

F. No. 283/41/2024-GRID SOLAR

भारत सरकार / Government of India

नवीन और नवीकरणीय ऊर्जा मंत्रालय / Ministry of New & Renewable Energy

ग्रिड सौर ऊर्जा प्रभाग / Grid Solar Power Division

Atal Akshay Urja Bhawan,
Lodhi Road, New Delhi – 110003.

Dated: 23rd January, 2025

OFFICE MEMORANDUM

Sub: Updation of List I (Manufacturers and Models of Solar PV Modules) of ALMM Order, 2019 – Reg.

Ref: (i) MNRE's O.M. No. 283/54/2018-GRID SOLAR-Part(1) dated 10.03.2021
(ii) MNRE's O.M. No. 283/22/2023-GRID SOLAR/Pt dated 10.05.2023;
(iii) MNRE's O.M. No. 283/22/2023-GRID SOLAR/Pt dated 22.03.2024;

Reference is invited to this Ministry's O.M.s of even no. dated 10.03.2021, regarding implementation of Approved Models and Manufacturers of Solar Photovoltaic Modules (Requirement for Compulsory Registration) Order, 2019 and publishing List – I (Manufacturers and Models of Solar PV Modules) of ALMM Order, 2019.

2. This Ministry vide its O.M. No. 283/22/2023-GRID SOLAR/Pt dated 10.05.2023 and O.M. of even no. dated 22.03.2024 inter-alia directed that only such models of Solar PV Module Manufacturers will be enlisted under ALMM, which comply with the BIS Standards and are having the following minimum module efficiency:

Category	Application/ Use	Minimum Module Efficiency requirement for crystalline-Silicon technology based Solar PV Modules	Minimum Module Efficiency requirement for Cadmium Telluride Thin Film technology based Solar PV Modules
Category I	Utility / Grid Scale Power Plants	20.0%	19.00%
Category II	Rooftop and Solar Pumping	19.5%	18.50%
Category III	Solar Lighting	19.0%	18.00%

3. Post the O.M. dated 10.05.2023 and subsequent O.M. dated 22.03.2024, only such models of Solar PV Modules have been considered for enlistment under ALMM List-I, whose module efficiency is meeting the eligibility criteria as mentioned in table at para-2 above.

4. The List – I (Manufacturers and Models of Solar PV Modules) of ALMM Order, 2019 was last updated on 06.01.2025.

5. The List – I (Manufacturers and Models of Solar PV Modules) of ALMM Order, 2019 is hereby further revised and the Revision-XXXIV of same is enclosed at Annexure-I. The details of provisional enlistments granted by MNRE in ALMM List-I are at pages after Annexure-I.

6. The ALMM enlistment validity is subject to valid BIS Registration; else deemed to be delisted.

7. The details of Registration No. (R. No.) which has been allotted by BIS is mentioned against each manufacturer / manufacturing unit enlisted in ALMM and further details related to BIS certification like validity, models included, etc. may be checked from BIS website by using the following link:
https://www.crsbis.in/BIS/Lims_registration.do?hmode=getLimsData

8. This issues with the approval of competent authority.



(Sanjay G. Karndhar)
Scientist-E

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Encl: as above

To: All Concerned

Copy to: Director (Technical), NIC, MNRE for uploading this document on MNRE's website

