



सत्यमेव जयते

File No: 11/24/2025-IA.III  
Government of India  
Ministry of Environment, Forest and Climate Change  
IA-III Section (CRZ)  
Centralized Processing Centre - Green

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Dated 09/04/2025



To,

**M/s Solar Energy Corporation of India Limited**

**6<sup>th</sup> Floor, Plate-B, NBCC Office,**

**Block Tower-2, East Kidwai Nagar,**

**South West, Delhi- 110023**

**Email: [srinivasrao.49@seci.co.in](mailto:srinivasrao.49@seci.co.in)**

**Subject:**

**Proposal for IPZ Clearance – Project of Floating 5 MW Solar PV Power Plant for Kavaratti Island of Lakshadweep by M/s Solar Energy Corporation of India Limited – regarding**

**Sir/Madam,**

This has reference to your proposal No. IA/LD/CRZ/504098/2024, dated 05/11/2024 on the above mentioned project proposal for IPZ Clearance in accordance with the provisions of the Island Protection Zone (IPZ) Notification, 2011 issued under the Environment (Protection) Act, 1986.

2. The Ministry of Environment, Forest and Climate Change has examined the proposal for IPZ Clearance for 'Project of Floating 5 MW Solar PV Power Plant for Kavaratti Island of Lakshadweep by M/s Solar Energy Corporation of India Limited'.

3. The proposal was considered by the Expert Appraisal Committee (EAC) for Infrastructure Development, Coastal Regulation Zone, Building/Construction and Miscellaneous projects, in its 394<sup>th</sup> meeting held on 03/03/2025. The Project Proponent (M/s Solar Energy Corporation Of India Limited) along with his EIA consultant (M/s National Centre for Sustainable Coastal Management, Chennai) have made a presentation on above said proposal and informed the following salient features of the proposal, including the details provided in the application of the project, to EAC:

1.	Brief description of the Project	The proposal seeks IPZ Clearance as per IPZ Notification 2011 for Installation of Floating 5
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		MW Solar PV Power Plant for Kavaratti Island of Lakhadweep. Total project area is 4.8 ha.
2.	Salient features / Components of the project activity	<p>Salient Features of the FSPV Project:</p> <p>Key Components of the FSPV Project:</p> <p><b>1. Floating Structure</b></p> <p>Floats: HDPE (High-Density Polyethylene) structures designed for buoyancy and durability.</p> <p>Anchoring &amp; Mooring System: Prevents movement due to wind, waves, or water currents.</p> <p><b>2. Solar PV Modules</b></p> <p>High-efficiency monocrystalline/polycrystalline panels designed for marine and humid environments.</p> <p>Coated with anti-reflective and anti-soiling layers for better performance.</p> <p><b>3. Power Electronics</b></p> <p>String Inverters: Convert DC power from solar panels to AC power.</p> <p>Transformers: Step-up voltage for grid integration.</p> <p><b>4. Transmission &amp; Distribution System</b></p> <p>Underwater cabling system to connect the floating plant to the main power grid.</p> <p>Switchgear &amp; Control Systems to ensure smooth power transmission.</p> <p><b>5. Monitoring &amp; Control System</b></p> <p>SCADA (Supervisory Control and Data Acquisition) system for real-time monitoring.</p> <p>Remote sensors &amp; IoT devices for tracking performance, temperature, and efficiency.</p> <p><b>6. Water Treatment &amp; Maintenance Infrastructure (if applicable)</b></p> <p>RO (Reverse Osmosis) or demineralization units to provide low-TDS water for panel cleaning.</p> <p>Periodic maintenance to remove algae, sediments, and dust accumulation.</p>

