Response on the pre-submission Queries w.r.t. Application Document for selection of manufacturers under Production Linked Incentive Scheme 'National Programme on High Efficiency Solar PV Modules'

S. No.	Queries received by IREDA	IREDA's response
1.	**<u>Tapering factor</u>:** Applicability of tapering factor in case of shift to higher performance matrix in within 1 year	The tapering factor is not linked with position in Performance Matrix.
2.	**<u>Local Value addition</u>:** • Allow 2-year moratorium for Local Value addition for supply chain to establish due to negligible presence of local vendors • Local value addition will change based on change in taxation on value chain/raw material etc., request to accommodate taxes in change in law • More clarity is needed on "Local Value Addition" formula. What all things will be included in "Services" component in order to calculate final local value addition • We anticipate that there is high probability of local value content being circumvented by white labelling the components by the domestic manufacturers. Request you to elucidate the mechanism to avoid leakages in local value content requirement.	Para 3.9 of the PLI Scheme Guidelines defines Local Value Addition (LVA). There is no minimum threshold prescribed for local value addition. Taxes i.e. import duties have been duly factored-in while calculating local value addition.

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3.	<u>**Manufacturing capacity**</u>: Enable flexibility to change the manufacturing capacity in case an approved applicant receives partial/lesser PLI amount than applied due to limit of Rs. 4,500 Crores	While selecting bidders through bucket filling, if the quantity of manufacturing capacity left for allotment to the last successful bidder in the bucket, is less than the quantity for which he was otherwise eligible for allotment under the PLI Scheme if he was in the bucket at any position other than the last position, then such last successful bidder can exercise any of the following options: **Option 1:** <u>The bidder accepts the quantity left for allotment to him</u>. Bidder's commitment to set up total manufacturing capacity shall be reduced commensurately, and the bidder will get first priority in waiting list for allotment of balance capacity, in case of additional outlay. However, there shall be no liability on IREDA or MNRE in case he is not able to get full bid capacity allotted due to non-availability of additional outlay. **The bidder shall be asked to give an undertaking to IREDA in this regard.** The option is illustrated below: *Suppose a bidder had promised to set up 5 GW of (polysilicon + ingot-wafer + cell + module) manufacturing unit, the maximum capacity that he would have got under PLI Scheme was 2000 MW but his manufacturing capacity obligation was full 5000 MW. Suppose this bidder is the last successful bidder in the bucket (selection zone) and the capacity left for allotment under PLI Scheme is only 1200 MW. In this case, if the bidder exercises option 1, he accepts 1200 MW manufacturing capacity in PLI Scheme and he is required to set up (5000 x 1200 / 2000) = 3000 MW manufacturing capacity. This bidder will remain in the waiting list with first priority. If, on additional outlay, he gets balance manufacturing capacity (2000-1200) = 800 MW allotted to him, his commitment for setting up manufacturing capacity will be restored to 5000 MW as per his submitted bid.* **Option 2:** <u>The bidder rejects the offer of partial allotment of manufacturing capacity.</u> Bidder quits with no penalty imposed on him. He is also removed from the waiting list. The offer for allotment of available manufacturing capacity passes on to the next bidder in que as per the bucket filling method.