S. No.	Name of the Manufacturer	Location of Manufacturing Facility	BIS Registration No.	Enlisted Capacity (MWs / Year)	S. No.	Type of Module	Applied Model	Enlisted Models	Module Efficiency (%)	No. of Cells in Module	System Voltage (in Volt)	Validity	
												From	To (subject to valid BIS Registration; else deemed to be delisted)
					iv	Mono c-Si PERC Module	AS-385-HM108 (385 Wp)	AS-375-HM108 AS-380-HM108 AS-385-HM108 AS-390-HM108 AS-395-HM108 AS-400-HM108 AS-415-HM120 AS-420-HM120 AS-425-HM120 AS-430-HM120 AS-435-HM120 AS-440-HM120 AS-445-HM120 AS-450-HM120	19.21 19.47 19.73 19.99 20.27 20.47 19.20 19.42 19.64 19.87 20.11 20.33 20.56 20.79	108 Half Cut Cells	1500	24.01.2024	23.01.2028
					v	Mono c-Si PERC Module	AS-430-HM120 (430Wp)	ISEN560 ISEN565 ISEN570 ISEN575 ISEN580 ISEN585 ISEN590 ISEN520 ISEN525 ISEN530 ISEN535 ISEN540 ISEN545 ISEN550 ISEN555	20.03 20.21 20.39 20.57 20.75 20.93 21.11 20.12 20.32 20.52 20.71 20.9 21.1 21.3 21.48	120 Half Cut Cells	1500	24.01.2024	23.01.2028
63	M/s. Icon Solar En Power Technologies Private Limited	PH No. 09, Gram Dighari Mandir Hasaud, The Arang, Raipur- 492001, Chhattisgarh, India	R-59000140	395	i	Mono c-Si PERC Module	ISEN575 (575 Wp)	ISEN500 ISEN510 ISEN420 ISEN425 ISEN430 ISEN435 ISEN440 ISEN445 ISEN450 ISEN455 ISEN460 ISEN380 ISEN385 ISEN390 ISEN395 ISEN400 ISEN405 ISEN410 ISEN620N-TOP ISEN615N-TOP ISEN610N-TOP ISEN605N-TOP ISEN600N-TOP ISEN590N-TOP ISEN585N-TOP ISEN580N-TOP ISEN575N-TOP ISEN570N-TOP ISEN565N-TOP ISEN560N-TOP ISEN540N-TOP ISEN535N-TOP ISEN530N-TOP ISEN525N-TOP ISEN520N-TOP ISEN500N-TOP ISEN495N-TOP ISEN490N-TOP ISEN485N-TOP ISEN480N-TOP ISEN475N-TOP ISEN470N-TOP ISEN465N-TOP	20.03 20.21 20.39 20.57 20.75 20.93 21.11 20.12 20.32 20.52 20.71 20.9 21.1 21.3 21.48 21.05 21.47 19.41 19.64 19.87 20.1 20.34 20.57 20.8 21.03 21.26 19.46 19.72 19.97 20.23 20.48 20.74 21 22.19 22.01 21.83 21.65 21.47 22.84 22.64 22.45 22.26 22.06 21.87 21.68 22.74 22.53 22.32 22.11 21.90 23.11 22.88 22.65 22.41 22.18 21.95 21.72 21.49	156 (Half Cut Cells)	1500	24.02.2024	23.02.2028
