

41/06/2015-16/PVSE

Ministry of New and Renewable Energy  
Government of India  
SPV Off-Grid Division

Block No14, CGO Complex,  
Lodi Road, New Delhi-110 003  
Dated: 19<sup>th</sup> April 2017

**OFFICE MEMORENDUM**

**Subject: Quarterly review Meeting with Test Labs empanelled under Solar Off-Grid Programme during March 2017**

Quarterly review meeting of test labs empanelled under Solar Off Grid Programme was held at MNRE on 29th March 2017. The following decisions were taken in the meeting:

1. The Potential Induced Degradation (PID) test for solar modules will be mandatory from 1<sup>st</sup> April 2017. In order to simulate the Indian operating conditions, it was decided that during PID test the module, with applied system voltage, will be subjected to a conditioning for 3 rounds at 85°C and 85 % RH for a period of 96 hours in each round. After each round the module shall be allowed to recover for a period of 2 hours followed by visual inspection, EL measurements, insulation test and power determination at STC. After completion of the test the modules shall meet the pass criterion of visual inspection and insulation test. No micro-cracks shall be detected during EL measurement and power degradation at STC shall be  $\leq 5\%$ , in order to pass the test. The system voltage details of the module to be provided by the module manufacturer.
2. The PID test will be applicable to the modules being used in the application like Solar Lighting systems, Solar Pumps, Power Packs etc. The procedure to conduct the PID test will as per IEC standards. The ceiling for the test charges shall be kept at Rs. 1.5 lacs. All labs to test the modules as per the rate prescribed by NISE.
3. In continuation of previous review meeting, it was decided that modules having the certificates with OEM / Co- certification testing will be considered as disqualified under the Ministry programme.
4. The manufacturer shall provide the information laminated inside the module and it shall be readable under normal conditions
5. Earlier in previous meeting, it was stated that "300 W inverter should have minimum 90 % efficiency under full load condition whereas from 25 % to full load condition the efficiency should have minimum 85 %". However, based on the experience of Test Agencies, that it is very difficult to maintain an efficiency of 85% at 25% of load. It was decided to change the clause to:  
**"300 W inverter should have a minimum of 90 % efficiency at full load condition whereas at 25 % of full load condition, the efficiency should have a minimum value of 80 %"**.

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6. In case of batteries following decisions were taken:
  - a. The endurance test will be mandatory from 1st July 2017.
  - b. In case of test reports issued for the battery before 1st July 2017, the manufacturer needs to test only the additional test of Endurance Test. In case of any change in design of the Battery, a fresh test report is required.
  - c. The testing procedure for Li-Fe-PO<sub>4</sub> is provided by BIS, however, It was suggested that separate guidelines for testing of Li-Fe-PO<sub>4</sub> batteries be provided by NISE.
  
7. In case of Pumps following decisions were taken:
  - a. The pump shall be tested for summer and winter profiles. Also the pump shall be tested under realistic field conditions by using the PV modules provided by the manufacturer. In order to qualify the MNRE specifications the pump shall meet the requirement under realistic field condition testing and with summer & winter profile. The test report shall contain the data achieved with realistic field condition testing, testing with summer profile and winter profile. The 'Test Charges' due to this additional test shall not be increased.
  - b. In view of the practical difficulties faced by the stakeholders (in making suitable series parallel combinations), it was decided that the overall capacity of the "Total Array" is allowed up to + 10% (instead of +5%)
  - c. NISE will initiate inter lab comparison testing of a PV Pump by involving all the test labs. After completion of the inter lab comparison testing the results will be reviewed. All testing labs will submit the test results to NISE only without sharing among the test labs.
  - d. Test labs shall start the testing of Micro Solar Pumps with immediate effect.
  
8. In view of the practical difficulties faced by the small inverter manufacturers, It was decided that for 300 W inverter at 25% load condition, the efficiency be revised to 80%.
  
9. A test report must have a concluding remark either qualify or does not qualify as per the MNRE specifications. The reasons for fail shall be provided in the report. The validity of a 'Test Report' shall be for a period of three years from the date of issue or till the new specifications is in force whichever is earlier.
  
10. It was decided that the 'Test Report' of a PV System would indicate, whether the company is a 'Manufacturer' (of a component of the system viz. PV Module, Electronics, Battery, or Pump) or a 'Trader' (System Integrator).

These issues are with the approval of competent authority.



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