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4.	**<u>Commissioning</u>:** • Definition of Commissioning Date • Allow extension in SCOD due to delay in Govt approvals and suitable amend penalty clause • Clarify methodology to demonstrate the capacity of the manufacturing unit.	Commissioning may be defined as the commencement of production by the applicant manufacturing unit. The manufacturer shall give advance intimation to IREDA about the expected date of commencement of production. After commissioning, i.e., commencement of production, the manufacturer shall give a self–declaration, duly certified by its company secretary and countersigned by its Statutory auditor, for commencement of production, meeting the prescribed parameters of level of integration, capacity of manufacturing plant and module performance parameters of efficiency and temperature coefficient of Pmax. Along with the said declaration, the applicant shall also submit the copy of invoices raised at the end of first month of commissioning The date of commissioning shall be taken from the date of such self-declaration, subject to verification of above details by IREDA and NISE. The timelines for commissioning are as defined in clause 3.10 of the PLI Scheme Guidelines and will remain same Methodology to demonstrate the manufacturing capacity of the unit shall be as defined at Annexure A of this Response.
5.	**<u>Construction plan</u>:** • To treat the PERT Chart/ construction plan submitted along with the application as indicative/tentative. Detailed and firm timelines will be known during detail engineering phase after EPC award. To allow relaxation in the construction	Only Successful applicants will be required to submit the construction plan with their acceptance of the Letter of Award to them. However, one revision in plan shall be allowed till formation of SPV within 90 days from LoA. Further, it may be noted that the commissioning timelines will remain as per scheme guidelines and as applicable to the project.

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	timeline upon delay caused by factors not attributable to applicant • Cannot be provided at application stage • Allow to submit Construction plan post LOA	
6.	**JV/Consortium/ Shareholding:** • Allow to form JV post bidding, given CIL being PSU have to follow due procedure for equity partner amid tight bid application timelines of 30 June, with rider to keep minimum 26% shareholding post JV.	The restructuring of the equity/ shareholding is allowed to the extent that clause no. 3.6, & 3.7 is complied with, and the applicant remains the majority shareholder i.e., 51% till date of commissioning.
	• In case of submission of application by JV or Consortium, what is the minimum threshold for shareholding pattern among the JV Partners/ Consortium?	JV partners have to identify a lead partner as per their mutual arrangement.
	• Allow Modification in the shareholding pattern without intervention/consent of MNRE	Till commissioning of the project, as long as the original applicant remains the majority shareholder and there is no equity transfer as mentioned in clause 3.7 of IFA, modification can be made to shareholding pattern with intimation to MNRE & IREDA
	• Clarity on issuance of debentures/ preference shares	The Debentures/preference shares can be done if there is no impact on the equity structure
	• Allow both pre and post commissioning change provided Applicant retains 51% shareholding.	

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	•Clarify if Shareholding pattern Change can be done at time of bidding and formation of SPV? Post SCD, majority shareholding can be taken by foreign entity? •What happens to the Lead Member if the other members of the consortium are not able to fulfill their commitment? Will MNRE / IREDA blacklist the Lead member for the failure of the other members genuine inability to fulfill their commitment. •Board resolution needs to be issued only by the lead member of the consortium or all the members of the consortium •Change in equity allowed in case of merger?	Shareholding, as mentioned at the time of application, can be changed till time of SPV formation as long as the majority shareholding remains with the applicant company. Also, any change to the Majority shareholding can be done post actual date of commissioning with approval of MNRE. Any equity infusion has to comply with clause 3.7 of IFA All the compliances will be responsibilities of the lead member. As such, Penalties will be levied on lead member of the group All the participants shall submit the board resolution
7.	SPV: • Can JV partners create separate SPVs for execution of the various stages of the integration projects eg.-SPV1-> C+M, SPV2-> W+PS	Para 3.3 (b) of PLI Scheme Guidelines, inter-alia, states as follows: *The bidder manufacturer can be a single company or a Joint Venture/ Consortium of more than one company. However, in case of Joint Venture/ Consortium, a partner/ company will be allowed to tie up their manufacturing capacity (of any stage) with another partner/company for one bid only.* The JV partners, can form sub-SPVs for various stages of integration process, provided that such SPVs are 100% subsidiaries of the main SPV and capacity of each stage is as per the capacity allocated to the applicant, i.e. if 2000 MW is allocated to JV, then each stage must be of 2000 MW and min size of a single unit of every stage shall be 1000 MW.