3.	CRZ Report/Maps prepared by	National Centre for Sustainable Coastal Management (NCSCM)																											
4.	<p>CRZ Categorization as per CRZ Report</p> <p>As per the approved IIMP of Kavaratti Island under IPZ Notification 2011, the project activity falls in preservation zone and conservation zone. The details as follows:</p> <table border="1"> <thead> <tr> <th>Project activity</th> <th>IIMP Zone</th> <th>Category</th> <th>Area (in Sq.m)</th> </tr> </thead> <tbody> <tr> <td rowspan="2">Floating Solar</td> <td rowspan="2">Conservation Zone</td> <td>Deep Lagoon</td> <td>47726.42</td> </tr> <tr> <td>Intermediate Lagoon</td> <td>371.96</td> </tr> </tbody> </table> <table border="1"> <thead> <tr> <th>Project activity</th> <th>IIMP Zone</th> <th>Category</th> <th>Length (in m)</th> </tr> </thead> <tbody> <tr> <td rowspan="5">Cable Route</td> <td rowspan="3">Preservation Zone</td> <td>Seagrass</td> <td>156.68</td> </tr> <tr> <td>Boulder Zone</td> <td>119.97</td> </tr> <tr> <td>Beach/Sand patch</td> <td>15.96</td> </tr> <tr> <td rowspan="2">Conservation Zone</td> <td>Deep Lagoon</td> <td>111.85</td> </tr> <tr> <td>20m NDZ</td> <td>20.32</td> </tr> </tbody> </table>		Project activity	IIMP Zone	Category	Area (in Sq.m)	Floating Solar	Conservation Zone	Deep Lagoon	47726.42	Intermediate Lagoon	371.96	Project activity	IIMP Zone	Category	Length (in m)	Cable Route	Preservation Zone	Seagrass	156.68	Boulder Zone	119.97	Beach/Sand patch	15.96	Conservation Zone	Deep Lagoon	111.85	20m NDZ	20.32
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5.	Applicability of EIA Notification 2006	No																											
6.	NOC from SPCB (For discharge Project)	Yes																											
7.	Certified Compliance Report from IRO (Expansion / Amendment Case)	NA																											
8.	Permissibility of project as per CRZ Notification 2011/2019 (mention the Clause as per SCZMA recommendation letter)	As per Paragraph 7 (vii) (c) of the IPZ Notification 2011, the proposed activity is permissible within the Lakshadweep Islands. Additionally, Paragraph 15 of Annexure-1 in the IPZ Notification 2011 mentions the inclusion of non-conventional energy resources, particularly wind, solar, and tidal energy, desalination, water recycling, and the use of local products in the Lakshadweep Islands.																											
9.	EIA Consultants details (with validity)	National Centre for Sustainable Coastal Management (NCSCM), Chennai, Tamil Nadu-600025.																											

10.	Baseline period for EIA	23 <sup>rd</sup> December 2019 and 4 <sup>th</sup> January 2020
11.	Applicability of Terrestrial and Marine EIA (please mention clearly, if not applicable please mention the same)	<p>EIA (Terrestrial): Not Carried Out</p> <p>Reason: the proposed project is a Floating Solar PV on the Lagoons of Kavaratti Island. therefore, the EIA study for the proposed floating solar photo voltaic cells in the lagoons of Kavaratti was carried out.</p> <p>EIA (Marine): Carried Out</p> <p>Summary Details of EIA (Marine): Key Findings:  Environmental Impact: - Positive impact on reducing shoreline erosion. - Experiments using shaded conditions on various corals showed that while shading may decrease coral colour and increase turbidity, it can also prevent bleaching. - For Lakshadweep, these findings stress the need to strategically position FSPVs to minimize adverse impacts on coral health, ensuring careful monitoring of these shading effects in ecologically sensitive areas.</p> <p>-Ecological Benefits: Sediment accumulation near shoreline. Social Impact: Community.</p> <p>Feedback: - Concerns from fishermen on lagoon access. -Potential job opportunities in maintenance and tourism growth.</p> <p>Recommendation: -Based on the findings of the study, site for Floating Solar Photo Voltaic (FSPV) installation has been recommended and best practices for operation of FSPV have also been provided for the island.</p>
12.	Anticipated impacts (mention page no of EIA)	Page No. 76
13.	Mitigation measures proposed (mention page no of EIA)	Page No. 76
14.	Disaster Management Plan (mention page no of EIA)	Attached in the relevant field on Parivesh
15.	Risk Assessment (mention page no of EIA)	Provided Attached in the relevant field on Parivesh
16.	Total Project cost (in crores)	70.13

17.	Is project located in erosion prone area (yes/no)	No
18.	If yes, specific the management plan proposed	NA
19.	EMP cost proposed (capital and recurring)	10.0 lakh
20.	Forest Clearance requirement	NA
21.	Wildlife Clearance Requirement	NA
22.	Proposed Green Cover	NA
23.	Proposed budget for green cover development	NA
24.	Rain water harvesting	NA
25.	Proposed budget for rainwater harvesting	NA
26.	Details of Mangrove tree Cutting	NA
27.	Details of tree Cutting	NA
28.	Details of Compensatory afforestation proposed	NA
29.	Proposed energy conserving measures	Reducing auxiliary consumption
30.	Power Requirement and Source	The proposed project is a power generation station
31.	Water requirement and source	1200 Liters of well water will be used mainly for module cleaning purpose only. The cleaning cycle will be monthly once for 6 months in a year.
32.	Waste water Treatment and reuse	NA
33.	Solid Waste Generation	NA
34.	Solid Waste management	NA
35.	Hazardous waste Management	NA

