.

3.3. **Financial Model:** SPPDs may raise funds as per the financial model given in the Scheme.

4. Projects of any solar technology may come up in the solar park. The flexibility in choosing technology will lie with the Solar Project Developers (SPDs) to ensure adoption of cost effective and state-of-the-art technology which is commensurate with the dynamic requirements of the project.

5. **Power Purchase Agreement**

The SPDs within the solar park shall enter into Power Purchase Agreement(s) (PPAs) with Central Utilities/State Utilities/Discoms/Third Parties/Captive Users who are willing to buy power from the developer(s). The tariff for the sale of power through PPAs could be either based on the tariff determined by Central Electricity Regulatory Commission (CERC)/State Electricity Regulatory Commission (SERC) or as determined through bidding process. The solar projects may come up under any schemes/programmes of the Central/State/UT Government or can be for third party sale, captive use or merchant sale.

6. **Fund for power evacuation**

The power evacuation arrangement will consist of two parts i.e. pooling stations and network within Park to collect power from each project and transmitting it to the transmission sub-station at the park boundary as the first part and the transmission sub-station along with the transmission line up to the existing grid of Central Transmission Utility (CTU)/State Transmission Utility (STU) as the second part. The SPPD would be responsible for the first part and the CTU/STU would be responsible for the second part. For both these parts i.e. entire evacuation arrangement, MNRE grant may be used. Loan from multilateral/bilateral agencies may also be used as a component to fund the power evacuation infrastructure by the SPPDs and CTU/STU. If the capital expenditure for the external power evacuation network is high, then a separate proposal may also be considered for funding from National Clean Energy Fund (NCEF), Green Corridor Programme or any other source.

7. **Central Financial Assistance (CFA)**

- CFA @ Rs. 25.00 lakh (Rs. Twenty Five Lakh) per solar park would be released by MNRE to SECI for preparation of DPR of the Solar Park, conducting surveys, etc.
- Beside above, CFA of up to Rs. 20.00 lakh (Rs. Twenty Lakh only) per MW or 30% of the project cost, including Grid-connectivity cost, whichever is lower, would be released on achieving the milestones given under para 7 of the Scheme. The distribution of eligible grant between the SPPD for works within the park and CTU/STU for works outside the park would be as decided by MNRE. For release of requisite funds, the State Government will send a formal proposal to MNRE.
- For administering the scheme and management of fund, SECI will be entitled a management fee @ 1% of the grant released.
- If the park is developed in phases, grant will accordingly be phased out in proportion to the expenditure in each phase.

8. If there is need for any amendment to this Scheme for better implementation or any relaxation is required in the norms for Solar Parks due to operational problems, MNRE will be competent to make such amendments with the approval of Minister-in-charge.

 Devendra Singh
21-3-17

9. The funds for implementation of the above scheme would be met from Demand No.69-Ministry of New & Renewable Energy; Major Head 2810-New & Renewable Energy, Minor Head: 101-Grid Interactive & Distributed Renewable Power, Sub Head 01- Grid Interactive Renewable Power; 04-Solar Power, 01.04.35 – Grants for Creation of Capital Assets during the year 2016-17 (Plan) and onwards.

10. This sanction issues in exercise of powers delegated to this Ministry and concurrence of IFD vide their Dy. No. 2163 dated 8.3.2017 and with the approval of competent authority on 20.3.2017.

Enclosure: As above

Yours faithfully,


(Devendra Singh) 21.3.17

Under Secretary to the Govt. of India
Phone: 011-2436 0625

No. 30/26/2014-15/NSM

Dtd. 21.03.2017

Copy for information and necessary action to:

1. All Central Government Ministries/Departments;
2. Principal Director of Audit, Scientific Audit-II, DGACR Building. I.P. Estate, Delhi-02
3. All State/UT Energy Secretaries
4. All Heads of State/UT Nodal Agencies
5. All State/UT Utilities
6. All Solar Power Park Developers
7. CMD, IREDA, August Kranti Bhawan, Bhikaiji Cama Place, New Delhi
8. Managing Director, SECI, New Delhi-110017

Copy to:

1. PS to Hon'ble Minister, New and Renewable Energy
2. PSO to Secretary, MNRE
3. All Advisers & Group Heads/ JS (ANS)/JS (SV)/JS&FA, MNRE
4. Director (NIC), MNRE to upload this on the Ministry's website.
5. CCA, MNRE / Cash Section
6. Hindi Section for Hindi version
7. Sanction folder


(Devendra Singh) 21.3.17

Under Secretary to the Govt. of India

Scheme for Development of Solar Parks and Ultra Mega Solar Power Projects

1. Background

India, with its large population and rapidly growing economy, needs access to clean, cheap and reliable sources of energy. India lies in the high solar insolation region, endowed with huge solar energy potential with most of the country having about 300 days of sunshine per year with annual mean daily global solar radiation in the range of 4-6 kWh/m²/day. Solar power projects can be set up anywhere in the country, however the solar power projects scattered in multiple locations lead to higher project cost per MW and higher transmission losses, due to drawing separate transmission lines to nearest substation, procuring water and in creation of other necessary infrastructure. Also it takes a long time for project developers to acquire land, get change of land use and various permissions, etc. which delays the project.

The solar park is a concentrated zone of development of solar power generation projects and provides developers an area that is well characterized, with proper infrastructure and access to amenities and where the risk of the projects can be minimized. Solar Park will also facilitate developers by reducing the number of required approvals. Assured availability of land and transmission infrastructure are the major benefits of the Solar Park Scheme.

Starting with the 'Charanka Solar Park' in Gujarat, and closely followed by the 'Bhadla Solar Park' in Rajasthan, solar parks have quickly emerged as a powerful mechanism for the rapid development of solar power projects in the country. These parks have obtained their initial impetus from the National Solar Mission (NSM), which provided the policy framework and roadmap for solar power development in the country.

Under Phase I of the the Solar Park scheme, 34 solar parks were sanctioned by the Ministry, having an aggregate capacity of 20,000 MW in 21 states. These parks are at different stages of development. Recent downward trends in solar tariff may be attributed to the factors like economies of scale, assured availability of land and power evacuation systems under the Solar Park Scheme. Based on the excellent response to the Phase-I of the scheme, the capacity of the scheme is enhanced on the similar lines.

2. Proposal

MNRE through this scheme plans to set up at least 50 solar parks, each with a capacity of 500 MW and above; thereby targeting around 40,000 MW of solar power installed capacity including the solar parks sanctioned under the existing scheme. These solar parks would be set up by 2019-20 and the solar projects may come up as per demand and interest shown by developers. Any extension of time beyond 2019-20, may be considered without any financial liability/additional financial implications.

At the State level, the solar parks will enable the States to bring in significant investment from project developers, meet its Solar Renewable Purchase Obligation (RPO) mandate and provide employment opportunities to local population. Further, the State will also avoid procuring expensive fossil fuels to power conventional power plants.

The solar park will provide a huge impetus to solar energy generation by acting as a flagship demonstration facility to encourage project developers and investors, prompting additional projects of similar nature, triggering economies of scale for cost-reductions, technical improvements and achieving large scale reductions in GHG emissions. Some Ultra Mega Solar Power Projects may be set up in these Parks or the entire park may individually be an Ultra Mega Solar Power Project.

2.1 Applicability: All the States and Union Territories are eligible for benefits under the scheme. Solar parks could be set-up in all States/UTs blessed with good amount of solar radiation. States/UTs with good solar potential which have not yet submitted proposals would be encouraged for setting up of solar parks.

2.2 Capacity: Park to be taken up for development should be of capacity of 500 MW and above. However, smaller parks in Himalayan & other hilly States where contiguous land may be difficult to acquire in view of the difficult terrain will also be considered. Further, smaller parks may also be considered in States/UTs where there is acute shortage of non-agricultural lands.

3. Solar Power Park Developer (SPPD)

The solar parks will be developed in collaboration with the State Governments & their agencies. The Nodal Agency of Ministry of New and Renewable Energy (MNRE), Government of India (GOI) would be Solar Energy Corporation of India (SECI). SECI will administer the scheme under the direction from MNRE and will also handle funds to be made available under the scheme on behalf of GOI.

The States/UTs applying under the scheme will have to designate an agency for the development of solar park. The agency identified for the development of the solar parks shall be termed as Solar Power Park Developer (SPPD). Solar parks are envisaged to be developed in the following four modes:

(i) **Mode 1:** The State designated nodal agency undertakes the development & management of the solar park. This agency could be a State Government Public Sector Undertaking (PSU) or a Special Purpose Vehicle (SPV) of the State Government.

