

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: 27th September, 2024

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 28.08.2024.

5. The List – I (Manufacturers and Models of Solar PV Modules) of ALMM Order, 2019 is hereby further revised and the Revision-XXVIII 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

List of Manufacturers and Models of Solar PV Modules Enlisted under ALMM Order (As on 27.09.2024)

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)
1	Emmvee Photovoltaic Power Pvt. Ltd.	#13/1, International Airport Road (Bellary Road), Bettahalsuru Post, Bengaluru-562157, Karnataka	R-62001074	512	i	Mono C-Si PERC Modules	E390M72 (390 Wp)	E385M72	19.20	72 (Full Cells)	1500	10.03.2023	09.03.2027
								E390M72	19.45				
					ii	Mono C-Si PERC Modules	E325M60 (325 Wp)	E395M72	19.70				
								E320M60	19.04				
2	M/s Sova Solar Ltd.	Layout Plot No: 25, E.P.I.P, Banskopa, Durgapur 713212, West Bengal, India.	R-51000590	532	i	Mono C-Si PERC Modules	SS535144HCMP (535Wp)	SS520144HCMP	20.16	144 (Half-Cut Cells)	1500	10.03.2023	09.03.2027
								SS525144HCMP	20.35				
								SS530144HCMP	20.54				
								SS535144HCMP	20.74				
								SS540144HCMP	20.93				
								SS545144HCMP	21.13				
								SS550144HCMP	21.32				
								SS555144HCMP	21.51				
					ii	Mono C-Si PERC Bifacial Modules	SS535144HCBP (535Wp)	SS520144HCBP	20.16				
								SS525144HCBP	20.35				
								SS530144HCBP	20.54				
								SS535144HCBP	20.74				
								SS540144HCBP	20.93				
								SS545144HCBP	21.13				
								SS550144HCBP	21.32				
								SS555144HCBP	21.51				
3	M/s Solex Energy Ltd	Plot No. 131/A Phase-1, G.I.D.C, Vitthal Udyog Nagar, Anand, Gujarat	R-72002577	21	i	Mono C-Si PERC Modules	SESM24375 (375 Wp)	SESM24370	19.04	72 (Full Cells)	1000	10.03.2023	09.03.2027
								SESM24375	19.30				
								SESM24380	19.55				
					ii	Mono C-Si PERC Modules	SES20CM120W320 (320 Wp)	SES20CM120W320	19.21				
								iii	Mono C-Si PERC Modules	SES24CM144W380 (380 Wp)	SES24CM144W375	19.01	
											SES24CM144W380	19.30	
SES24CM144W385	19.51												
4	Saatvik Green Energy Pvt. Ltd.	Village Dubli, Tehshil- Barara, Dist- Ambala -133101, Haryana	R-91003670	566	i	Mono C-Si PERC Modules	SGE 190-36M (190 Wp)	SGE 190-36M	19.11	36 (Full Cells)	1000	10.03.2023	09.03.2027
								SGE 255-48M	19.37				
					ii	Mono C-Si PERC Modules	SGE 285-54M (285 Wp)	SGE 280-54M	19.15				
								SGE 285-54M	19.49				
					iii	Mono C-Si PERC Modules	SGE 315-60M (315 Wp)	SGE 310-60M	19.08				
								SGE 315-60M	19.41				
					iv	Mono C-Si PERC Modules	SGE 375-72M (375 Wp)	SGE 370-72M	19.09				
								SGE 375-72M	19.35				
					v	Mono C-Si PERC Modules	SGE 380-72M (380 Wp)	SGE 380-72M	19.61				
								SGE555-156MHC	19.78				
								SGE560-156MHC	19.96				
								SGE565-156MHC	20.14				
								SGE570-156MHC	20.32				
								SGE575-156MHC	20.50				
								SGE580-156MHC	20.67				
								SGE585-156MHC	20.85				
								SGE590-156MHC	21.03				
								SGE520-144MHC	20.13				
					vi	Mono C-Si PERC Modules	SGE570-156MHC (570 Wp)	SGE525-144MHC	20.32				
								SGE530-144MHC	20.52				
								SGE535-144MHC	20.70				
								SGE540-144MHC	20.90				
								SGE545-144MHC	21.10				
								SGE550-144MHC	21.29				
SGE470-132MHC	19.78												
SGE475-132MHC	20.01												
vii	Mono C-Si PERC Modules	SGE530-144MHC (530 Wp)	SGE480-132MHC	20.23									
			SGE485-132MHC	20.41									
			SGE490-132MHC	20.63									
			SGE495-132MHC	20.84									
			SGE500-132MHC	21.05									
			SGE420-120MHC	19.37									
			SGE425-120MHC	19.60									
			SGE480-132MHC	20.23									
viii	Mono C-Si PERC Modules	SGE485-132MHC (485 Wp)	SGE485-132MHC	20.41									
			SGE490-132MHC	20.63									
			SGE495-132MHC	20.84									
			SGE500-132MHC	21.05									
			SGE420-120MHC	19.37									
			SGE425-120MHC	19.60									
			SGE480-132MHC	20.23									
			SGE485-132MHC	20.41									