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		Also, there shall be a binding agreement till end of PLI period specifying that sale of complete capacity of one stage shall be exclusively for the next stage in the integration level and no sale to another party shall be made. Any deviation will lead to cancellation of award instantly. Consequently, the total committed capacity will be capped at the minimum capacity of any stage. Also, such SPV's operation remains exclusively for solar manufacturing operations as per the LoA. Same shall be established by submitting MoA/AoA.
	• Is it Mandatory to form SPV by consortium? Can consortium members can execute their respective scopes of work in their individual capacity?	In such cases, it will be the responsibility of the lead member to ensure the compliances regarding the sales of the module, extent of integration, capacity installed and performance parameter as well as shareholding etc. The lead member will also be responsible to submit all the documents in this regard, duly certified by its SA, at desired frequency.
	• Can consortium members make their own SPV? Can future expansion be done in this SPV created for PLI	Expansions will be allowed after the end of PLI period, unless there is a change in capacity allocated to an entity.
	• Can existing SPV be used?	Yes, existing SPV can be used, provided that SPV has operations dedicatedly for solar manufacturing as per the LoA given. Same shall be established by submitting MoA/AoA.
	• Request to change the timeline to form SPV to 180 days instead of 90 days	No, SPV must be formed within 90 days only.
	• Tender stipulates formation of SPV within 90 days from LoA. In the same line, timeline for furnishing of MoA/AoA of SPV shall also be 90 days from LOA instead of 2 months.	The MoA/AoA can be submitted with SPV formation.

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	• Can 2 companies form Consortium simply by signing consortium agreement	Agreement shall be executed as prescribed in the application document on stamp paper of appropriate value and submitted to IREDA as proof of formalization of consortium. However, the consortium partners must ensure fulfilment of all the remaining compliances, legal and others, as required.
8.	**<u>Force Majeure</u>:** • Request to define force majeure in IFA (Invitation For Application) • Uncontrollable factor may be defined. • Force Majeure developer should not be penalized and scheduled commissioning date is extended.	"Force Majeure" means an event which is beyond the reasonable control of a Party, is not foreseeable, is unavoidable, and makes a Party's performance of its obligations hereunder impossible or so impractical as reasonably to be considered impossible under the circumstances, and subject to those requirements, includes, but is not limited to, war, riots, civil disorder, earthquake, fire, explosion, storm, flood or other adverse weather conditions, strikes, lockouts or other industrial action confiscation or any other action by Government agencies. In such cases of force Majeure event, any request from applicant shall be referred to MNRE, which shall assess the request of the applicant and decide on whether to give further time to the manufacturer to fulfil his manufacturing commitments. Similarly, in case of such Force Majeure event happening post commissioning, affecting the operations of applicant, any request from applicant shall be referred to MNRE, which shall assess the request of the applicant and decide on disbursement of PLI.
9.	**<u>Disbursement of PLI and Penalties</u>:** • Clarify if Disbursement of PLI allowed on Partial Commissioning?	Para 3.8 of PLI Scheme Guidelines states as follows: *Disbursement of PLI: The manufacturing units sanctioned under the programme would be eligible for getting PLI on* ***<u>annual basis</u>*** *on sales of high efficiency solar PV modules for 5 years from commissioning or 5 years from scheduled commissioning date, whichever is earlier. Consequently, in case of delayed commissioning, the PLI period will reduce from 5 years by the quantum of such delay in commissioning. A team constituted by MNRE or IREDA will visit the manufacturing unit immediately after its commissioning to verify promised extent of integration, manufacturing capacity, efficiency and temperature co-efficient of modules. The manufacturers will be asked to give a self-declaration and a Statutory Auditor's or Chartered or Cost Accountant's certificate in support of claims of PLI. The manufacturers will be required to provide documents in support of the PLI claimed for a particular year*