(ii) **Mode 2:** A Joint Venture Company is set up between State designated nodal agency and SECI for the development & management of solar park with 50% equity from SECI and 50% equity from the State Government Agency (State Government may also allow more than one agency provided total equity from State Government remains 50%).

(iii) **Mode 3:** The State designates SECI as the nodal agency and SECI undertakes the development and management of solar park on behalf of State Government on mutually agreed terms.

(iv) **Mode 4:** Private entrepreneurs promote solar parks without any equity participation from SECI, but may have equity participation from the State Government or its agencies.

SECI would not take up solar projects in its own name in the solar parks in new cases, where SECI is a partner in the SPPD.

If the State Government decides to develop solar park through private entrepreneurs (under Mode 4) then in order to give fair chance to all, the State Government must give open advertisement. The State Governments would develop transparent guidelines consisting of financial and technical aspects for selection of private entrepreneurs for development of solar parks. The selection of private entrepreneurs is to be made in a transparent manner on the basis of location and availability of land with the park developers, feasibility of power evacuation system and arrangement of water system etc. This will not apply to solar parks approved already under the existing scheme.

The SPPD, as identified under the provisions at (i) to (iv) above, shall undertake following activities to achieve the objective of speedy establishment and implementation of Solar Power Parks in the States/UTs:

- i) Plan, finance, develop, execute, operate and maintain the Solar Park;
- ii) Identify potential site and acquire/leasehold/possess land for Solar Park;
- iii) Carry out site related studies/investigations;

- iv) Obtain statutory & non-statutory clearances and to make area development plan within Solar Park;
- v) Design a plan for sharing development cost between the developers;
- vi) Create necessary infrastructure like water, transmission lines, roads, drainage etc. to facilitate Solar Project Developer(s) for faster implementation of Solar Power Projects;
- vii) Make water harvesting arrangements in the park area in consultation with Soil Conservation Department/Agricultural Department/Ground Water Department present in the State/UT;
- viii) Measures to be taken to monitor water table through the existing dug-well and in consultation with the Mining and Geology Department of the State or any other Departments that monitors the ground water levels;
- ix) Frame out transparent plot allotment policy and specify procedures pursuant to the relevant State/UT policies and their amendments thereof;
- x) Provide directives for technology-specific land requirements;
- xi) Engage the services of national agencies/global experts/consultants to promote Solar Park and related activities;
- xii) Facilitate the State Government to establish educational institutions/training facilities within Solar Park for development of manpower skill related to Solar Power;
- xiii) Include any other activity related to Solar Park, such as manufacturing as per the directives from MNRE and the State Government;
- xiv) Conduct necessary evaluation of environmental and social impacts of utility scale solar deployment as per law and before allocating the land to prospective developers.

All infrastructural requirements outside the park such as connecting road, provision of water supply, electricity during construction, etc. to make the park functional, will be the sole responsibility of the concerned State/UT Government.

4. Land acquisition / Site selection

Land for the setting up of the Solar Park will be identified by the State/UT Government unless the SPPD has its own land. It will be the responsibility of the State/UT Government to help in making the land available if the SPPD selected by the State/UT Govt. needs help. States/UTs are encouraged to identify sites receiving good solar radiation, water availability and sites which are closer to Central Transmission Utility (CTU)/State Transmission Utility (STU), preferably locations with spare transmission capacities. However, private entrepreneurs selected by the State/UT Government as SPPD may be allowed to arrange their own land for setting up the Solar Park. Land can also be taken on long term lease from Government as well as private sources. In such cases, the State Government/State Nodal Agency (SNA) will ensure that the land is free from any dispute. The park must have approximately 5 acres per MW for setting up solar projects and will give opportunity for all technologies in a technologically agnostic fashion.

In order to provide for such a large tract of contiguous land with appropriate insolation levels, the State/UT Government may prioritize the use of government waste/non-agricultural land in order to speed up the acquisition process. It will be preferred if most of the required land is Government owned and very little private land is to be acquired. The price of the land is to be kept as low as possible in order to attract the solar project developers and therefore, the site should be selected in such a manner so that inexpensive land can be made available. If land cannot be made available in one location, then land in few locations in close vicinity may be taken. Possibility of using cold and hot deserts, water surface in big reservoirs, canal bunds and sides of highways can also be accepted if found suitable.

The land conversion charges and stamp duty charges for Solar Parks comes under the domain of the State/UT Government. The State/UT Government may be requested to exempt the land conversion charges and stamp duty charges for Solar Parks.

5. Facilities to be provided

The Solar Park will provide specialized services to incentivize solar project developers to invest in solar energy in the park. These services while not being unique to the park, are provided in a central, one-stop-shop, single window format, making it easier for investors to implement their projects within the park in a significantly shorter period of time, as compared to projects outside the park which would have to obtain these services individually.

The SPPD is tasked with acquiring the land for the Park, cleaning it, leveling it and allocating the plots for individual projects. Apart from this, the SPPD will also be entrusted with providing the following facilities to the solar project developers for the development of the Solar Park:

- i. Land approved for installation of solar projects and necessary permissions including change of land use etc;
- ii. Road connectivity to each plot of land;
- iii. Water availability for construction as well as running of power plants and demineralization plant;
- iv. Flood mitigation measures like flood discharge, internal drainage etc;
- v. Construction power;
- vi. Telecommunication facilities;
- vii. Transmission facility consisting of pooling stations (with 220kV/66kV or suitable voltage level) to allow connection of individual solar projects with pooling station through a network of underground/overground cables or overhead lines;
- viii. Housing facility for basic manpower wherever possible;
- ix. Parking, Warehouse etc.

The Solar Park will be a large contiguous stretch of land with high insolation levels, saving the solar project developers from making the effort of identifying the ideal site for the projects. Where large contiguous land is not available, non-contiguous land is also permitted. In addition, the site within the park is already levelled and developed reducing these costs for the project developer.

In addition, the Park will provide road access (both approach roads and smaller access roads to individual plots), water (via a dedicated reservoir located within the premises), boundary fence and security, each of which would have entailed additional costs for the developer outside the park.

Each of these specialized services offer significant benefits to the project developers but come at a premium. Land plots within the solar park are more expensive than outside. But this premium is easily justifiable by these services, which are bundled into the land cost. However, the most important benefit from the park for the project developer is the significant time saved. The centralized, single window nature of the services within the park reduces the time between project conceptualization and operations, translating into economic and real monetary gains for the project developers and the State.

Centralized Weather Monitoring Station would be set-up by the SPPD so as to provide weather data to the projects in the Solar Parks.

6. Financial model

The SPPDs entrusted with developing the park will get the land developed and provide necessary infrastructure like road connectivity, transmission infrastructure etc. Significant investments will also be made in the operation & maintenance of the Solar Park, employing staff and other

activities like marketing etc. The entire cost of development including cost involved in acquisition of land will form the total cost of the project for which an estimate will be prepared beforehand by the SPPD. Based on this estimate the SPPD will formulate a recovery model to ensure the sustainability of the park. The SPPD may raise the funds as follows:

- The SPPD may give wide publicity and have a process of registration for prospective project developers to register so that the demand for the solar park can be assessed;
- The SPPD may sell/lease out the plots to prospective project developers. Lease period shall be of 30 years or as per State/UT land policy. The Allotment Price per meter square (inclusive of all applicable taxes, duties, cess etc.) payable by the plot applicant for the applications must be specified in a transparent manner. The allotment price may be reviewed annually and an annual increment may also be specified. The maximum stretch of plot to be allotted will be decided as per the benchmarks finalized by the SPPD.
- A one-time registration fee (per project or per MW) may be collected by inviting applications from the prospective project developers when the scheme is finalized, land identified and marked. An advance may be collected from the prospective project developers when 50% of the land is acquired. This advance will be 10% of the sale price or lease amount. Another installment of 25% of the price of land or lease amount may be taken when full land is acquired. Further installments of 10% each time may be collected while plot are being developed. Final 15% of the price of land or lease amount may be collected at the time of allotment of the plot to the project developers;
- The SPPD may put in some of its own equity and can raise loans, depending on the availability of funds and requirement. The subsidy of MNRE under the scheme would bring down the cost of the project to that extent. The SPPD will also create a small corpus for working capital to ensure upkeep and maintenance in the future, which may be supplemented with some annual charges. The SPPD may change the above plan if it is in the interest of the Solar Park.

7. MNRE support

The State/UT Government will first nominate the SPPD for the Solar Park and also identify the land for the proposed Solar Park. It will then send a proposal to MNRE for approval along with (or later) the name of the SPPD. The SPPD may be sanctioned a grant of up to Rs. 25 Lakhs for preparing Detailed Project Report (DPR) of the Solar Park, conducting surveys etc.