36.	Resettlement and Rehabilitation	NA
37.	Employment generation (in Numbers)	During Construction phase: 40 Nos. During Operational Phase: 3 Nos.
38.	Details of Litigation, If any	No
39.	Details of Ground Water extraction	Nil
40.	Benefits	Clean energy transition, ecological protection, and community support. 100% renewable energy cover
41.	SCZMA Recommendation	Lakshadweep CZMA has recommended the proposal to Ministry <i>vide</i> letter No: 9/5/96-S & T Vol.VII, dated 19/02/2025 to Ministry as per IPZ Notification 2011.

4. The Committee deliberated on the proposal based on the information provided and the presentation made by the Project Proponent (PP). After discussions, the Committee observed that the proposed project activity is permissible under the provisions of the Island Protection Zone (IPZ) Notification, 2011, and has received a recommendation from the Lakshadweep Coastal Zone Management Authority (LCZMA). The Committee also raised concerns regarding the inclusion of the proposed activity in the approved Integrated Island Management Plan (IIMP) of Kavaratti Island. In response, the proponent clarified that, as per Paragraph 7(vii)(c) of the IPZ Notification, 2011, the proposed activity is permissible within the Lakshadweep Islands. Additionally, Paragraph 15 of Annexure-1 of the same notification allows for the inclusion of non-conventional energy resources-such as wind, solar, and tidal energy-along with desalination, water recycling, and the use of local products in the Lakshadweep Islands. In this regards the Committee suggested that the LCZMA shall comply the IPZ 2011 Notification and IIMP for the proposed activity.

5. Furthermore, the Committee noted that in Kavaratti, the location of the floating solar installation is sufficiently distant from the lagoon opening, minimizing the risk of adverse wave action. However, a small portion of the proposed cable route alignment crosses seagrass areas. Therefore, the Committee directed the proponent to lay the cable in a manner that ensures no impact on seagrass, in consultation with the National Centre for Sustainable Coastal Management (NCSCM). In response, the proponent agreed to comply with this directive. The Committee also noted that, while lagoon areas generally provide optimal conditions for installing floating solar panels, they are also rich in biodiversity and offer various ecological services to local communities. Therefore, defining a threshold limit for floating solar installations within a given lagoon area is essential to ensure the long-term sustainability of the ecosystem.

6. The Committee expressed the opinion that, since M/s Solar Energy Corporation of India Limited (SECIL) is a major solar power development agency in India and is likely to expand its floating solar panel projects, it is essential for them to ensure the protection of marine and aquatic ecosystems from any potential adverse impacts of such projects. Therefore, M/s SECIL shall conduct a detailed study on the impact of these floating solar panel projects on aquatic and marine flora and fauna, particularly on corals and seagrasses. The study should cover all types of ecosystems, including shallow and deep lagoons, lakes, rivers, deep sheltered marine waters, and any other marine or aquatic habitats that could

potentially be used for floating solar panel projects. The study should be carried out in collaboration with reputable research institutes of national significance, such as ZSI, NCSCM, and NIOT, with the objective of determining the threshold limits for floating solar installations in different habitats and designing appropriate mitigation measures. In response, PP has agreed the same.

7. The Committee, after detailed deliberations and considering the submissions made by the project proponent, has recommended the proposal for IPZ Clearance as per IPZ Notification, 2011, subject to terms and conditions as stipulated during its 394<sup>th</sup> meeting held on 03/03/2025.

8. Based on the recommendation of the Lakshadweep Coastal Zone Management Authority and considering the submissions made by the project proponent, the Ministry of Environment, Forest and Climate Change, in acceptance of the recommendations of the Expert Appraisal Committee (CRZ), hereby accords IPZ Clearance to the project for **“Project of Floating 5 MW Solar PV Power Plant for Kavaratti Island of Lakshadweep by M/s Solar Energy Corporation of India Limited”** under the provisions of the IPZ Notification, 2011 and amendments thereto, subject to the compliance of terms and conditions as under:-