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		based on (i) sales (watt) of modules, (ii) percentage of local value addition and (iii) PLI rate (as per the position in Performance Matrix). Documents required to be submitted by manufacturer for availing PLI will be detailed out in the tender documents. MNRE will also make provisions for adequate safeguards, including for periodical special audits and appointing technical organisations to conduct sample checks to verify claims of manufacturers in respect of module efficiency and temperature coefficient.
	• Impact of delay in commissioning on LD and PLI disbursement?	For delay in the commissioning up to 6 months the PBG submitted will be encashed by IREDA for the period of delay. Also, for such delay, as per clause 3.11(i) of MNRE PLI scheme the Disbursement of PLI will be reduced.
	• Clarify excess or shortfall /change in PLI	1. Cumulative allocation, amongst all successful applicants will not be more than the total allocated amount under the scheme. 2. Any successful applicant will receive lower of the annual PLI that has been quoted in its application, or PLI claim approved by IREDA as per the MNRE PLI scheme.
	• Compliances required for PLI disbursal in advance before the submission deadline, Commissioning audit Scheme should be outlayed beforehand.	The compliances and documents required to demonstrate the commissioning of the unit shall be as per Annexure A of this Response.
	• frequency, due date-15 days within PLI claim, penalty beyond due date for disbursal of PLI.	As per clause 3.8 of MNRE PLI scheme guidelines, the PLI will be released annually and on establishing of PLI claims by applicant to the satisfaction of IREDA.
10.	**Ranking of Bidders:** • Allotment in case of tie?	In PLI Scheme Guidelines, the 'note' below the Selection Criteria Table in Para 3.3(a) states as follows: *The bidder manufacturer getting higher marks will get preference in allocation of manufacturing capacity under the PLI scheme. In case of equal marks, the bidder/ manufacturer quoting least total PLI amount for five years' period as per Para 3.5 below, followed by higher 'Extent of integration followed by higher Manufacturing Capacity' will get priority in selection.* Accordingly, in case of equal marks, the award will be as per the process explained in clause 3.3 (a) of the scheme guidelines. Additionally, in case the tie persists even after defined process, the

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		appropriate mechanism will be chosen to allocate the manufacturing capacity in a fair and transparent manner.
11.	**PLI Calculation:** • Clarify if cumulative PLI over 5 years, as requested, is the arithmetic summation of the year-wise PLI values for 5 years	Yes, cumulative PLI over 5 years, as requested, is the arithmetic summation of the year-wise PLI values for 5 years.
12.	**SIPS/M-SIPS programme of MEITY:** Please clarify that the restriction which is with respect to the fact that benefit under Central Government Schemes (as referred to in Para 1.9) should not have been availed, would be applicable only with respect to capacity on which benefit is being claimed under this PLI Scheme. Also, to amend annexure 6- "Undertaking for not taking benefit under any other scheme of MNRE/MEITY/ GOI"	The benefits under SIPS/ MSIPS/ Manufacturing Linked Tender, can be availed by manufacturers for the difference of offered bid capacity and double the PLI awarded capacity. For example, for a bid capacity of Y, if a manufacturer has been awarded PLI capacity of X, then he may avail any benefit under SIPS/MSIPS/Manufacturing Linked Tender for capacity in excess of double the PLI awarded capacity i.e., Y-2X.
13.	**Net worth/Equity Commitment requirements:** • Provide exact definition and formula of "Net worth", consolidated financial statements acceptable?	"Net worth" means the aggregate value of the paid-up share capital and all reserves created out of the profits, securities premium account and debit or credit balance of profit and loss account, after deducting the aggregate value of the accumulated losses, deferred expenditure and miscellaneous expenditure not written off, as per the audited balance sheet, but does not include reserves created out of revaluation of assets, write-back of depreciation and amalgamation.