Thereafter, application may be made by the SPPD and CTU/STU to SECI and MNRE for the grant of up to Rs. 20 lakhs/MW or 30% of the project cost including Grid-connectivity cost, whichever is lower.

The Central Grant for development of solar park and for development of external transmission system will be apportioned in the ratio of 60:40 i.e. Rs. 12 lakh per MW or 30% of the project cost, whichever is lower may be provided to the Solar Power Park Developers (SPPDs) towards development of solar parks and Rs. 8 lakh per MW or 30% of the project cost, whichever is lower will be provided to the CTU or STU towards development of external transmission system. The eligible grant for SPPD will be established on the basis of DPR submitted by them, whereas the eligible grant to the CTU or STU will be established on the basis of detailed cost estimation and investment approval of their Board to be provided by the CTU or STU.

Further, the central grant towards development of external transmission system may exceed Rs. 8 lakh per MW subject to consent of the SPPD considering various park specific parameters, with corresponding reduction in percentage allocated towards development of internal infrastructure of solar park. However, the central grant towards development of external transmission system would not exceed 30% of its total cost.

The approved grant to the SPPDs will be released by SECI as per the following milestones:

Sl. No.	Milestone	% of subsidy disbursed
1.	Land acquisition (not less than 50% land acquired)	20%
2.	Financial Closure	20%
3.	Award of work for pooling stations	20%
4.	Receipt of material on site for pooling stations	25%
5.	Completion of construction of pooling stations & land development	15%
Total		100%

In case, in some solar parks pooling stations are set up in phases, then subsidy may be released proportionately.

The approved grant to CTU or STU will be released by SECI as per the following milestones:

Sl. No.	Milestone	% of subsidy disbursed
1.	On award of work	50%
2.	On successful commissioning	50%
Total		100%

For Solar Parks where some installments have been released as per milestones mentioned in the Administrative Approval no. 30/26/2014-15/NSM dated 12/12/2014; the further releases may continue as per the same Administrative Approval, if it is considered difficult to release as per the new milestones mentioned above.

Under the scheme for "Development of Solar Park and Ultra Mega Solar Power Projects" the "**Financial Closure**" may be defined as arrangement of 90% of the total project cost by the SPPD either by way of commitment of funds by the SPPD from internal resources of its own or of the promoters / Joint Venture partners of the SPPD or tie up of funds through a bank / financial institution by way of sanction of a loan or letter agreeing to finance; grants from Government or other sources or accruals from sale / lease / right to use of the land in the park. While commitment of funds from internal resources or loan may be by the way of letter, commitment for proceeds from sale / lease / right to use of land may come from the SPPD in the form of a statement giving year wise expected accruals. The inflow of funds expected over the years should be enough to cover expected expenses in developing the park.

SECI will administer the scheme under the direction from MNRE and will also handle funds to be made available under the scheme on behalf of GOI.

The grant will be managed and released by SECI on behalf of MNRE. For administering the scheme and fund management, SECI will be entitled a management fee @ 1% of the grant released. If the park is developed in phases, grant will also be phased out in proportion to expenditure in each phase.

Based on above, the estimated cost has been worked as under:

Sl. No.	Particulars	(Rs. in Crores)
(i)	Cost of 40,000 MW @ Rs. 20 Lakh/MW	8000.00
(ii)	1% fund handling fee for SECI on above amount	80.00

Sl. No.	Particulars	(Rs. in Crores)
(iii)	Cost of DPR preparation for 50 Solar Parks @ Rs. 25 Lakh each park	12.50
(iv)	Training, consultancy & other related Expenditure (to be incurred by MNRE, SECI, implementing agency)	7.50
(v)	TOTAL	8100.00

8. Transmission and evacuation of power from solar park

Interconnection of each plot with pooling stations through 66 kV/other suitable voltage underground, overground or overhead cable will be the responsibility of the solar project developer.

The SPPD will set up the pooling stations (with 220/66 KV or suitable voltage level) inside the Solar Park and will also draw transmission line to transmit power to sub-station (220 KV/400 KV or suitable voltage). This is termed as internal transmission system.

The responsibility of setting up a sub-station nearby the solar park to take power from one or more pooling stations will lie with the CTU/STU, after following necessary technical and commercial procedures as stipulated in the various regulations notified by the Central/State Commission. Setting up of sub-station nearby the solar park and creation of transmission line to connect with the existing network of CTU/STU is termed as external transmission system.

For both internal and external transmission system i.e. for entire evacuation arrangement, MNRE grant may be used.

The SPPD will intimate CTU/STU and CEA at least 6 months before so that the planning and execution can be carried out in time.

Wherever possible, CTU will be entrusted with the responsibility of setting up 400 KV or above sub-station right next to the Solar Park and its connectivity with the CTU. For setting up of this transmission & evacuation infrastructure, CTU/POWERGRID may prepare a separate project to be funded from NCEF / external funds / Green Corridor project, if the cost is very high. The system would be planned in such a manner so that there is no wheeling charge applicable on solar power in accordance with the CERC Regulation or reduce the wheeling charges to affordable level. Where it is not possible to evacuate power by CTU, then STU will ensure setting up of sub-station and development of necessary infrastructure for transmission of power from substation to load centers.

To build this infrastructure using the highest possible standards, the whole solar power evacuation network scheme may be designed using latest technologies like SCADA, GIS, Bay controller, online monitoring equipment for dissolved gas analysis, OPGW, PLCC, synchro-phasor technology i.e. PMU and WAMS on pooling stations and FACT devices at strategic locations in the grid etc.

9. Power Purchase Arrangement

Acceptance for development of Solar Park under the Scheme does not guarantee Power Purchase Agreement (PPA) or tariff for the power to be generated. The project developers need to have their own arrangement for PPA or get selected in any schemes under Government of India or State/UT Government. The project developer will be free to set up projects under any scheme or for third party sale.

10. Loan

MNRE will also put in efforts to tie up with multilateral/ bilateral funding agencies to finance the entire or a part of the cost of the Solar Parks. The MNRE grant will be treated as the SPPDs' contribution to get this loan. The loan tenure and the moratorium period will be set in accordance

with the Banks' terms and conditions while the annual interest will be set in accordance with Banks' LIBOR-based lending facility.

11. Fund for power evacuation

The connectivity with grid substation (220kV/400 kV or any suitable voltage level) and transmission line to connect with the existing network of CTU/STU is a very important component. For power evacuation network, MNRE grant may be used. Loan from multilateral/bilateral agencies may also be used to the power evacuation network. If the capital expenditure for the external power evacuation network is high, then a separate proposal may also be considered for funding from National Clean Energy Fund (NCEF), Green Corridor Programme or any other source.

12. Equity Contribution

The SPPD whether single company or JV may not require a high equity infusion as most of the cost will be covered through as MNRE grant and loan. Most of the land is expected to be Government land. The total expenses on development of park will be worked out by the SPPD in a transparent manner.

The expenses after taking into account MNRE subsidy may be recovered through sale or lease charges of land from the project developers.

The SPPD can generate a reasonable amount of surplus which can be profit for the SPPD or its promoters which may preferably be converted into equity of the JV partners or the SPPD so that the SPPD gets financial strength for long term sustenance.

13. Ultra Mega Solar Power Projects

Ultra Mega Solar Power project is a single power project with capacity of over 500 MW. These projects may be set up in some of these Solar Parks. The projects may be bid out after developing the park or simultaneously with park developments. In some cases, the full park may be one Ultra Mega Project.

In such cases the JV set up to develop the Ultra Mega Solar Power Project may become the SPPD also.

14. Hybrid Projects

Some other forms of renewable energy like wind, biomass etc. may also be allowed to come up in the park wherever feasible. Projects with CSP technology may also come up in these parks with up to 15% of auxiliary fuel as gas or biomass.

15. Timelines

All the solar parks of first phase with aggregate capacity 20,000 MW is envisaged to be set up by 2018-19. The enhanced capacity of 20,000 MW will be completed by 2019-20. Any extension of time beyond 2019-20, may be considered without any financial liability/additional financial implications.

16. Manufacturing

Manufacturing of solar products including solar cells/modules etc. and components may also be allowed in the parks.

17. Interpretation

In case of any ambiguity in interpretation of any of the provisions of the Scheme, the decision of the Minister-in-Charge, MNRE shall be final.

18. Arbitration

Any dispute that arises out of any provision of the scheme shall be settled by an Arbitrator appointed by this Ministry for the purpose and his decision shall be final and binding.

19. Liquidation of Shareholdings of the SPPD

Only inter se interchange of 100% shareholding between holding and subsidiary companies is allowed till completion of pooling stations inside the solar parks, connection of solar projects to the sub-station of CTU/STU and commissioning of solar projects of at least 75% of the total capacity of the solar park.