					ii	Mono c-Si PERC Module	ISEN540 (540 Wp)	ISEN500 ISEN510 ISEN420 ISEN425 ISEN430 ISEN435 ISEN440 ISEN445 ISEN450 ISEN455 ISEN460 ISEN380 ISEN385 ISEN390 ISEN395 ISEN400 ISEN405 ISEN410 ISEN620N-TOP ISEN615N-TOP ISEN610N-TOP ISEN605N-TOP ISEN600N-TOP ISEN590N-TOP ISEN585N-TOP ISEN580N-TOP ISEN575N-TOP ISEN570N-TOP ISEN565N-TOP ISEN560N-TOP ISEN540N-TOP ISEN535N-TOP ISEN530N-TOP ISEN525N-TOP ISEN520N-TOP ISEN500N-TOP ISEN495N-TOP ISEN490N-TOP ISEN485N-TOP ISEN480N-TOP ISEN475N-TOP ISEN470N-TOP ISEN465N-TOP	20.03 20.21 20.39 20.57 20.75 20.93 21.11 20.12 20.32 20.52 20.71 20.9 21.1 21.3 21.48 21.05 21.47 19.41 19.64 19.87 20.1 20.34 20.57 20.8 21.03 21.26 19.46 19.72 19.97 20.23 20.48 20.74 21 22.19 22.01 21.83 21.65 21.47 22.84 22.64 22.45 22.26 22.06 21.87 21.68 22.74 22.53 22.32 22.11 21.90 23.11 22.88 22.65 22.41 22.18 21.95 21.72 21.49	144 (Half Cut Cells)	1500	24.02.2024	23.02.2028
					iii	Mono c-Si PERC Module	ISEN500 (500 Wp)	ISEN500 ISEN510 ISEN420 ISEN425 ISEN430 ISEN435 ISEN440 ISEN445 ISEN450 ISEN455 ISEN460 ISEN380 ISEN385 ISEN390 ISEN395 ISEN400 ISEN405 ISEN410 ISEN620N-TOP ISEN615N-TOP ISEN610N-TOP ISEN605N-TOP ISEN600N-TOP ISEN590N-TOP ISEN585N-TOP ISEN580N-TOP ISEN575N-TOP ISEN570N-TOP ISEN565N-TOP ISEN560N-TOP ISEN540N-TOP ISEN535N-TOP ISEN530N-TOP ISEN525N-TOP ISEN520N-TOP ISEN500N-TOP ISEN495N-TOP ISEN490N-TOP ISEN485N-TOP ISEN480N-TOP ISEN475N-TOP ISEN470N-TOP ISEN465N-TOP	20.03 20.21 20.39 20.57 20.75 20.93 21.11 20.12 20.32 20.52 20.71 20.9 21.1 21.3 21.48 21.05 21.47 19.41 19.64 19.87 20.1 20.34 20.57 20.8 21.03 21.26 19.46 19.72 19.97 20.23 20.48 20.74 21 22.19 22.01 21.83 21.65 21.47 22.84 22.64 22.45 22.26 22.06 21.87 21.68 22.74 22.53 22.32 22.11 21.90 23.11 22.88 22.65 22.41 22.18 21.95 21.72 21.49	132 (Half Cut Cells)	1500	24.02.2024	23.02.2028
					iv	Mono c-Si PERC Module	ISEN440 (440 Wp)	ISEN500 ISEN510 ISEN420 ISEN425 ISEN430 ISEN435 ISEN440 ISEN445 ISEN450 ISEN455 ISEN460 ISEN380 ISEN385 ISEN390 ISEN395 ISEN400 ISEN405 ISEN410 ISEN620N-TOP ISEN615N-TOP ISEN610N-TOP ISEN605N-TOP ISEN600N-TOP ISEN590N-TOP ISEN585N-TOP ISEN580N-TOP ISEN575N-TOP ISEN570N-TOP ISEN565N-TOP ISEN560N-TOP ISEN540N-TOP ISEN535N-TOP ISEN530N-TOP ISEN525N-TOP ISEN520N-TOP ISEN500N-TOP ISEN495N-TOP ISEN490N-TOP ISEN485N-TOP ISEN480N-TOP ISEN475N-TOP ISEN470N-TOP ISEN465N-TOP	20.03 20.21 20.39 20.57 20.75 20.93 21.11 20.12 20.32 20.52 20.71 20.9 21.1 21.3 21.48 21.05 21.47 19.41 19.64 19.87 20.1 20.34 20.57 20.8 21.03 21.26 19.46 19.72 19.97 20.23 20.48 20.74 21 22.19 22.01 21.83 21.65 21.47 22.84 22.64 22.45 22.26 22.06 21.87 21.68 22.74 22.53 22.32 22.11 21.90 23.11 22.88 22.65 22.41 22.18 21.95 21.72 21.49	120 (Half Cut Cells)	1500	24.02.2024	23.02.2028
