केंद्रीय लोक निर्माण विभाग
कार्यालय ज्ञापन
सं.–डीजी/अधीक्षण अभियंता(वै)टास/नई तकनीक/03
महानिदेशक, के.लो.नि.वि. द्वारा प्रदत्त अधिकार द्वारा जारी

निर्माण भवन, नई दिल्ली — दिनांक 12.09.2019
चतुर्दशी, शुक्ल, भाद्रपद, 2076

विषय:- Adoption of New & Emerging Technologies by CPWD- issue of DSR & AOR items for Solar Photovoltaic Power Plant - regarding

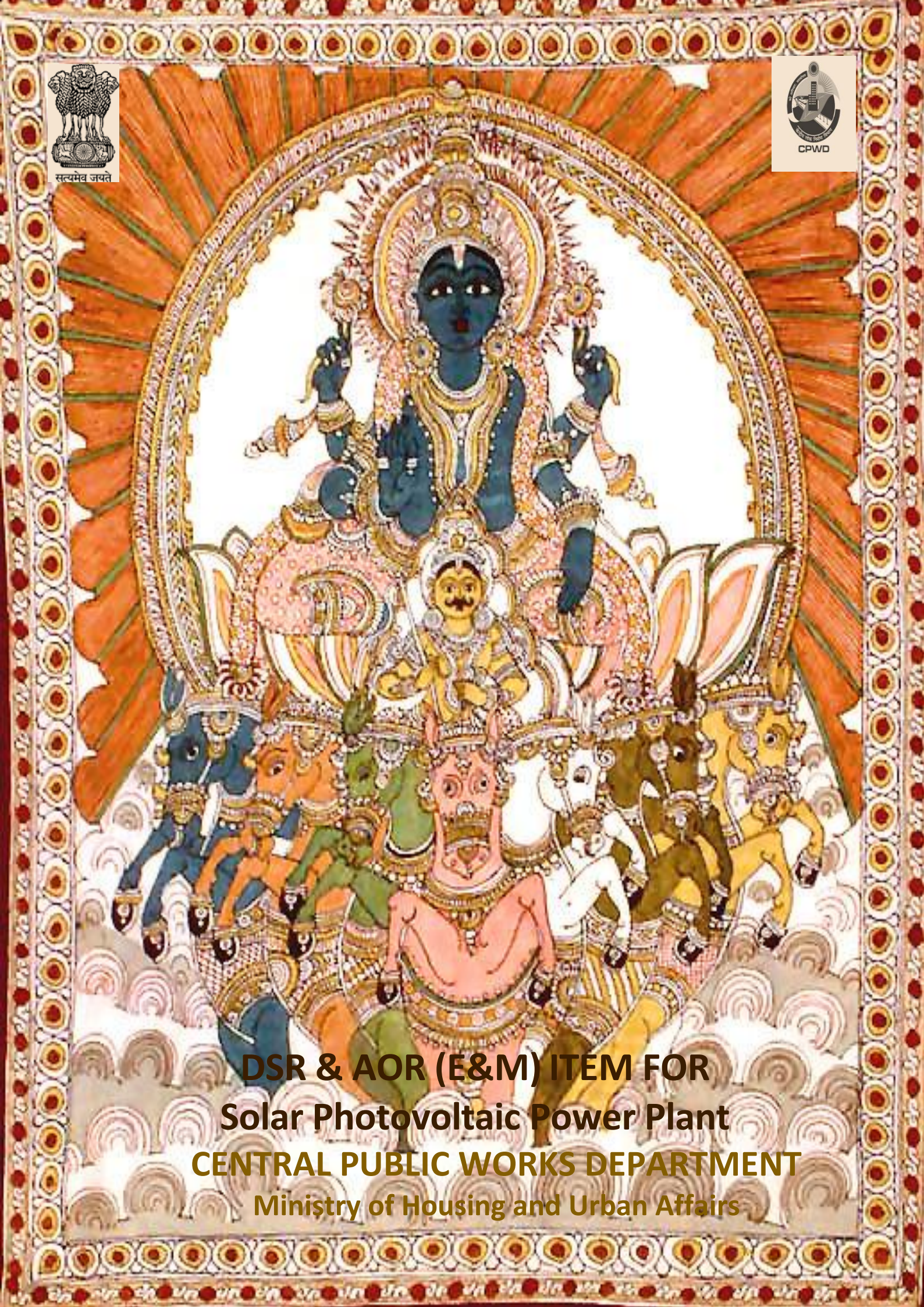
It is hereby notified that DSR & AOR (Item for Solar Photovoltaic Power Plant)-2019 have been approved and have become effective with immediate effect. These are available in PDF format at https://www.cpwd.gov.in/Publication/DSR and AOR for Solar Photovoltaic Power Plant.pdf

(डी के तुलानी)
अधीक्षण अभियंता (वै)
तकनीकी अनुप्रयोग एवं मानक

फाइल नंबर–ई–9059857/9(नई टेक्नोलॉजी)/मु.अ.(वै)सीएसक्यू/2019

सेवा में, (केवल केंद्रीय लोक निर्माण विभाग की वेबसाइट के माध्यम से)