20. Power to remove difficulties

If there is need for any amendment to this Scheme for better implementation or any relaxation is required in the norms for Solar Parks due to operational problems, MNRE will be competent to make such amendments with the approval of Minister-in-charge.

21. State Government's obligation to purchase power

The State in which the solar park is developed must agree to buy at least 20% of the power produced in the park through its DISCOM(s). The States which agree to buy higher percentage of power will be given preference. If STU system has to be used to evacuate power to other states, the STU/State Government concerned will agree to waive off the wheeling charges or reduce the wheeling charges to affordable level.

22. Monitoring progress of Scheme

MNRE will designate a Nodal Officer in the Ministry to help, guide, handhold and closely monitor progress of the scheme to ensure that timeliness as envisaged for completion of various activities are adhered to for development of Solar Parks. MNRE will extend all possible help to ensure that the investors complete their task on time. The concerned monitoring division of CEA may be kept informed regarding progress of the solar parks, which will help them in development of generation and transmission facilities to formulate a comprehensive National Electricity Plan.

A Committee headed by the Principle Secretary / Secretary (Power/Energy/Renewable Energy) of the State Government having members from CEO of SPPD, head of the SNA and three experts in the field of renewable energy and power system will be constituted to monitor the progress of the Park and address the issues arising in implementation of the solar park scheme.

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F. No. 320/14/2017-NSM
Government of India
Ministry of New and Renewable Energy
(National Solar Mission Division)

Block-14, CGO Complex
Lodhi Road, New Delhi-110003
18th September, 2018

OFFICE MEMORANDUM

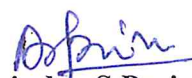
Subject: Modifications in Scheme for Development of Solar Parks and Ultra Mega Solar Power Projects-reg.

The undersigned is directed to refer this Ministry's OM of even no. dated 22-05-2018 on "Modifications in selection of Solar Power Park Developers (SPPDs) for development of solar parks under the Solar Park Scheme" and to intimate the following modifications:

Sl. No.	Existing provision under the Scheme	Modifications
1.	Mode 5A: CPSUs having its own land may approach this Ministry directly for setting up of solar parks.	Mode 5A: Any CPSU or SPV formed by CPSU(s) and/or Government of India Organization(s) having its own land or land taken from various State Governments / Central Governments or their entities /PSU's etc. on lease or on Right to Use basis may approach this Ministry directly for setting up of solar parks. The other content would remain same as mentioned in this Ministry's OM of even no. dated 22-05-2018.
	Mode-5B: CPSUs having its own land may select Solar Power Park Developer (SPPD) based on open bidding on development and O&M charges.	Mode-5B: CPSUs having its own land or land taken from various State Governments / Central Governments or their entities /PSU's etc. on lease or on Right to Use basis may select Solar Power Park Developer (SPPD) based on open bidding on development and O&M charges. The other content would remain same as mentioned in this Ministry's OM of even no. dated 22-05-2018.
3.	Mode-6: Solar Parks by private entrepreneurs without CFA a) Private entrepreneurs may also develop solar parks without any CFA. In such cases, status of solar park will entitle them to in get the connectivity and LTA from CTU. The	Mode-6: Solar Parks by private entrepreneurs without CFA Private entrepreneurs may also develop solar parks without any CFA. In such cases, status of solar park will entitle them to in get the connectivity and LTA from CTU. The private

Sl. No.	Existing provision under the Scheme	Modifications
	private entrepreneurs may submit proposals along with the Detailed Project Report (DPR) and documents in support of 100% land in possession. After examination of DPR and land documents, an “in principle” approval will be given. However, the status of SPPD for applying for connectivity and LTA etc. with CTU may be issued by Ministry after financial closure, award of works for road, water and internal transmission infrastructure by the park developer.	entrepreneurs may submit proposals along with the Detailed Project Report (DPR) and documents in support of 100% land in possession. After examination of DPR and land documents, the status solar park may be issued which would enable them to apply for connectivity. However, if financial closure and issue of tenders for internal infrastructure of the solar park is not issued in 12 months of issue of solar park status, then the solar park status would be withdrawn, and connectivity, if any, given would be cancelled.

2. This issues with the approval of the Competent Authority.


(Anindya S Parira)
 Scientist-C (NSM)

Tele: 2436 3546 | Email: anindya.parira@nic.in

To:

- 1) **Principal Secretary** (Power/Energy/Renewable Energy) of the All States
- 2) **Managing Director**, Solar Energy Corporation of India, 1st Floor, D-3, A Wing, Religare Building, District Centre, Saket, New Delhi – 110017
- 3) **All Solar Power Park Developers** (SPPDs)

Copy to:

- 1) PPS to Secretary, MNRE
- 2) PPS to AS, MNRE
- 3) PS to AS&FA, MNRE
- 4) PS to Adviser (NSM)
- 5) Director, NIC for uploading on MNRE website

F. No. 320/14/2017-NSM
Government of India
Ministry of New and Renewable Energy
(National Solar Mission Division)

Block-14, CGO Complex
Lodhi Road, New Delhi-110003
05-02-2019

OFFICE MEMORANDUM

Subject: Modifications in Scheme for "Development of Solar Parks and Ultra Mega Solar Park Scheme"-reg.

The undersigned is directed to refer to the Guidelines for implementation of Scheme for "Development of Solar Parks and Ultra Mega Solar Power Project" issued vide this Ministry's order no. 30/26/2014-15/NSM dated 21-03-2017 and subsequent modifications dated 22-05-2018, 18-09-2018 and to convey the following modifications under the Solar Park Scheme:

a) Timelines for development of solar park:

- (i) All new solar parks approved under the Scheme shall be completed by two years from the date of issues of in-principle approval. The milestones as mentioned in the Scheme for the purpose of release of funds vis-à-vis timelines for achievement of each milestone are as under:

Sl. No.	Milestone	Timelines
1.	Date of issue of in-principle approval	Zero Date
2.	Submission of Detailed Project Report (DPR)	4 months from zero date
3.	Land acquisition (not less than 50% land acquired)	8 months from zero date
4.	Financial Closure	11 months from zero date
5.	Award of work for pooling stations	14 months from zero date
6.	Receipt of material on site for pooling stations	17 months from zero date
7.	Completion of construction of pooling stations & land development	24 months from zero date

- (ii) The solar parks already approved during the Financial Years 2014-15, 2015-16 & 2016-17 under the Phase-I of Solar Park Scheme vide order dated 12-12-2014 shall be completed by one year from the date of issue of this order, failing which the approval for solar park will be canceled and the Central Grants already released under the Scheme will be required to be returned with due interest.
- (iii) The solar parks already approved in and after Financial Year 2017-18 under the Phase-II of Solar Park Scheme vide order dated 21-03-2018 shall be completed



by two years and six months from the date of issues of in-principle approval; failing which the approval for solar park will be canceled and the Central Grants released under the Scheme will be required to be returned with due interest.

b) Essential responsibilities of Solar Power Park Developer (SPPD):

In addition to the activities to be performed by the SPPDs as mentioned in the Solar Park Scheme vide order dated 21-03-2017, the following activities are the essential responsibilities of the SPPD:

- i) Acquisition of land;
- ii) Getting land related all clearances and plotting of land;
- iii) Developing approach road to the solar park and access road to each plot;
- iv) Developing internal transmission system and maintaining it;
- v) Making arrangement to connect to the grid i.e. ISTS or State Transmission Network;
- vi) Flood mitigation measures like flood discharge, internal drainage etc;
- vii) Required power during construction;
- viii) Telecommunication facilities;
- ix) Providing water supply (minimum essential quantity i.e. 5-6 KL /MW/ wash). In every 50 MW, the SPPD will provide one water point and the further water distribution grid will be developed by the SPDs as per the layout (technical design) of the allotted project.

c) Release of Central Financial Assistance (CFA) to SPPD under Mode-4:

Ministry vide its OM 320/14/2017-NSM dated 22-05-2018 issued order that under Mode-4 (solar park by private entrepreneurs with or without equity participation from the State Government or its agencies), the CFA of Rs. 12 lakh/MW to SPPD may be provided back-ended i.e. after issue of Letter of Award (LOA) of the solar power projects to come in the solar park and as per the milestones mentioned in the Solar Park Scheme dated 21-03-2017 i.e. the SPPD should have achieved both the parameters i.e. the milestones mentioned in the Administrative Guidelines vide order no. 30/26/2014-15/NSM dated 21st March, 2017 and LOA for solar power projects should have been issued by SECI/NTPC/MNRE designated agency for setting up of solar power projects.