					v	Mono c-Si PERC Module	ISEN395 (395 Wp)	ISEN500 ISEN510 ISEN420 ISEN425 ISEN430 ISEN435 ISEN440 ISEN445 ISEN450 ISEN455 ISEN460 ISEN380 ISEN385 ISEN390 ISEN395 ISEN400 ISEN405 ISEN410 ISEN620N-TOP ISEN615N-TOP ISEN610N-TOP ISEN605N-TOP ISEN600N-TOP ISEN590N-TOP ISEN585N-TOP ISEN580N-TOP ISEN575N-TOP ISEN570N-TOP ISEN565N-TOP ISEN560N-TOP ISEN540N-TOP ISEN535N-TOP ISEN530N-TOP ISEN525N-TOP ISEN520N-TOP ISEN500N-TOP ISEN495N-TOP ISEN490N-TOP ISEN485N-TOP ISEN480N-TOP ISEN475N-TOP ISEN470N-TOP ISEN465N-TOP	20.03 20.21 20.39 20.57 20.75 20.93 21.11 20.12 20.32 20.52 20.71 20.9 21.1 21.3 21.48 21.05 21.47 19.41 19.64 19.87 20.1 20.34 20.57 20.8 21.03 21.26 19.46 19.72 19.97 20.23 20.48 20.74 21 22.19 22.01 21.83 21.65 21.47 22.84 22.64 22.45 22.26 22.06 21.87 21.68 22.74 22.53 22.32 22.11 21.90 23.11 22.88 22.65 22.41 22.18 21.95 21.72 21.49	108 (Half Cut Cells)	1500	24.02.2024	23.02.2028
					vi	Bifacial N-type TOPCon Module	ISEN610N-TOP (610 Wp)	ISEN500 ISEN510 ISEN420 ISEN425 ISEN430 ISEN435 ISEN440 ISEN445 ISEN450 ISEN455 ISEN460 ISEN380 ISEN385 ISEN390 ISEN395 ISEN400 ISEN405 ISEN410 ISEN620N-TOP ISEN615N-TOP ISEN610N-TOP ISEN605N-TOP ISEN600N-TOP ISEN590N-TOP ISEN585N-TOP ISEN580N-TOP ISEN575N-TOP ISEN570N-TOP ISEN565N-TOP ISEN560N-TOP ISEN540N-TOP ISEN535N-TOP ISEN530N-TOP ISEN525N-TOP ISEN520N-TOP ISEN500N-TOP ISEN495N-TOP ISEN490N-TOP ISEN485N-TOP ISEN480N-TOP ISEN475N-TOP ISEN470N-TOP ISEN465N-TOP	20.03 20.21 20.39 20.57 20.75 20.93 21.11 20.12 20.32 20.52 20.71 20.9 21.1 21.3 21.48 21.05 21.47 19.41 19.64 19.87 20.1 20.34 20.57 20.8 21.03 21.26 19.46 19.72 19.97 20.23 20.48 20.74 21 22.19 22.01 21.83 21.65 21.47 22.84 22.64 22.45 22.26 22.06 21.87 21.68 22.74 22.53 22.32 22.11 21.90 23.11 22.88 22.65 22.41 22.18 21.95 21.72 21.49	156 (Half Cut Cell)	1500	24.02.2024	23.02.2028
					vii	Bifacial N-type TOPCon Module	ISEN575N-TOP (575 Wp)	ISEN500 ISEN510 ISEN420 ISEN425 ISEN430 ISEN435 ISEN440 ISEN445 ISEN450 ISEN455 ISEN460 ISEN380 ISEN385 ISEN390 ISEN395 ISEN400 ISEN405 ISEN410 ISEN620N-TOP ISEN615N-TOP ISEN610N-TOP ISEN605N-TOP ISEN600N-TOP ISEN590N-TOP ISEN585N-TOP ISEN580N-TOP ISEN575N-TOP ISEN570N-TOP ISEN565N-TOP ISEN560N-TOP ISEN540N-TOP ISEN535N-TOP ISEN530N-TOP ISEN525N-TOP