सभी विशेष महानिदेशक/अतिरिक्त महानिदेशक/मुख्य अभियंता/मुख्य परियोजना प्रबन्धक/अधीक्षण अभियंता/परियोजना प्रबन्धक/कार्यपालक अभियंता, के. लो. नि. वि. को सूचनार्थ एवं आवश्यक कार्रवाई हेतु।



DSR & AOR (E&M) ITEM FOR

Solar Photovoltaic Power Plant

CENTRAL PUBLIC WORKS DEPARTMENT

Ministry of Housing and Urban Affairs

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DELHI SCHEDULE OF RATES			
Solar Photovoltaic Power Plant			
S.No.	**Description**	**Unit**	**Rate ₹**
1	Supply, Installation, Testing and Commissioning of ongrid Solar Photovoltaic Power Plant conforming to MNRE specifications as amended, consisting of Mono/Poly Crystalline silicon solar cells, net metering facility, necessary protections, earthing, mounted on Aluminium/GI structure of suitable strength with following components complete as required:- a) Solar Photovoltaic Module of capacity 330 Wp or above, manufactured in India, conforming to IS 14286/IEC 61215, IS/IEC 61730-Part-1, IS/IEC 61730-Part-2. Solar Photovoltaic Module conversion efficiency shall not be less than 16.5%. PV modules used in solar power plants/ systems must be warranted for their output peak watt capacity, which should not be less than 90% at the end of 10 years and 80% at the end of 25 years. b) Power Conditioning Unit (PCU) of 350-800 V DC Input voltage range and 400 V AC, three phase, 4 wire, 50Hz +/- 2.5 Hz, output voltage suitable to generate AC Power with efficiency not less than 97%, total harmonic distortion less than 3% and suitable for ambient temperature from 0 to 50 degree C. The PCU shall adjust the voltage and frequency level to suit the Grid Voltage Frequency. c) Data Monitoring System complete with accessories. d) Fixing of Array junction box & Main junction box with IP 65 protection and termination arrangement for incoming and outgoing cable along with glands, lugs and other accessories etc. as required. e) Lightning and surge voltage protection. f) Connections & Interconnections by supplying & fixing required size XLPE insulated copper conductor 1.1 kV grade armoured power and control cables between solar modules, main power cable to grid supply PCU unit along with supplying & fixing of necessary channel/conduit lugs and other accessories etc. as required.	kWp	61060.00

ANALYSIS OF RATES					
1	Supply, Installation, Testing and Commissioning of ongrid Solar Photovoltaic Power Plant conforming to MNRE specifications as amended, consisting of Mono/Poly Crystalline silicon solar cells, net metering facility, necessary protections, earthing, mounted on Aluminium/GI structure of suitable strength with following components complete as required:- a) Solar Photovoltaic Module of capacity 330 Wp or above, manufactured in India, conforming to IS 14286/IEC 61215, IS/IEC 61730-Part-1, IS/IEC 61730-Part-2. Solar Photovoltaic Module conversion efficiency shall not be less than 16.5%. PV modules used in solar power plants/ systems must be warranted for their output peak watt capacity, which should not be less than 90% at the end of 10 years and 80% at the end of 25 years. b) Power Conditioning Unit (PCU) of 350-800 V DC Input voltage range and 400 V AC, three phase, 4 wire, 50Hz +/- 2.5 Hz, output voltage suitable to generate AC Power with efficiency not less than 97%, total harmonic distortion less than 3% and suitable for ambient temperature from 0 to 50 degree C. The PCU shall adjust the voltage and frequency level to suit the Grid Voltage Frequency. c) Data Monitoring System complete with accessories. d) Fixing of Array junction box & Main junction box with IP 65 protection and termination arrangement for incoming and outgoing cable along with glands, lugs and other accessories etc. as required. e) Lightning and surge voltage protection. f) Connections & Interconnections by supplying & fixing required size XLPE insulated copper conductor 1.1 kV grade armoured power and control cables between solar modules, main power cable to grid supply PCU unit along with supplying & fixing of necessary channel/conduit lugs and other accessories etc. as required.				
	Cost FOR 50 kWp				
	Description	**Unit**	**Qty**	**Rate**	**Amount**
A	**MATERIALS**				
	A(1) 330 Wp Solar PV Panels	Nos.	152.00	9168.50	1393612.00
	Structure, Earthing, Wiring, and other accessories @ 40% of A1				557444.80
	A(2) Sub-total				1951056.80
	A(3) Power Conditioning Unit(PCU) 50 kWp	Each	1.00	265000.00	265000.00
	A(4) Total (A2+A3)				2216056.80
	Cartage @ 1% of A4				22160.57
	Total of A				2238217.37
B	Installation charges @ 4% of A				89528.69
	Total (A+B)				**2327746.06**
C	GST @ 12% (Multiplying Factor 14.05%) of (A+B)				327048.32
	Total A+B+C				**2654794.38**
D	Overhead and Profit @ 15% of (A+B+C)				398219.16
	Total A+B+C+D				3053013.54
	TOTAL				**3053013.54**
	Cost/kWp				**61060.27**
	Say				**61060.00**