However, as per direction, the CFA may be released to the SPPD on achieving the milestones mentioned in the Solar Park Scheme vide order dated 21-03-2017 and upon submission of bank guarantee (BG) to SECI equivalent the amount of CFA to be released against each milestone. The BG must be valid till the completion of the solar park. Upon successful completion of the solar park, the BG would be discharged by SECI to the SPPD. The BG can be encashed by SECI and the amount may be deposited to this Ministry under the following conditions:

- i) On failing to achieve the milestones as per the stipulated timelines in this order;
- ii) Failing to provide the facilities inside the solar parks as mentioned above.



2. This issues with the approval of the Hon'ble Minister, New and Renewable Energy.



(Anindya S Parira)

Scientist -C (NSM)

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To:

- 1) **Principal Secretary** (Power/Energy/Renewable Energy) of the concerned States
- 2) **All Solar Power Park Developers** (SPPDs)
- 3) **Managing Director**, Solar Energy Corporation of India, 1st Floor, D-3, A Wing, Religare Building, District Centre, Saket, New Delhi – 110017
- 4) **Chairman and Managing Director**, Power Grid Corporation of India Limited, Saudamini, Plot No.2, Sector 29, Near IFFCO Chowk, Gurgaon-122001; Haryana
- 5) **All State Transmission Utilities** of the concerned States

Copy to:

- 1) PSO to Secretary, MNRE
- 2) PPS to AS, MNRE
- 3) PS to AS&FA, MNRE
- 4) PS to Adviser (NSM)

F. No. 320/14/2017-NSM
Government of India
Ministry of New and Renewable Energy
(National Solar Mission Division)

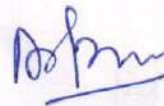
Block-14, CGO Complex
Lodhi Road, New Delhi-110003
09-03-2019

OFFICE MEMORANDUM

Subject: Modifications in Scheme for “Development of Solar Parks and Ultra Mega Solar Park Scheme”-reg.

The undersigned is directed to refer to the Guidelines for implementation of Scheme for “Development of Solar Parks and Ultra Mega Solar Power Project” issued vide this Ministry’s order no. 30/26/2014-15/NSM dated 21-03-2017 and subsequent modifications dated 22-05-2018, 18-09-2018 & 05-02-2019 and to convey the following modifications under the above Scheme:

2. In order to address the two most critical elements such as land and power evacuation infrastructure for solar parks, a new mode (Mode 7) is being introduced for development of Renewable Energy Parks (Solar or Wind or Hybrid or other RE parks) through Solar Energy Corporation of India Ltd. (SECI). The strategies for implementation of RE parks under Mode 7 are as under:
 - i. With assistance of the State Government, SECI will make both government and private land available to be used by successful bidder for setting up RE power projects. The State Government providing such facilitation for land identification and making its right of use available to SECI would be paid a facilitation charge of Rs 0.02/unit of power being generated in these parks. This facilitation charge would be paid by the RE project developers for setting up projects in these lands, in addition to any land cost in terms of outright sale or lease rent. No funds from CFA will be used for procurement of land.
 - ii. SECI will act as the Solar Power Park Developer (SPPD) including other renewable energy sources. SECI will get the external power evacuation infrastructure of the parks developed by External Transmission Development Agency (ETDA) like CTU, STU as the case may be. However, the internal infrastructures of the RE park like internal power evacuation system, road, water, levelling of land, fencing, telecommunication & other facilities as mentioned in the Solar Park Scheme and also battery storage if required would be done by the RE project developers at its own cost and would be factored in the tariff to be bid by the RE project developers. The RE project developers will not be provided with any CFA for development of internal infrastructures of the RE park. However, the essential components of internal infrastructure which need to be put in place by the RE project developers may be indicated separately by the RE project



developers and the same may be eligible for availing line of credit if the financial institution has separate product to fund the RE parks.

- iii. Under the existing Solar Park Scheme, there is a provision of providing CFA of Rs. 20 lakh per MW or 30% of the project cost whichever is less for setting up of both internal infrastructure and external power evacuation infrastructure. Presently, around 16,650 MW capacity is still to be allocated under the scheme. The entire CFA available for this spare capacity under the Solar Park Scheme would now be utilized for Mode-7 except for special cases with approval of Hon'ble Minister, NRE. Further, there is scope of cancellation of few solar parks due to its slow progress. These cancelled capacities may also be included under the present proposal. Under Mode-7, the entire CFA would be apportioned for setting up external power evacuation infrastructure as laid down in para (iv) below.
- iv. The funds available for the 16,650 MW spare capacity under the Solar Park Scheme will be utilised for development of external power evacuation infrastructure by the External Transmission Development Agency (ETDA) for putting up the external transmission network, and instead of 60:40 ratio between development of internal infrastructure of solar park and external transmission system, the new ratio would be 0:100. Since Rs. 20 lakh per MW provided under Solar Park Scheme may not be enough to set up transmission system, the following additional mechanism is proposed:
 - a. The total cost of any transmission network for any parcel of land would be divided by the total capacity of RE projects planned to be set up on that land parcel and utilizing the said transmission capacity to get the per MW cost.
 - b. 40% of the cost of transmission system, subject to a minimum of Rs 10 lakh per MW (or the total cost if it is less than Rs 10 lakh per MW) and a maximum of Rs 30 lakh per MW would be borne by the RE project developers. The successful RE project developers selected through competitive bidding process shall be charged as upfront charges and collected by SECI. SECI will make this amount available to the ETDA for putting up the external transmission system.
 - c. The balance CFA for spare 13,650 MW under the Solar Park Scheme would be made available at the rate Rs 20 lakh/MW or 30% of the total cost for development of external power evacuation system, whichever is less, [provided that the total of (b) & (c) above does not exceed the total cost for development of external power evacuation system] to the ETDA for putting up the external transmission network.
 - d. Remaining cost, if any, shall be socialised as is done presently for RE projects.
- v. Further, to make the setting of RE projects in such parks more attractive, a Payment Security Mechanism will be set up by SECI to ensure continuous payment to the power developers and mitigate any payment risk due to default in payment by the DISCOMs in any month. This will be in the form of a common dedicated Payment Security Fund (PSF) for all projects in the RE parks created under the scheme. This PSF would be




build up over time by SECI by levying a charge of Rs. 0.02/unit from the RE project developers setting up projects in these RE parks.

vi. The facilitation charges of Rs 0.02/unit to the State Governments, the share of cost of transmission system and Payment Security Fund charges of Rs. 0.02/unit from the RE project developers would be included by SECI while calling bids for selection of RE project developers.

3. The CFA under the Solar Park Scheme is released to SECI on achievement of five different milestones by the SPPDs and three different milestones by the CTU/STUs. However, now a lump sum estimated amount of CFA would be released to SECI in two installments for all solar park projects (earlier sanctioned solar parks and to be sanctioned under Mode-7). The first installment of 50% of the anticipated expenditure under the scheme or allocated budget under the scheme whichever is less, would be released at the beginning of the financial year. SECI after due diligence of achievement each milestone as mentioned in the Solar Park Schemes dated 12-12-2014, 21-03-2017 and its modifications thereafter and upon fulfillment of the T&C of the Scheme would release the CFA to the ETDA/s/SPPDs as early as possible. The funds should be kept in an interest-bearing bank account by SECI and the accrued interest should be credited towards the MNRE CFA. A statement of the interest accrued will have to be submitted at the end of the financial year. The second installment would be released only after SECI disbursed at least 75% of the fund released in first installment and upon submission of provisional Statement of Expenditure and Utilization Certificates for the previous year.

4. This issues with the approval of the Hon'ble Minister, Power & NRE.


(Anindya S Parira)
Scientist - C (NSM)

Tele: 2436 3546 | Email: anindya.parira@nic.in

To:

1. **Principal Secretary** (Power/Energy/Renewable Energy) of States
2. **Managing Director**, Solar Energy Corporation of India, 1st Floor, D-3, A Wing, Religare Building, District Centre, Saket, New Delhi – 110017
3. **All Solar Power Park Developers** (SPPDs)

Copy to:

1. Sr PPS to Secretary, MNRE
2. PPS to AS, MNRE
3. PS to AS&FA, MNRE,
4. PS to Adv. (NSM)
5. Dir, NIC for uploading on MNRE website

F. No. 320/14/2017-NSM
Government of India
Ministry of New and Renewable Energy
(National Solar Mission Division)

Block-14, CGO Complex
Lodhi Road, New Delhi-110003
19-07-2019

CORRIGENDUM

Subject: Modifications in Scheme for “Development of Solar Parks and Ultra Mega Solar Park Scheme”-reg.