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	• Net worth requirement (Rs 235 Cr for C+M) is on higher side as capex for (C+M) is Rs 400-430 Cr • Removal of 27.5% net worth requirement or allow 9-month time instead of 3 months for net worth establishment • Documents required • Request for 270 days to establish net worth and to include OCD, CCD, OCRPS, CCPS in equity • Can Parent / Affiliate credentials be used for fulfilling the net worth criteria as in case of RE tenders? • Net worth of Foreign Parent company can be considered? Indian CA certificate considered for foreign company to establish net worth? • Applicant needs to showcase net worth or equity commitment? • Clarify process for net worth evaluation, net worth of parent company or any of JV partner be considered?	The applicants are required to provide the net worth as per clause 3.3 of IFA document within 120 days of date of LoA. The applicant is required to furnish net worth based on audited annual accounts for FY 2020-21, however, in case of unavailability of audited annual accounts for FY 2020-21 the applicant may submit the statutory auditor certificate for net worth as on 31st March 2021 for Indian entities and 31st December 2020 for foreign entities. Net worth of the parent company will be considered. Statutory auditor of Indian entity can issue net worth certificate for foreign parent company. Applicant will have to showcase minimum net worth at the time of application as clause 3.3 (column A) of the IFA. However if they have the net worth less than as defined in clause 3.3 (column B) of IFA, they must ensure remaining equity infusion within 120 days of date of LoA, at the level of entity which shall be executing the project. Equity commitment in form of Board resolution from consortium partners/ parent company at the application stage, the commitment of equity infusion from consortium partner will be considered for net worth criteria. The same commitment shall be fulfilled post LoA on formation of SPV. The consortium member can pool the net worth in ratio of their shareholding, as per timelines defined in clause 3.3 of IFA.

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	• Can consortium members pool in their net worth to fulfil the Net Worth Criterial?180 days instead of 90 days for 27.5% net worth • Document for net worth criteria/equity commitment • Date of net worth 31st March or 30 June 2021? • CCD/CCPS allowed for fulfilling net worth criteria? • The parent for lead member of consortia is a fund which is Green Growth Equity Fund. For such a fund the concept of Assets Under Management (AUM) are typically used instead of Net Worth. Request that the requirement for net worth be appropriately modified to enable participation by funds as applicants whereby Assets Under Management is considered as the appropriate proxy.	
14.	**PBG:**	Para 3.11(ii) of PLI Scheme Guidelines states as follows: *Bidders will have to submit, at the time of signing of Contract Agreement with IREDA, Performance Bank Guarantees (PBG). In case they fail to implement the promised 'Extent of integration' or the 'Manufacturing capacity' submitted by them in their bids, within scheduled commissioning date, Bank Guarantees commensurate to the manufacturing commitments not fulfilled by the bidder will be forfeited by IREDA and balance Bank Guarantees will be released by them.*

S. No.	Queries received by IREDA	IREDA's response
	• Clarify if only PBG will be encashed in case of delay in commissioning upto 180 days? • Ratio of PBG to be submitted in case of consortium/JV • Change in format as per banker • time of 180 days to submit PBG instead of 90 days • Clarification on inclusion of list of documents	The JV/ consortium participants can mutually decide on that ratio / proportion of PBG however only one PBG for total amount is required to be submitted as per IFA. PBG, as per IFA, needs to be submitted by Successful applicants only. A confirmation towards the same will be needed at application stage, in the electronic form of application portal
15.	**Capital Goods Purchase order:** Can bidder place purchase order before last date of Bid?	Para 3.3 (b) of PLI Scheme Guidelines, inter-alia, states as follows: … *"Manufacturing units which have imported capital goods for setting up the module manufacturing facility before the last date of bid submission will not be eligible for participation under the PLI scheme"*. "Import", with its grammatical variations and cognate expressions, means bringing into India from a place outside India;
16.	**Covering letter:** Proposed Change in language	Timeline has been proposed to show net worth/ equity infusion in the executing company. The Applicant can decide on the utilization of equity as per requirement of project.
17.	**Applicant:** • To include Affiliate company (Definition as per SECI)	No change in definition of applicant as per IFA. If applying through a SPV, then such SPV shall be a 100% subsidiary of the original applicant.