ISEN520N-TOP ISEN500N-TOP ISEN495N-TOP ISEN490N-TOP ISEN485N-TOP ISEN480N-TOP ISEN475N-TOP ISEN470N-TOP ISEN465N-TOP	20.03 20.21 20.39 20.57 20.75 20.93 21.11 20.12 20.32 20.52 20.71 20.9 21.1 21.3 21.48 21.05 21.47 19.41 19.64 19.87 20.1 20.34 20.57 20.8 21.03 21.26 19.46 19.72 19.97 20.23 20.48 20.74 21 22.19 22.01 21.83 21.65 21.47 22.84 22.64 22.45 22.26 22.06 21.87 21.68 22.74 22.53 22.32 22.11 21.90 23.11 22.88 22.65 22.41 22.18 21.95 21.72 21.49	144 (Half Cut Cell)	1500	24.02.2024	23.02.2028
					viii	Bifacial N-type TOPCon Module	ISEN530N-TOP (530 Wp)	ISEN500 ISEN510 ISEN420 ISEN425 ISEN430 ISEN435 ISEN440 ISEN445 ISEN450 ISEN455 ISEN460 ISEN380 ISEN385 ISEN390 ISEN395 ISEN400 ISEN405 ISEN410 ISEN620N-TOP ISEN615N-TOP ISEN610N-TOP ISEN605N-TOP ISEN600N-TOP ISEN590N-TOP ISEN585N-TOP ISEN580N-TOP ISEN575N-TOP ISEN570N-TOP ISEN565N-TOP ISEN560N-TOP ISEN540N-TOP ISEN535N-TOP ISEN530N-TOP ISEN525N-TOP ISEN520N-TOP ISEN500N-TOP ISEN495N-TOP ISEN490N-TOP ISEN485N-TOP ISEN480N-TOP ISEN475N-TOP ISEN470N-TOP ISEN465N-TOP	20.03 20.21 20.39 20.57 20.75 20.93 21.11 20.12 20.32 20.52 20.71 20.9 21.1 21.3 21.48 21.05 21.47 19.41 19.64 19.87 20.1 20.34 20.57 20.8 21.03 21.26 19.46 19.72 19.97 20.23 20.48 20.74 21 22.19 22.01 21.83 21.65 21.47 22.84 22.64 22.45 22.26 22.06 21.87 21.68 22.74 22.53 22.32 22.11 21.90 23.11 22.88 22.65 22.41 22.18 21.95 21.72 21.49	132 (Half Cut Cell)	1500	24.02.2024	23.02.2028
					ix	Bifacial N-type TOPCon Module	ISEN480N-TOP (480 Wp)	ISEN500 ISEN510 ISEN420 ISEN425 ISEN430 ISEN435 ISEN440 ISEN445 ISEN450 ISEN455 ISEN460 ISEN380 ISEN385 ISEN390 ISEN395 ISEN400 ISEN405 ISEN410 ISEN620N-TOP ISEN615N-TOP ISEN610N-TOP ISEN605N-TOP ISEN600N-TOP ISEN590N-TOP ISEN585N-TOP ISEN580N-TOP ISEN575N-TOP ISEN570N-TOP ISEN565N-TOP ISEN560N-TOP ISEN540N-TOP ISEN535N-TOP ISEN530N-TOP ISEN525N-TOP ISEN520N-TOP ISEN500N-TOP ISEN495N-TOP ISEN490N-TOP ISEN485N-TOP ISEN480N-TOP ISEN475N-TOP ISEN470N-TOP ISEN465N-TOP	20.03 20.21 20.39 20.57 20.75 20.93 21.11 20.12 20.32 20.52 20.71 20.9 21.1 21.3 21.48 21.05 21.47 19.41 19.64 19.87 20.1 20.34 20.57 20.8 21.03 21.26 19.46 19.72 19.97 20.23 20.48 20.74 21 22.19 22.01 21.83 21.65 21.47 22.84 22.64 22.45 22.26 22.06 21.87 21.68 22.74 22.53 22.32 22.11 21.90 23.11 22.88 22.65 22.41 22.18 21.95 21.72 21.49	120 (Half Cut Cell)	1500	24.02.2024	23.02.2028