The undersigned is directed to refer this Ministry’s OM no. 320/14/2017-NSM dated 05-02-2019 and to convey the following corrigendum on the above order:

2. The para (1) (a) (iii) of OM no. 320/14/2017-NSM dated 05-02-2019 may be read as following:

“The solar parks already approved in and after Financial Year 2017-18 under the Phase-II of Solar Park Scheme vide order dated 21-03-2017 shall be completed within two years from the date of issue of in-principle approval or within one year from the issue of the order OM no. 320/14/2017-NSM dated 05-02-2019 whichever is later, failing which the approval for solar park will be cancelled and the Central Grants released under the Scheme will be required to be returned with due interest.”

3. A clause regarding extension of time lines is added as para (1) (a) (iv) to the OM no. 320/14/2017-NSM dated 05-02-2019 as under:

“In both the cases of Phase I and Phase II, extension to the above timelines may be given in extreme cases, where a Solar Power Developer (SPD) has been selected through competitive bidding process, and it has been allotted land in the solar park, provided financial closure of SPD has taken place before expiry of the time limit of the solar park and it is certain that power is going to come from the solar power project to be installed in the solar park. However, time extension would be limited to the extent of capacity for which solar power projects have been tied up accordingly.”

4. A clause regarding recovery of excess release in case of cancellation of park is added as para (1) (a) (v) to the OM no. 320/14/2017-NSM dated 05-02-2019 as under:

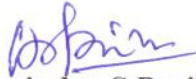
“In case, a park is cancelled at any stage and funds have been released as per earlier milestones/timelines, recovery may be made as follows:

- i. Adjustment against any other dues pending for the same SPPD
- ii. Recovery from lease rent and O&M charges (to be paid by the SPD having solar projects in the Park to SPPD). SPD will remit the same to Government.
- iii. By any other means available with MNRE.”

5. The para (1) (c) of OM no. 320/14/2017-NSM dated 05-02-2019 may be read as following: Ministry vide its OM 320/14/2017-NSM dated 22-05-2018 issued order that under Mode-4 (solar park by private entrepreneurs with or without equity participation from the State Government or its agencies), the CFA of Rs. 12 lakh/MW to SPPD may be provided back-ended i.e. after issue of Letter of Award (LOA) of the solar power projects to come in the solar park and as per the milestones mentioned in the Solar Park Scheme dated 21-03-2017 i.e. the SPPD should have achieved both the parameters i.e. the milestones mentioned in the Administrative Guidelines vide order no. 30/26/2014-15/NSM dated 21-03-2017 and LOA for solar power projects should have been issued by SECI/NTPC/MNRE designated agency for setting up of solar power projects.

However, the CFA may be released to the SPPD on achieving the milestones mentioned in the Solar Park Scheme vide order dated 21-03-2017 and upon submission of Bank Guarantee (BG) to SECI equivalent the amount of CFA to be released against each milestone. The BG must be valid till the completion of the solar park and LoA to SPDs with valid Power Purchase Agreement (PPA). Upon successful completion of the solar park, the BG would be discharged by SECI to the SPPD. The BG can be encashed by SECI and the amount may be deposited to this Ministry under the following conditions:

- i. On failing to achieve the milestones as per the stipulated timelines as mentioned in this Ministry's OM no. 320/14/2017-NSM dated 05-02-2019;
 - ii. Failing to provide the facilities inside the solar parks as mentioned at para 1 (b) of this Ministry's OM no. 320/14/2017-NSM dated 05-02-2019.
6. This issues with the approval of the Competent Authority.


(Anindya S Parira)
Scientist -C (NSM)

Tele: 2436 3546 | Email: anindya.parira@nic.in

To:

1. **Principal Secretary** (Power/Energy/Renewable Energy) of the concerned States
2. **All Solar Power Park Developers** (SPPDs)
3. **Managing Director**, Solar Energy Corporation of India, 1st Floor, D-3, A Wing, Prius Platinum Building, District Centre, Saket, New Delhi – 110017
4. **Chairman and Managing Director**, Power Grid Corporation of India Limited, Saudamini, Plot No. 2, Sector 29, Near IFFCO Chowk, Gurgaon-122001; Haryana
5. **All State Transmission Utilities** of the concerned States

Copy to:

1. PS to Hon'ble Minister, Power & NRE
2. Sr. PPS to Secretary, MNRE
3. PPS to AS, MNRE
4. PS to AS&FA, MNRE
5. PS to Adviser (NSM)

F. No. 320/7/2019-NSM
Government of India
Ministry of New and Renewable Energy
(National Solar Mission Division)

Block-14, CGO Complex
Lodhi Road, New Delhi-110003
15-06-2020

OFFICE MEMORANDUM

Subject: Modifications in Scheme for “Development of Solar Parks and Ultra Mega Solar Power Projects”-regarding.

The undersigned is directed to refer to the Guidelines for implementation of Scheme for “Development of Solar Parks and Ultra Mega Solar Power Projects” issued vide this Ministry’s order no. 30/26/2014-15/NSM dated 21-03-2017 & subsequent modifications and to further convey the following modifications in the above Scheme.

2. So far, there are 7 modes under which the scheme is implemented. A new mode, Mode-8 namely Ultra Mega Renewable Energy Power Parks (UMREPPs) is introduced with the following features.
3. The details of implementing arrangements of Mode-8 (UMREPPs) are as follows:
 - i. **Solar Power Park Developer (SPPD):** The SPPD of the UMREPP may be any CPSU/State PSU/State Govt. Organisation or their subsidiaries. A Joint Venture Company (JVC) between two or more of the above entities may also act as the SPPD.
 - ii. **Role of State Government**
 - a. State Government to provide necessary assistance to the SPPDs in identification & acquisition of land for setting up of UMREPPs and also to facilitate all required statutory clearances. The State Government may designate any State Government Organization for the purpose.
 - b. The land for UMREPP to be allotted with a condition that the development must be completed within two years (with a provision of extension for one year under extreme cases) failing which the State Government may take back the allotted land in consultation with this Ministry.
 - c. A Committee to be set up under the Chairmanship of Principal Secretary/ Secretary (Power/Energy/Renewable Energy) of the concerned State Government, having CEO of the SPPD, head of State Nodal Agency (SNA) and three experts in the field of Renewable Energy and Power Systems as members of the committee. The committee will facilitate setting up of the UMREPP, monitor the progress and also fix the one-time upfront charges and annual Operation & Maintenance charges etc. to be charged from the power developers. The UMREPPs are not to be taken as profit making activities and maximum 16% return on equity may be allowed.
 - d. For the above activities, the State Government or any organization designated by the State Government would be paid a facilitation charge of Rs. 0.05/unit of power being generated from the projects in the UMREPPs for the entire PPA period of the project.



This facilitation charge may be paid to State Governments only on the quantum of power that is exported outside the state from that UMREPP and only if no facilitation charge or similar charge is levied under the State Government policy.

- iii. **Compensation to the SPPD:** The SPPD will be entitled for the following compensations for development and management of the UMREPPs:
- Central Financial Assistance (CFA): For development of internal infrastructure including cost of transmission to the CTU/STU point, the CFA of Rs. 20 Lakh/MW or 30% of the cost of development of the UMREPPs, whichever is lower would be provided. Any augmentation/strengthening and/or creation of external power evacuation infrastructure may be done by CTU.
 - If the SPPD or any of its individual promoters has a trading license, he may act as a trader of power being produced in the park, for which he would be entitled to claim a margin of Rs 0.07 /unit. This compensation may not be provided to RE projects to be developed under EPC mode where the cost of power would already have a factor of Return on Equity.
 - While calling bids for power projects in UMREPPs, the Standard Bidding Guidelines issued by Government of India will have to be followed.
- iv. **Power Projects inside UMREPPs:**
- The power projects inside the UMREPPs may be developed either under developer mode through Tariff Based Competitive Bidding (TBCB) process or under EPC mode (by the SPPD or any of its individual promoters) or any combination of both. However, the SPPD or any of its individual promoters cannot take part in tariff based competitive bidding process in an UMREPP developed by them.
 - While calling bids for selection of RE power developers in the UMREPPs, it may be made clear in the bid document that the facilitation charge of Rs 0.05/unit and trading margin of Rs 0.07/unit to the SPPD, if applicable, will be paid by the RE power developers.
 - The CPSUs are free to set up RE projects in EPC mode, under Central Schemes like the CPSU Scheme, in any of the UMREPPs.

4. All other terms & conditions will be as per the relevant provisions mentioned in the scheme for "Development of Solar Parks and Ultra Mega Solar Power Projects" issued vide this Ministry's order no. 30/26/2014-15/NSM dated 21-03-2017 & subsequent modifications.