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)
					ix	Mono C-Si PERC Modules	SGE440-120MHC, (440 Wp)	SGE430-120MHC	19.83	120 (Half Cut Cells)	1500	10.03.2023	09.03.2027
								SGE435-120MHC	20.06				
								SGE440-120MHC	20.29				
								SGE445-120MHC	20.52				
								SGE450-120MHC	20.76				
								SGE455-120MHC	20.99				
					x	Mono C-Si PERC Modules	SGE395-108MHC, (395 Wp)	SGE380-108MHC	19.44	108 (Half Cut Cells)	1500	10.03.2023	09.03.2027
								SGE385-108MHC	19.69				
								SGE390-108MHC	19.95				
								SGE395-108MHC	20.20				
								SGE400-108MHC	20.46				
								SGE405-108MHC	20.71				
xi	Mono C-Si PERC Modules	SGE 395-72M, (395 Wp)	SGE 385-72M	19.22	72 (Full Cell)	1500	10.03.2023	09.03.2027					
			SGE 390-72M	19.47									
			SGE 395-72M	19.72									
xii	Bifacial Mono c-Si PERC Modules (Glass to Transparent Backsheet)	SGE535-144MBHC (535 Wp)	SGE 400-72M	19.97	144 (Half Cut Cells)	1500	10.03.2023	09.03.2027					
			SGE525-144MBHC	20.32									
			SGE530-144MBHC	20.52									
			SGE535-144MBHC	20.71									
			SGE540-144MBHC	20.90									
			SGE545-144MBHC	21.10									
5	Navitas Green Solutions Pvt. Ltd.	Plot No. B-20/3, Road No. 13, 14, Palsana-Baleswar Rd, Hoziwala Industrial Estate, Sachin, Surat-394230, Gujarat	R-72003140	250	i	Mono C-Si PERC Modules	NSM375 (375 Wp)	NSM370	19.07	72 (Full Cells)	1500	10.03.2023	09.03.2027
ii	Mono C-Si PERC Modules	NSM320-60 (320 Wp)	NSM375	19.33									
iii	Mono C-Si PERC Modules	NSM350-66 (350 Wp)	NSM380	NSM310-60	19.09	60 (Full Cells)	1500	10.03.2023	09.03.2027				
				NSM315-60	19.40								
iv	Mono PERC C-Si Module	NSM580-156 (580 Wp)	NSM320-60	NSM320-60	19.71	156 (Half Cut Cells)	1500	10.03.2023	09.03.2027				
				NSM325-60	20.02								
				NSM330-60	20.33								
v	Mono PERC C-Si Module	NSM540-144 (540 Wp)	NSM340-66	NSM340-66	19.03	144 (Half Cut Cells)	1500	10.03.2023	09.03.2027				
				NSM345-66	19.31								
				NSM350-66	19.59								
				NSM355-66	19.87								
				NSM570-156	20.39								
vi	Mono PERC C-Si Module	NSM500-132 (500 Wp)	NSM575-156	20.57	132 (Half Cut Cells)	1500	10.03.2023	09.03.2027					
			NSM580-156	20.74									
			NSM585-156	20.92									
			NSM525-144	20.32									
			NSM530-144	20.51									
			NSM535-144	20.71									
vii	Mono PERC C-Si Module	NSM445-120 (445 Wp)	NSM540-144	20.90	120 (Half Cut Cells)	1500	10.03.2023	09.03.2027					
			NSM545-144	21.09									
			NSM550-144	21.29									
			NSM555-144	21.48									
viii	Mono PERC C-Si Module	NSM400-108 (400 Wp)	NSM560-144	21.67	108 (Half Cut Cells)	1500	10.03.2023	09.03.2027					
			NSM480-132	20.21									
			NSM485-132	20.42									
ix	Mono PERC C-Si Module	NSM360-96 (360 Wp)	NSM490-132	20.64	96 (Half Cut Cells)	1500	10.03.2023	09.03.2027					
			NSM495-132	20.85									
			NSM500-132	21.06									
			NSM435-120	20.09									
			NSM440-120	20.33									
x	Mono PERC C-Si Module	NSM270-72 (270 Wp)	NSM445-120	20.56	72 (Half Cut Cells)	1500	10.03.2023	09.03.2027					
			NSM450-120	20.79									
								NSM455-120	21.02				
								NSM390-108	19.96				
								NSM395-108	20.21				
								NSM400-108	20.47				
								NSM405-108	20.72				
								NSM410-108	20.98				
								NSM350-96	20.06				
								NSM355-96	20.35				
								NSM360-96	20.64				
								NSM365-96	20.92				
								NSM260-72	19.62				
								NSM265-72	20.00				
								NSM270-72	20.38				
								NSM275-72	20.76				
								NSM460-156	19.65				