### Specific Conditions

S. No	Specific Conditions
1	All construction shall be strictly in accordance with the provisions of the IPZ Notification, 2011 and IIMP.
2	As proposed, only 4.8 ha of lagoon area should be used for installation of floating solar.
3	Cable should be laid in a manner that ensures no impact on areas of the lagoon like seagrass, in consultation with the National Centre for Sustainable Coastal Management (NCSCM).
4	The proposed Disaster Management Plan (including the risk management), as submitted by PP shall be implemented in consultation with concerned department and implementation report shall be submitted to concerned IRO of this Ministry as part of six monthly compliance reports.
5	All the measures listed in the EMP and mitigation measures proposed in the EIA report should be implemented without any deviations.
6	Project Proponent shall strive to enhance the tree plantation and that trees planted in this regard would be planted under the campaign "एक पेड़ माँ के नाम" (Ek Ped Maa Ke Naam) and the details of the trees planted would be uploaded on the portal <a href="https://merilife.nic.in">https://merilife.nic.in</a> .
7	M/s SECIL should conduct a detailed study on the impact of these floating solar panel projects on aquatic and marine flora and fauna, particularly on corals and seagrasses. The study should cover all types of ecosystems, including shallow and deep lagoons, lakes, rivers, deep sheltered marine waters, and any other marine or aquatic habitats that could potentially be used for floating solar panel projects. The study should be carried out in collaboration with reputable research institutes of national significance, such as

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	ZSI, NCSCM, and NIOT, with the objective of determining the threshold limits for floating solar installations in different habitats and designing appropriate mitigation measures. The study report should be submitted to Ministry and concern SCZMA.
8	Permanent labour camp, machinery and material storage shall not be set up in the IPZ area.
9	Any temporary physical infrastructure setup and excavated material during the construction of project shall not be dumped in water bodies or adjacent areas.
10	Construction material and structures/scaffoldings erected for construction at site shall be cleared immediately after finishing construction and it shall be ensured that no construction waste, garbage and machinery or equipment are left post construction.
11	No groundwater shall be extracted to meet with the water requirements during the construction and/or operation phases.
12	Topsoil excavated during construction activities shall be stored for use in horticulture/landscape development etc. within the project site. The Project Proponent shall comply order / direction, if any, issued by Hon'ble Court/tribunal on the project.
13	All the condition stipulated by Lakshadweep Coastal Zone Management Authority (LCZMA) under CRZ Notification 2011, <i>vide</i> letter No. 9/5/96-S & T Vol.VII, dated 19/02/2025 and commitments made by the PP before the LCZMA and EAC shall be followed in letter and spirit.
14	All necessary clearance from the concerned authority, as may be applicable should be obtained prior to commencement of project or activity.

## General Conditions

S. No	General Conditions
1	Management of solid waste in accordance with the Solid Waste Management Rules, 2016 shall be strictly implemented.
2	'Consent to Establish' and /or 'Consent to Operate' shall be obtained from State Pollution Control Board under the provisions of Air (Prevention and Control of Pollution) Act, 1981 and / or the Water (Prevention and Control of Pollution) Act, 1974, as may be applicable.
3	Disposal of muck during construction phase should not create any adverse effect on the neighbouring communities and be disposed taking the necessary precautions for general safety and health aspects of people, only in approved sites with the approval of Competent Authority.
4	All liquid waste arising from the proposed development will be disposed of as per the norms prescribed by Central / State Pollution Control Board. There shall not be any disposal of untreated effluent into the sea / coastal water bodies. It shall be ensured that the wastewater

S. No	General Conditions
	generated is treated in the STP as committed by the project proponent. The treated waste water shall be reused for landscaping, flushing and / or HVAC cooling purposes etc. within the development. The project proponent should also make alternate arrangement for situation arising due to malfunctioning of STP. There shall be regular monitoring of standard parameters of the effluent discharge from STP under intimation to the SPCB.
5	Any hazardous waste generated during construction phase, shall be disposed off as per applicable rules and norms with necessary approvals of the State Pollution Control Board.
6	A copy of the clearance letter shall be uploaded on the website of the concerned State Coastal Zone Management Authority/State Pollution Control Board. The Clearance letter shall also be displayed at the Regional Office, District Industries Centre and Collector's Office/ Tehsildar's office for 30 days.
7	A six-monthly monitoring report shall need to be submitted by the project proponent to the concerned Regional Office of this Ministry regarding the implementation of the stipulated conditions.
8	The Ministry of Environment, Forest & Climate Change or any other Competent Authority may stipulate any additional conditions or modify the existing ones, if necessary in the interest of environment and the same shall be complied with.
9	Full co-operation shall be extended to the officials from the Regional Office of MoEF&CC, during monitoring of implementation of environmental safeguards stipulated. It shall be ensured that documents/data sought pertinent is made available to the monitoring team. A complete set of all the documents submitted to MoEF&CC shall be forwarded to the concerned Regional Office of MoEF&CC.
10	In the case of any change(s) in the scope of the project, the project would require a fresh appraisal by this Ministry.
11	The Ministry reserves the right to add additional safeguard measures subsequently, if considered necessary, and to take action to ensure effective implementation of the suggested safeguard measures in a time bound and satisfactory manner, including revoking of the environment clearance under the provisions of the Environmental (Protection) Act, 1986, for non-compliance.
12	All other statutory clearances such as the approvals for storage of diesel from Chief Controller of Explosives, Fire Department, Civil Aviation Department, Forest Conservation Act, 1980 and Wildlife (Protection) Act, 1972 etc. shall be obtained, as applicable by project proponent from the respective Competent Authorities.
13	The project proponent should advertise in at least two local Newspapers widely circulated in the region, one of which shall be in the vernacular language informing that the project has been accorded CRZ Clearance and copies of clearance letters are available with the State Pollution Control Board (SPCB) and may also be seen on the website of the Ministry of