S. No.	Queries received by IREDA	IREDA's response
	• Clarify if No minimum shareholding required	
18.	**<u>Greenfield /brownfield:</u>** • Greenfield /brownfield restriction is not applicable to manufacture of components in the value chain? • The existing manufacturing units are eligible to expand to higher level of integration? • Timelines are same for brownfield and greenfield as per scheme, request to provide additional time for greenfield facility	Para 3.4 of PLI Scheme Guidelines, inter-alia, states as follows: *Greenfield & Brownfield projects: Greenfield new solar PV module manufacturing units will be eligible for PLI. Brownfield projects will also be allowed to participate subject to the fulfilment of prescribed eligibility criteria for greenfield projects as mentioned at 3.2(a), 3.2(b) and 3.2(c). PLI rate for such Brownfield projects will be 50% of the rate for Greenfield projects. Brownfield projects will refer to all such new solar PV manufacturing capacities set up by the existing solar PV manufacturers which share some common infrastructure facilities with the pre-existing solar PV manufacturing capacities or addition of new manufacturing lines in the existing solar PV manufacturing facilities.*
19.	**<u>Financial/Revenue</u>:** Global or Indian revenue? Parent Company financials allowed if applicant already exists but not started business operations? Revenue & PAT to be provided for module manufacturing or entire business of applicant	The applicant may submit the global revenue, PAT and other financial details of relevant business. Applicants may enclose the breakup of financial details along with application documents. Yes

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20.	<u>**Original documents:**</u> How to submit? Clarify mechanism to verify the originality of the documents?	IREDA will ask for offline submission of original documents, if required.
21.	Will the details of applicants/applications received and at the process end, winners, waitlist candidates be announced?	List of winners and waitlist candidates will be available publicly on IREDA website, post conclusion of the allotment process.
22.	"Revised Guidelines for series approval of SPV Modules for conducting testing in Test Labs for implementation of Solar Photovoltaics Systems, Devices and Component Goods Order 2017" dated 16.04.19 be followed for lab testing of solar modules?	**The modules produced, in respect of which PLI is being claimed, shall have to comply with all the extant quality controls including BIS registration and other such requirements.**
23.	Clause 7.9 and Clause 7.7 of IREDA's bid document are directly contradictory.	The appropriate amendment to clause 7.9 being issued.
24.	To clarify the "Preference Order" referred in Clause 12 of Annex 1	Preference order will be the ranking obtained and capacity awarded according to that ranking.
25.	Clarify definition of 'Technology Partner'	The appropriate amendment is being issued to remove the same.

Annexure A

Methodology for testing module performance parameters as per PLI scheme

Step A: Document Verification under PLI Scheme

The applicant must submit copies of the following documents before the inspection:

a) The bill of material of PV module fabrication
b) Valid BIS certificate.
c) The production capacity of PV module per day of the manufacturing facility should be declared by the applicant.
d) Calibration details of the PV module tester of the manufacturing facility
e) The normal or Gaussian distribution of the P_{max} of PV module produced in a day along with the calculation of the mean (μ) and standard deviation (σ) of the P_{max} value.
f) Declared minimum efficiency should not lower than (μ - 3σ).
g) Declaration of the temperature coefficient.
h) Copy of the valid ISO certificate for quality management system.
i) List of equipment (Manufacturing & Testing) along with the schematic layup.
j) Module data sheet.