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												From	To (subject to valid BIS Registration; else deemed to be delisted)
					xi	Mono PERC C-Si Module	NSM470-156 (470 Wp)	NSM465-156	19.86	156 (Half Cut Cells)	1500	10.03.2023	09.03.2027
								NSM470-156	20.07				
								NSM475-156	20.29				
								NSM480-156	20.50				
					xii	Mono PERC C-Si Module	NSM450-144 (450 Wp)	NSM485-156	20.72	144 (Half Cut Cells)	1500	10.03.2023	09.03.2027
								NSM440-144	20.32				
								NSM445-144	20.78				
								NSM450-144	20.55				
								NSM455-144	21.01				
								NSM460-144	21.64				
								NSM465-144	21.47				
								NSM395-132	19.85				
					xiii	Mono PERC C-Si Module	NSM405-132 (405 Wp)	NSM400-132	20.10	132 (Half Cut Cells)	1500	10.03.2023	09.03.2027
								NSM405-132	20.35				
								NSM410-132	20.60				
								NSM415-132	20.85				
					xiv	Mono PERC C-Si Module	NSM370-120 (370 Wp)	NSM360-120	19.84	120 (Half Cut Cells)	1500	10.03.2023	09.03.2027
								NSM365-120	20.11				
								NSM370-120	20.39				
								NSM375-120	20.66				
					xv	Mono PERC C-Si Module	NSM330-108 (330 Wp)	NSM320-108	19.52	108 (Half Cut Cells)	1500	10.03.2023	09.03.2027
								NSM325-108	19.82				
								NSM330-108	20.13				
								NSM335-108	20.43				
					xvi	Mono PERC C-Si Module	NSM290-96 (290 Wp)	NSM340-108	20.74	96 (Half Cut Cells)	1500	10.03.2023	09.03.2027
								NSM285-96	19.47				
								NSM290-96	19.81				
								NSM295-96	20.15				
xvii	Mono PERC C-Si Module	NSM220-72 (220 Wp)	NSM300-96	20.49	72 (Half Cut Cells)	1500	10.03.2023	09.03.2027					
			NSM215-72	19.32									
			NSM220-72	19.77									
			NSM225-72	20.22									
xviii	Mono PERC C-Si Module	NSM395 (395 Wp)	NSM385	19.40	72 (Full Cells)	1500	10.03.2023	09.03.2027					
			NSM390	19.65									
			NSM395	19.90									
			NSM400	20.15									
			JH-420M	19.26									
			JH-425M	19.49									
			JH-430M	19.71									
			JH-435M	19.94									
JH-440M	20.17												
JH-445M	20.40												
JH-450M	20.63												
JH-455M	20.86												
JH-460M	21.09												
JH-470M	19.66												
JH-475M	19.87												
JH-480M	20.08												
JH-485M	20.29												
JH-490M	20.50												
JH-495M	20.71												
JH-500M	20.92												
JH-505M	21.13												
JH-510M	21.34												
JH-515M	19.85												
JH-520M	20.04												
JH-525M	20.23												
JH-530M	20.43												
JH-535M	20.62												
JH-540M	20.81												
JH-545M	21.00												
JH-550M	21.20												
JH-555M	21.39												
JH-580M	20.67												
JH-585M	20.85												
JH-590M	21.03												
JH-595M	21.21												
JH-600M	21.38												
JP-H385M	19.37												
JP-H390M	19.62												