5. This issues with the approval of Hon'ble Minister, Power and New & Renewable Energy.


(A. S. Parira)

Scientist-D

Email: anindya.parira@nic.in

To:

- Additional Chief Secretary / Principal Secretary / Secretary (Power / Energy / Renewable Energy) of States**

2. **Secretary**, Ministry of Power, Rafi Marg, Shram Shakti Bhavan, New Delhi, Delhi-110001
3. **Chairperson**, Central Electricity Authority, Sewa Bhawan, R. K. Puram, Sector-1, New Delhi - 110 066
4. **Chairman and Managing Director**, PGCIL, Saudamini, Plot No.2, Sector 29, Near IFFCO Chowk, Gurgaon (Haryana) – 122001
5. **Chairman & Managing Director**, Solar Energy Corporation of India, 1st Floor, D-3, A Wing, Prius Platinum Building, New Delhi- 110017.
6. **Chairman & Managing Director**, NTPC, NTPC Bhawan, SCOPE Complex, Institutional Area, Lodhi Road, New Delhi – 110003
7. **Chairman & Managing Director**, N.H.P.C Office Complex, Sector-33, Faridabad-121003 (Haryana)
8. **Chairman & Managing Director**, NEEPCO Ltd., Lower New Colony, Shillong-793003
9. **Chairman and Managing Director**, THDC India Limited, Rishikesh, Pragatipuram, By Pass Road, Rishikesh - 249201 (Uttarakhand)
10. **Chairman and Managing Director**, SJVN Limited, Shakti Sadan Coporate Office Complex, Shanan, Shimla – 171006, Himachal Pradesh
11. **Chairman and Managing Director**, NLC India Limited, Block - 1, Neyveli, Cuddalore-607 801, Tamil Nadu
12. **Chairman**, Damodar Valley Corporation, DVC Towers, VIP Road, Kolkata-700054, West Bengal
13. **Chairman & Managing Director**, Power Finance Corporation Ltd. 'Urjanidhi', 1, Barakhamba Lane, Connaught Place, New Delhi-110 001

Copy to:

1. PS to Hon'ble Minister, Power & NRE
2. Sr. PPS to Secretary, MNRE
3. PPS to Additional Secretary, MNRE
4. PS to Adviser (DN), PPS to JS (BPY), PPS to JS (AKS)
5. NIC for uploading on MNRE website



F. No. 320/14/2017-NSM
Government of India
Ministry of New and Renewable Energy
(National Solar Mission Division)

Block-14, CGO Complex
Lodhi Road, New Delhi-110003
19-08-2020

OFFICE MEMORANDUM

Subject: Development of Solar Parks and Ultra Mega Solar Power Projects-Extension of timelines-reg.

The undersigned is directed to refer to the Guidelines for implementation of Scheme for “Development of Solar Parks and Ultra Mega Solar Power Project” issued vide this Ministry’s order no. 30/26/2014-15/NSM dated 12-12-2014, 21-03-2017, subsequent modifications dated 05-02-2019 & 19-07-2019 and to convey the following for extension of timelines for development of solar parks:

i) Extension may be granted, to the solar parks, only for a capacity for which land has been acquired by the SPPD. The balance capacity may be cancelled.

ii) The solar parks to be granted extension, will have to fulfil the following condition:

“The Solar Power Developers (SPDs) need to be selected and also allotted land in the solar park by the SPPD before 31st March, 2021.”


This criteria has to be met with suitable supporting documents. Otherwise, the capacity of the park not satisfying the above criteria will automatically stand cancelled.

iii) Solar parks satisfying the above condition, on or before 31st March, 2021 will become eligible for a further extension of up to one year for completion of the solar park.

iv) The total CFA for a solar park may be restricted (apportioned) to the park infrastructure capacity developed/completed within the approved timeline. Before releasing any CFA, Solar Energy Corporation of India shall take an Undertaking from the SPPDs that the CFA corresponding to the cancelled capacity would be returned by the SPPD with due interest, if they fail to complete the solar park within the stipulated time.

v) The solar parks, whose timelines are yet to be expired, any extension/cancellation, if required, may be considered on similar principles as given above, subject to the condition that the timeline for completion of solar park does not exceed the timeline of the Solar Park Scheme i.e. 31st March 2022.

2. This issues with the approval of the Hon’ble Minister, New and Renewable Energy.


(Anindya S Parira)
Scientist-D (NSM)

Tele/Fax: 2436 3546 | Email: anindya.parira@nic.in

To:

- 1) **Principal Secretary** (Power/Energy/Renewable Energy) of the concerned States
- 2) **All Solar Power Park Developers** (SPPDs)

- 3) **The Chairman & Managing Director**, Solar Energy Corporation of India, 1st Floor, D-3, A Wing, Religare Building, District Centre, Saket, New Delhi – 110017
- 4) **The Chairman and Managing Director**, Power Grid Corporation of India Limited, Saudamini, Plot No.2, Sector 29, Near IFFCO Chowk, Gurgaon-122001; Haryana
- 5) **All State Transmission Utilities** of the concerned States

Copy to:

- 1) PSO to Secretary, MNRE
- 2) PPS to AS, MNRE
- 3) PS to JS&FA, MNRE, PS to Adviser (NSM)

F. No. 320/14/2017-NSM
Government of India
Ministry of New and Renewable Energy
(National Solar Mission Division)

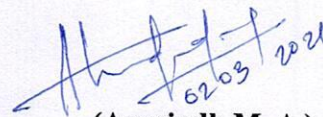
Block-14, CGO Complex
Lodhi Road, New Delhi-110003
Dated 02.03.2020

OFFICE MEMORANDUM

Subject: Development of Solar Parks and Ultra Mega Solar Power Projects-Extension of timelines-reg.

The undersigned is directed to refer to the Guidelines for implementation of Scheme for "Development of Solar Parks and Ultra Mega Solar Power Project" issued vide this Ministry's order no. 30/26/2014-15/NSM dated 21-03-2017 & subsequent modifications and to convey the following modifications under the Solar Park Scheme:

- i. The scheme is extended upto 31.03.2024 without any additional financial implications.
 - ii. Indian Renewable Energy Development Agency Limited (IREDA) will now be the implementing agency for the following solar parks where Solar Energy Corporation of India Ltd (SECI) is the SPPD as well as for the solar parks to be sanctioned in future in which SECI or its JV is the SPPD.
 - a. 150 MW floating solar park in Jharkhand
 - b. 160 MW Solar – Wind Hybrid Solar Park in Andhra Pradesh
 - c. 4000 MW Dholera solar park Phase-II in Gujarat
2. This issues with the approval of the Hon'ble Minister, New and Renewable Energy.



(Aravindh M. A.)
Scientist 'C'

Email: aravindh.mnre@gov.in

To:

1. **The Chairman & Managing Director**, Solar Energy Corporation of India, 1st Floor, D-3, A Wing, Religare Building, District Centre, Saket, New Delhi – 110017
2. **The Chairman & Managing Director, Indian Renewable Energy Development Agency Limited**, India Habitat Centre, East Court, Core-4A, 1st Floor, Lodhi Road, New Delhi - 11 00 03
3. **Principal Secretary** (Power/Energy/Renewable Energy) of the concerned States
4. **All State Transmission Utilities** of the concerned States
5. **All Solar Power Park Developers** (SPPDs)

Copy to:

1. PS to Hon'ble Minister, NRE
2. Sr. PPS to Secretary, MNRE
3. PPS to AS, MNRE
4. PS to JS&FA, MNRE, PS to Adviser (NSM)

F. No. 320/14/2017-NSM
Government of India
Ministry of New and Renewable Energy
(National Solar Mission Division)

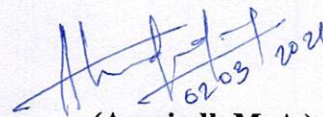
Block-14, CGO Complex
Lodhi Road, New Delhi-110003
Dated 02.03.2020

OFFICE MEMORANDUM

Subject: Development of Solar Parks and Ultra Mega Solar Power Projects-Extension of timelines-reg.

The undersigned is directed to refer to the Guidelines for implementation of Scheme for "Development of Solar Parks and Ultra Mega Solar Power Project" issued vide this Ministry's order no. 30/26/2014-15/NSM dated 21-03-2017 & subsequent modifications and to convey the following modifications under the Solar Park Scheme:

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 - a. 150 MW floating solar park in Jharkhand
 - b. 160 MW Solar – Wind Hybrid Solar Park in Andhra Pradesh
 - c. 4000 MW Dholera solar park Phase-II in Gujarat
2. This issues with the approval of the Hon'ble Minister, New and Renewable Energy.