Additional Documents required as a part of ALLM Inspection.

a) Application in prescribed format in brief details.
b) Copy of Certificate of Incorporation of the applying entity issued by Registrar of Companies, Ministry of Corporate Affairs, Government of India.
c) Document authorizing the signatory to sign and submit the application.
d) Datasheets of the modules applied for enlistment in ALMM.
e) Datasheets of the solar cells used in the modules.
f) Details of Balance of Materials as sought in Application Form.
g) Copy of the Accreditation Certificate of the Lab which has given test certificates required for BIS Registration/Certification.
h) Copy of valid Type Certificate of the solar PV module model, proposed for enlistment, issued by any internationally accredited type certification body as per IEC type certification scheme or any other Scheme (applicable only for those manufacturers who are exempt from BIS Registration/ Certification).
i) Copy of Conformity Statement/Statement of Compliance.

j) Copy of Final Evaluation Report.

k) Copy of Certified Power/I-V Curve.

l) Copy of Accreditation certificate of Type certifying body.

m) Copy of valid ISO Certificate for quality management system issued in the name of Applicant, if applicable.

n) Copy of Accreditation certificate of ISO certifying body.

o) Details of the Installed Manufacturing capacity of PV modules and production there from in last three years or the period of existence of such units, whichever is less.

p) Details of purchase of raw materials, in last three years or the period of existence of such units, whichever is less.

q) Details of sales in last three years or the period of existence of such units, whichever is less.

r) Profit & Loss account for last three years or the period of existence of such units, whichever is less.

s) Statement of assets & liabilities for last three years or the period of existence of such units, whichever is less.

t) Balance Sheet for last three years or the period of existence of such units, whichever is less.

u) Details of Payment of Application Fee.

v) Details of Payment of Inspection Fee.

w) Affidavit in the prescribed format on non- judicial stamp paper (Rs. 100) duly signed and attested Indemnity Bond in the prescribed format on non- judicial stamp paper (Rs. 100) duly signed and attested.

x) List of Equipment (Manufacturing & Testing).

y) All documents duly signed by authorized signatory.

Step B: Testing Methodology

a) NISE shall carry the reference cell with valid calibration certificate to the designated manufacturing facility. The PV module tester of the manufacturer will be calibrated in presence of NISE officials, using reference cell.

b) Manufacturer shall perform the I-V testing of each PV module, using the calibrated PV module tester, for at least to the half day production capacity of the manufacturing facility. NISE shall verify and review this testing procedure and results.

c) NISE shall select PV module samples from the facility for the offsite testing at NISE indoor testing lab. Select, a sample of at least 5 modules each, from the lower end power class ($\mu - 3\sigma$)/($\mu - 2\sigma$), median power class (μ) and higher end power class ($\mu + 3\sigma$)/($\mu + 2\sigma$). Total 15 PV modules selected.

d) EL imaging test shall be done by NISE, to identify any cracks, for all the 15 PV modules at the manufacturing site.

e) Two modules from each segment (total 6 PV modules) will be kept in seal packed with an unbreakable seal, with proper seal report, at the manufacturing site. Manufacturer shall provide the storage space to accommodate these sealed PV modules. Manufacturer must retain the PV modules in sealed conditions at least for a period of 180 days from the date of sealing.

f) Rest three modules from each segment (total 9 PV modules) will be seal packed and shipped to the NISE for indoor lab testing.

g) EL imaging test shall be done by NISE, to identify any cracks, for all the 9 PV modules at NISE on receipt of PV modules.

h) NISE shall perform the I-V curve test of all the 9 No.s of PV module at STC as per relevant standards. As per IS 14286:2019, the test for stabilized efficiency shall be performed after initial exposure to light soaking.

i) NISE shall perform the temperature coefficients test of the PV modules as per Relevant Standards. As per IS 14286:2019, the test shall be performed after initial exposure to light soaking.

j) NISE shall issue the standard report to IREDA indicating the observations from site visit, PV module details, and also test results.

k) NISE shall retain all the 9 No.s PV modules, after testing, at least for a period of 180 days from the date of receipt of PV modules. After which, manufacturer may pick up the PV modules from NISE at their own expense.

Relevant Standards	
Crystalline-Si Solar PV Module	IS 14286:2019 (Part 1/Sec 1)
Thin Film (CdTe, Amorphous Si, CIGS)	IS 14286: 2019 (Part1/Sec 2/Sec 3/ Sec4)
Bifacial	IEC TS 60904.1.2