S. No.	Name of the Manufacturer	Location of Manufacturing Facility	BIS Registration No.	Enlisted Capacity (MWs / Year)	S. No.	Type of Module	Applied Model	Enlisted Models	Module Efficiency (%)	No. of Cells in Module	System Voltage (in Volt)	Validity	
												From	To (subject to valid BIS Registration; else deemed to be delisted)
					x	Bifacial N-type TOPCon Module	ISEN430N-TOP (430 Wp)	ISEN460N-TOP ISEN440N-TOP ISEN435N-TOP ISEN430N-TOP ISEN425N-TOP ISEN420N-TOP	21.26 22.53 22.28 22.02 21.76 21.51	108 (Half Cut Cell)	1500	24.02.2024	23.02.2028
64	M/s. Waaree Energies Limited	Unit 2B, Survey No. 267, NH-48, Nandigram Village, Taluke Umbergaon, District Valsad, Gujarat 396105	R-72003085	1156	i	Mono c- Si PERC Module	WSMD-540 (540Wp)	WSMD-543 WSMD-525 WSMD-530 WSMD-535 WSMD-540 WSMD-545 WSMD-550	20.2 20.39 20.58 20.78 20.97 21.17 21.36	144 (Half Cut Cells)	1500	24.02.2024	23.02.2028
					ii	Bifacial Mono c- Si PERC Module	Bi-55-540 (540Wp)	Bi-55-520 Bi-55-525 Bi-55-530 Bi-55-535 Bi-55-540 Bi-55-545 Bi-55-550	20.2 20.39 20.58 20.78 20.97 21.17 21.36	144 (Half Cut Cells)	1500	24.02.2024	23.02.2028
					iii	N TOPCon Module	WSMT-570 (570Wp)	WSMT-560 WSMT-565 WSMT-570 WSMT-575 WSMT-580	21.75 21.94 22.14 22.33 22.53	144 (Half Cut Cells)	1500	24.02.2024	23.02.2028
					iv	N TOPCon Module	WSMT-615 (615Wp)	WSMT-605 WSMT-610 WSMT-615 WSMT-620 WSMT-625	21.74 21.92 22.1 22.28 22.46	156 (Half Cut Cells)	1500	24.02.2024	23.02.2028
					v	N TOPCon Module(Bifacial)	BIN-17-615 (615Wp)	BIN-17-605 BIN-17-610 BIN-17-615 BIN-17-620 BIN-17-625	21.64 21.82 22 22.18 22.35	156 (Half Cut Cells)	1500	24.02.2024	23.02.2028
					vi	N TOPCon Module(Bifacial)	BIN-08-570 (570Wp)	BIN-08-560 BIN-08-565 BIN-08-570 BIN-08-575 BIN-08-580	21.67 21.87 22.06 22.25 22.45	144 (Half Cut Cells)	1500	24.02.2024	23.02.2028
65	M/s. Waaree Energies Limited	Survey No 38/1,Tumb Village,Tumb,Umbergaon,Valsad,Gujar at-396150	R-72002038	1095	i	Mono c- Si PERC Module	WSMD-440 (440Wp)	WSMD-420 WSMD-425 WSMD-430 WSMD-435 WSMD-440 WSMD-445 WSMD-450	19.32 19.55 19.78 20.01 20.24 20.47 20.7	144 (Half Cut Cells)	1500	24.02.2024	23.02.2028
					ii	Mono c- Si PERC Module	WSMD-540 (540Wp)	WSMD-520 WSMD-525 WSMD-530 WSMD-535 WSMD-540 WSMD-545 WSMD-550	20.2 20.39 20.58 20.78 20.97 21.17 21.36	144 (Half Cut Cells)	1500	24.02.2024	23.02.2028
					iii	Mono c- Si PERC Bifacial Module	Bi-31-440(440Wp)	Bi-31-420 Bi-31-425 Bi-31-430 Bi-31-435 Bi-31-440 Bi-31-445 Bi-31-450	19.32 19.55 19.78 20.01 20.24 20.47 20.7	144 (Half Cut Cells)	1500	24.02.2024	23.02.2028
					iv	Bifacial Mono c-Si PERC Module	Bi-55-540 (540Wp)	Bi-55-520 Bi-55-525 Bi-55-530 Bi-55-535 Bi-55-540 Bi-55-545 Bi-55-550	20.2 20.39 20.58 20.78 20.97 21.17 21.36	144 (Half Cut Cells)	1500	24.02.2024	23.02.2028
					v	Mono c- Si PERC Module	WSMDI-400 (400Wp)	WSMDI-395 WSMDI-400 WSMDI-405 WSMDI-410	19.79 20.03 20.28 20.53	132 (Half Cut Cells)	1500	24.02.2024	23.02.2028