(Aravindh M. A.)
Scientist 'C'

Email: aravindh.mnre@gov.in

To:

1. **The Chairman & Managing Director**, Solar Energy Corporation of India, 1st Floor, D-3, A Wing, Religare Building, District Centre, Saket, New Delhi – 110017
2. **The Chairman & Managing Director, Indian Renewable Energy Development Agency Limited**, India Habitat Centre, East Court, Core-4A, 1st Floor, Lodhi Road, New Delhi - 11 00 03
3. **Principal Secretary** (Power/Energy/Renewable Energy) of the concerned States
4. **All State Transmission Utilities** of the concerned States
5. **All Solar Power Park Developers** (SPPDs)

Copy to:

1. PS to Hon'ble Minister, NRE
2. Sr. PPS to Secretary, MNRE
3. PPS to AS, MNRE
4. PS to JS&FA, MNRE, PS to Adviser (NSM)

F. No. 320/54/2017-NSM
Ministry of New and Renewable Energy
Government of India
(NSM Division)

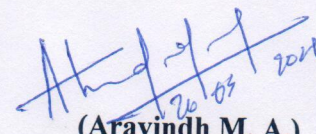
Block no. 14, CGO Complex,
Lodhi Road, New Delhi-110003.
Dated: 26.03.2021

OFFICE MEMORANDUM

Subject: "Development of Solar Parks and Ultra Mega Solar Power Projects" – Clarification regarding Rehabilitation and Resettlement (R&R) for Solar Parks

This is in reference to this Ministry's Guidelines for the Development of Solar Parks issued on Feb, 2016 and in continuation to the Scheme for "Development of Solar Parks and Ultra Mega Solar Power Projects" dated 21.03.2017. Clarifications were earlier sought by some SPPDs on the above subject and the same issue was also raised by CAG Audit. In this regard, it is to clarify that:

- i. The Guidelines issued in Feb 2016 are advisory in nature and may be applicable only for the parks sanctioned under Ph-I (i.e. before 21-03-2017).
 - ii. LADF is separate from that of the Solar Park Development Fund.
 - iii. LADF may be formed from contributions from SPDs and to be maintained by SPPDs.
 - iv. No separate fund maintained in MNRE for R&R works as 'Solar Park Development Fund'. SPPDs have to manage the activities related with R&R from their own funds.
 - v. Rehabilitation & Resettlement of disputed persons may be done in accordance with the law of the land and as per the respective State's policy.
2. This issues with the approval of Competent Authority.


(Aravindh M. A.)

Scientist 'C'

E-mail: aravindh.mnre@gov.in

To:

1. The CMD, Solar Energy Corporation of India (SECI), 1st Floor, D-3, A Wing, Religare Building, District Centre, Saket, New Delhi – 110 017.
2. The CMD, Indian Renewable Energy Development Agency (IREDA), India Habitat Centre, Core 4-A, East Court, 151 Floor Lodhi Road, New Delhi 110003.
3. All states/UT (Power, Energy, RE) and SPPDs.

Block No. 14, C.G.O. Complex,
Lodhi Road, New Delhi – 110003

Dated: 12th November, 2021

OFFICE MEMORANDUM

Subject: Norms for infrastructure development charges, O&M and other charges payable to SPPD by SPDs in Solar Parks-reg.

The undersigned is directed to refer to the guidelines for implementation of the scheme for "Development of Solar Parks and Ultra Mega Solar Power Projects" issued vide this Ministry's order no 30/26/2014-15/NSM dated 21-03-2017 & subsequent modifications and to further convey the following:

- i. It is necessary to ensure that subsidy given by the Govt of India for setting up of Solar/Renewable Energy (RE) parks is passed on to the ultimate beneficiary - the people of India - through proportionally lower charges for Solar Parks.
 - ii. It has therefore been decided that the infrastructure development charges, O&M charges for Solar/RE Parks and lease rent for land used in the Solar Park shall be fixed by a committee constituted by the State Govt under the Chairmanship of Principal Secretary/Secretary(Power/Energy/RE) of the concerned State Government and having head(CMD/MD/CEO) of the State Nodal Agency for Renewable Energy, CEO of SPPD and experts in the field of RE and power systems as members of the committee. The Committee while fixing these charges, will take into account the subsidy being provided by Government of India, as mentioned at point no. i. above.
 - iii. The norms for the fixation of lease rent, other infrastructure development charges and O&M charges for Solar/RE parks are at given Annexure.
 - iv. The DPR for all the Solar/RE Parks in all modes of Solar Park Scheme will be vetted by the above mentioned State Committee and SECI/IREDA. The Committee and SECI/IREDA will also verify whether work has been done as per the DPR. This will be applicable for all Solar parks for which DPRs have not yet been approved by this Ministry.
2. This issues with the approval of Hon'ble Minister (NRE & Power).



(Sunil Kr Gupta)

Scientist-D/NSM

Email: sk.gupta81@gov.in

To:

1. Principal Secretary/Secretary(Power/Energy/RE) of the States
2. MD, SECI
3. CMD, IREDA
4. All SPPDs
5. Head of SNAs

Norms suggested for CAPEX charges

S. No.	Item description	Benchmark that can be followed	Remarks
1	Internal Evacuation including Bays, Substation, Transformers, Transmission Lines etc.	Schedule of rates of STU/CTU	-
2	a) Roads b) Water Infrastructure, c) Buildings, d) Other Civil Works e) Fencing, f) Street lighting	as per Schedule of Rates issued by Public Works Department (PWD) of the concerned State Government	-
3	Incidental Expenses During Construction (Pre-operative Costs, IDC, Financing Costs, Project Management Costs etc)	upto 10.75% of CAPEX	(Reference: POWERGRID, APTRANSCO Norms for Estimation of Cost for Transmission elements)
4	Contingency	Upto 3% of CAPEX	Reference: POWERGRID, APTRANSCO Norms for Estimation of Cost for Transmission elements
5	Grid Connectivity, LTOA charges, ESIA charges	as per rates notified by concerned agencies/STU/CTU	-
6	Land Charges (one time or lease), Registration, Land Conversation, Land/Crop Compensation/ROW etc.	as per rates notified/Finalized by State Government or its agency	-

25/4

Norms suggested for O&M charges

Sl. No.	Head	Benchmark that can be followed	Remarks
1	Internal Evacuation including Bays, Substation, Transformers, Transmission Lines	As per norms of SERC/CERC	CERC Tariff Regulations 2019
2	a) Roads b) Water Infrastructure, c) Buildings, d) Other Civil Works e) Fencing, f) Street lighting g) Buildings	as per Schedule of Rates issued by Public Works Department (PWD) of the concerned State Government subject to ceiling of 5 % of CAPEX	Ref for Ceiling as per Benchmarks for Hydro plants
3	Establishment, Admin, Manpower	As per Schedule of Rates issued by PWD of concerned State Government subject to ceiling of 10% of the O&M Charges as above (1 to 2)	Ref for ceiling as per details in DPR of Kurnool & Kadapa Solar Park.
4	Power Consumption Charges, Water Consumption Charges, Land Lease Rentals if any	as per rates Notified/Finalized by State Government or its agency	To be billed by SPPD at actuals

Note: Annual Escalation in O&M Charges may be allowed as per CERC/SERC Regulations

Sund

F.No.320/7/2019-NSM
Government of India
Ministry of New and Renewable Energy
(National Solar Mission Division)

Atal Akshay Urja Bhawan
Lodhi Road, New Delhi 110003
16th June, 2023

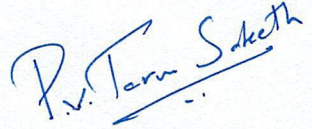
OFFICE MEMORANDUM

Subject: Scheme for "Development of Solar Parks and Ultra Mega Solar Power Projects"-reg extension in scheme timeline.

The undersigned is directed to refer to the OM No. 30/26/2014-15-NSM dated 21-03-2017 vide which the guidelines of the Solar Park Scheme were issued & subsequent modifications thereof. Reference is also invited to OM No. 320/14/2017-NSM dated 02-07-2018 and 02-03-2021 vide which extension in timeline of the scheme was conveyed.

2. In this regard, it is to convey that the timeline of the Solar Park Scheme has been extended up to FY2025-26 i.e. 31st March'2026 without any additional financial implication.

3. This issues with the approval of Hon'ble Minister, New & Renewable Energy and Power.



(P V Tarun Saketh)

Scientist 'C'

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To

1. **The Addl. Chief Secretary / Principal Secretary/ Secretary (Power/ Energy/ Renewable Energy) of all States**
2. **The Managing Director, Solar Energy Corporation of India Limited, 6th Floor, Plate-B, NBCC Office Block Tower-2, East Kidwai Nagar, New Delhi - 110003**
3. **The Chairman & Managing Director, Indian Renewable Energy Development Agency Limited, India Habitat Centre, East Court, Core-4A, 1st Floor, Lodhi Road, New Delhi - 110003**
4. **All Solar Power Park Developers (SPPDs) / CTU/ STUs**

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IT Cell (MNRE) for uploading on MNRE website