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)
					v	Mono C-Si PERC Modules	JP-H395M, (385Wp-405Wp)	JP-H395M JP-H400M JP-H405M	19.87 20.12 20.37	72 (Full Cells)	1500	17.08.2023	16.08.2027
					vi	Mono C-Si PERC Modules	JH-400M, (400Wp)	JH-380M JH-385M JH-390M JH-395M JH-400M JH-405M JH-410M JH-415M	19.28 19.53 19.79 20.04 20.29 20.55 20.88 21.06	108 (Half-Cut Cells)	1500	17.08.2023	16.08.2027
					vii	Mono c-Si Bifacial PERC Module	JH-400BB	JH-380BB JH-385BB JH-390BB JH-395BB JH-400BB JH-405BB JH-410BB JH-415BB	19.48 19.73 19.99 20.25 20.50 20.76 21.01 21.27	108 (Half Cut Cells)	1500	17.08.2023	16.08.2027
					viii	Mono c-Si Bifacial PERC Module	JH-440BB	JH-420BB JH-425BB JH-430BB JH-435BB JH-440BB JH-445BB JH-450BB JH-455BB JH-460BB JH-475BB	19.39 19.62 19.85 20.08 20.31 20.54 20.77 21.00 21.23 20.02	120 (Half Cut Cells)	1500	17.08.2023	16.08.2027
					ix	Mono c-Si Bifacial PERC Module	JH-490BB	JH-480BB JH-485BB JH-490BB JH-495BB JH-500BB JH-505BB JH-510BB JH-515BB	20.23 20.44 20.65 20.86 21.07 21.29 21.50 21.71	132 (Half Cut Cells)	1500	17.08.2023	16.08.2027
					x	Mono c-Si Bifacial PERC Module	JH-535BB	JH-520BB JH-525BB JH-530BB JH-535BB JH-540BB JH-545BB JH-550BB JH-555BB	20.15 20.34 20.53 20.73 20.92 21.11 21.31 21.50	144 (Half Cut Cells)	1500	17.08.2023	16.08.2027
					xi	Mono c-Si Bifacial PERC Module	JH-400BT	JH-380BT JH-385BT JH-390BT JH-395BT JH-400BT JH-405BT JH-410BT JH-415BT	19.48 19.73 19.99 20.25 20.50 20.76 21.01 21.27	108 (Half Cut Cells)	1500	17.08.2023	16.08.2027
					xii	Mono c-Si Bifacial PERC Module	JH-440BT	JH-420BT JH-425BT JH-430BT JH-435BT JH-440BT JH-445BT JH-450BT JH-455BT JH-460BT JH-475BT	19.39 19.62 19.85 20.08 20.31 20.54 20.77 21.00 21.23 20.02	120 (Half Cut Cells)	1500	17.08.2023	16.08.2027
					xiii	Mono c-Si Bifacial PERC Module	JH-490BT	JH-480BT JH-485BT JH-490BT JH-495BT JH-500BT JH-505BT JH-510BT JH-515BT JH-520BT	20.23 20.44 20.65 20.86 21.07 21.29 21.50 21.71 20.15	132 (Half Cut Cells)	1500	17.08.2023	16.08.2027