S. No	General Conditions
	Environment, Forest and Climate Change at <a href="https://parivesh.nic.in/">https://parivesh.nic.in/</a> . The advertisement should be made within Seven days from the date of receipt of the Clearance letter and a copy of the same should be forwarded to the concerned Regional Office of this Ministry.
14	A copy of the clearance letter shall be sent by the proponent to concerned Panchayat, Zilla Parisad/Municipal Corporation, Urban Local Body and the Local NGO, if any, from whom suggestions/ representations, if any, were received while processing the proposal.
15	The proponent shall upload the status of compliance of the stipulated conditions, including results of monitored data on their website and shall update the same periodically. It shall simultaneously be sent to the Regional Office of MoEF&CC, the respective Zonal Office of CPCB and the SPCB.
16	The environmental statement for each financial year ending 31st March in Form-V as is mandated to be submitted by the project proponent to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently, shall also be put on the website of the project proponent along with the status of compliance of clearance conditions and shall also be sent to the respective Regional Office of the Ministry by e-mail.

**9.** This Clearance is subject to final order of the Hon'ble Supreme Court of India in the matter of Goa Foundation Vs Union of India in Writ Petition (Civil) No.460 of 2004 as may be applicable to this project.

**10.** The Ministry reserves the right to stipulate additional conditions, if found necessary at subsequent stages and the project proponent shall implement all the said conditions in a time bound manner. The Ministry may revoke or suspend the IPZ clearance, if implementation of any of the above conditions is not found satisfactory.

**11.** Concealing factual data or submission of false/fabricated data and failure to comply with any of the conditions mentioned above may result in withdrawal of this clearance and attract action under the provisions of the Environment (Protection) Act, 1986.

**12.** Any appeal against this IPZ clearance shall lie with the National Green Tribunal, if preferred, within a period of 30 days as prescribed under Section 16 of the National Green Tribunal Act, 2010.

**13.** The above conditions shall be enforced, *inter-alia* under the provisions of the Water (Prevention & Control of Pollution) Act, 1974, the Air (Prevention & Control of Pollution) Act, 1981, the Environment (Protection) Act, 1986, Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016 and the Public Liability Insurance Act, 1991 along with their amendments and Rules and any other orders passed by the Hon'ble Supreme Court of India/High Courts and any other Court of Law relating to the subject matter.

**14.** This issues with approval of the Competent Authority.

**(Dr. H. Kharkwal)**

**Scientist 'F' (CRZ)**

## **Copy To**

1. The Director, Department of Information Technology, Lakshadweep Information Technology Services Society, U.T of Lakshadweep, Kavaratti-682555, Lakshadweep.
2. The Deputy Director General, Ministry of Environment Forest and Climate Change, Integrated Regional Office Kendriya Sadan, 4<sup>th</sup> Floor, E&F Wings, 17<sup>th</sup> Main Road, Koramangala II Block, Bangalore – 560034, Karnataka.
3. The Member Secretary, Central Pollution Control Board Parivesh Bhavan, CBD-cum-Office Complex, East Arjun Nagar, New Delhi - 110032.
4. The Member Secretary. Lakshadweep Pollution Control Committee. Lakshadweep Administration, Department of Science and Technology & Environment. Kavaratti-682555, Lakshadweep.
5. The Member Secretary, Lakshadweep Coastal Zone Management Authority & Member Secretary, Lakshadweep Pollution Control Committee, Kavaratti – 682555, Lakshadweep.
6. Monitoring Cell, MoEF&CC, Indira Paryavaran Bhavan, New Delhi.
7. Guard File/ Record File/ Notice Board/MoEF&CC website.

**(Dr. H. Kharkwal)**

**Scientist 'F' (CRZ)**