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)
					xiv	Mono c-Si Bifacial PERC Module	JH-535BT	JH-525BT JH-530BT JH-535BT JH-540BT JH-545BT JH-550BT JH-555BT	20.34 20.53 20.73 20.92 21.11 21.31 21.50	144 (Half Cut Cells)	1500	17.08.2023	16.08.2027
					xv	Mono c-Si Bifacial PERC Module	JH-400BW	JH-380BW JH-385BW JH-390BW JH-395BW JH-400BW JH-405BW JH-410BW JH-415BW JH-420BW JH-425BW JH-430BW JH-435BW JH-440BW JH-445BW JH-450BW JH-455BW JH-460BW	19.48 19.73 19.99 20.25 20.50 20.76 21.01 21.27 19.39 19.62 19.85 20.08 20.31 20.54 20.77 21.00 21.23	108 (Half Cut Cells)	1500	17.08.2023	16.08.2027
					xvi	Mono c-Si Bifacial PERC Module	JH-440BW	JH-440BW JH-445BW JH-450BW JH-455BW JH-460BW	19.62 19.85 20.08 20.31 20.54 20.77 21.00 21.23	120 (Half Cut Cells)	1500	17.08.2023	16.08.2027
					xvii	Mono c-Si Bifacial PERC Module	JH-490BW	JH-475BW JH-480BW JH-485BW JH-490BW JH-495BW JH-500BW JH-505BW JH-510BW JH-515BW	20.02 20.23 20.44 20.65 20.86 21.07 21.29 21.50 21.71	132 (Half Cut Cells)	1500	17.08.2023	16.08.2027
					xviii	Mono c-Si Bifacial PERC Module	JH-535BW	JH-520BW JH-525BW JH-530BW JH-535BW JH-540BW JH-545BW JH-550BW JH-555BW	20.15 20.34 20.53 20.73 20.92 21.11 21.31 21.50	144 (Half Cut Cells)	1500	17.08.2023	16.08.2027
					xix	N-Type TOPCon Module (Glass to Transparent Backsheet)	JN-420BT (420 Wp)	JN-400BT JN-405BT JN-410BT JN-415BT JN-420BT JN-425BT JN-430BT JN-435BT JN-440BT JN-445BT JN-450BT JN-455BT JN-460BT JN-465BT JN-470BT JN-475BT JN-480BT JN-485BT JN-490BT JN-495BT	20.50 20.76 21.01 21.27 21.53 21.78 22.04 22.29 22.55 20.54 20.77 21.00 21.23 21.46 21.70 21.93 22.16 22.39 22.62 20.86	108 (Half Cut Cells)	1500	17.08.2023	16.08.2027
					xx	N-Type TOPCon Module (Glass to Transparent Backsheet)	JN-470BT (470 Wp)	JN-500BT JN-505BT JN-510BT JN-515BT JN-520BT JN-525BT JN-530BT JN-535BT JN-540BT JN-545BT JN-550BT	20.77 21.00 21.23 21.46 21.70 21.93 22.16 22.39 22.62 20.86 21.07 21.28 21.50 21.71 21.92 22.13 22.34 22.55 22.76 21.12 21.31	120 (Half Cut Cells)	1500	17.08.2023	16.08.2027
					xxi	N-Type TOPCon Module (Glass to Transparent Backsheet)	JN-520BT (520 Wp)	JN-500BT JN-505BT JN-510BT JN-515BT JN-520BT JN-525BT JN-530BT JN-535BT JN-540BT JN-545BT JN-550BT	21.07 21.28 21.50 21.71 21.92 22.13 22.34 22.55 22.76 21.12 21.31	132 (Half Cut cells)	1500	17.08.2023	16.08.2027

