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कार्यालयीन उद्देश्य के सभी पत्रादि "मुख्य विस्फोटक नियंत्रक" के पदनाम से भेजे जाए उनके व्यक्तिगत नाम से नहीं।

All communications intended for this Office should be addressed to the 'Chief Controller of Explosives' and NOT to him by name.



भारत सरकार

GOVERNMENT OF INDIA

पेट्रोलियम तथा विस्फोटक सुरक्षा संगठन

Petroleum and Explosives Safety Organisation

(पूर्व नाम - विस्फोटक विभाग)

(Formerly- Department of Explosives)

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संख्या /No. C.VIII(3) 125/Circular/Petroleum

दिनांक/Nagpur, dated 25/02/2025

## C I R C U L A R

Subject: Installation of Solar panels over the roof of the sales room or over the Canopy of the LNG/CNG/CBG Retail Outlets/Petroleum service stations/ALDS: **Guidelines** regarding

This is in continuation to this office circular of even no. dated 21/01/2025, wherein, the draft guidelines for installation of Solar panels over the roof of the sales room or over the Canopy of the LNG/CNG/CBG Retail Outlets/Petroleum service stations/ALDS were circulated for stakeholders comments. The comments received from the stakeholders were reviewed and relevant suggestions have been considered. The following guidelines shall be followed.

The Proposals for Installation of Solar panels over the Canopy & sales room of the LNG/CNG/CBG Retail Outlets/Petroleum service stations/ALDS outside the hazardous area shall be approved subject to conditions as under:

- The canopy shall not adversely affect the ventilation or access to equipments. The Canopy heights installed at fuel forecourt shall have at least 300mm clearance from maximum permitted height recommended by Central Motor Vehicle Rules for the vehicles to be fuelled. The Wind and seismic load for the canopy design shall be considered as per IS: 875 and IS:1893 respectively. The Canopy structure shall be properly earthed as per IS :3043.
- The solar power generation system can be either ongrid or off grid type. On-grid type solar power generation system shall be approved by the State Electricity Board. Certificate shall be obtained from the respective Solar

system installer that the system is safe and reliable for installation and operation. Such certificate shall be submitted for every service station wherein the system is proposed to be installed.

- c) In off-grid solar power generation system, no sub-station, transformer or lightning arrestor in connection with the said system shall be installed. Battery bank shall be installed in the sales room or in dedicated room in non-hazardous area with adequate ventilation and maintaining adequate safety distances. Circuit breaker shall be installed in between solar panels and battery to isolate in case of emergency.
- d) Solar system shall be installed in non-hazardous area and no vent pipes of petroleum storage tanks shall be allowed to terminate atop such canopy. The cross sectional view of the canopy with solar panels shall be shown in the drawing.
- e) Vent pipe of the petroleum Storage tank, CNG/CBG cascades shall be minimum 4 metre away from such solar panels.
- f) The solar panel module, connectors, cables, cable glands, junction boxes, earthing, UPS/Charge controllers, inverters, breakers, isolators, panels, earthing system, fuses and all other electric /non-electric infrastructure of the system shall be of reputed make, shall conform to BIS standards/ other international standards and shall have certification mark on them.
- g) The structures over which the solar panels will be installed shall be suitably designed and certified by Third Party Inspection Agency accredited by NABCB as per requirement of IS/ISO/IEC: 17020 keeping in view the structural & mechanical integrity and safety of the each of the structure over which the solar panel is proposed to be installed.
- h) The structural stability certificate issued by third party inspection agency accredited by NABCB as per requirement of IS/ISO/IEC: 17020, shall be submitted along with application for grant /amendment of the license for the respective service station.
- i) Adequate and dedicated earthing shall be provided for the solar system. All the electrical cabling / wiring shall be underground/ covered in conduit and through ingress protected weather proof enclosure / conduits with no exposure to earth / soil / atmosphere.
- j) Protective devices such as earth insulation resistance, residual current monitoring devices, over current protection devices, ground fault detection devices, surge protection devices, breakers, isolators, fuses etc may be provided for safety and interlocked with the system such that in case of any fault they shall be capable of shutting down the entire solar system.



- k) Standard Operating Procedure for critical inspection, operation & maintenance, troubleshooting and safety shall be in place and strictly adhered to at all the times.
- l) The relevant provisions of the Gas Cylinder Rules 2016, Petroleum Rules, 2002 and SMPV (U) Rules 2016 including conditions of Licence shall be strictly complied at all the times.



Chief Controller of Explosives

To

- (1) All Circle & Sub-circle offices of PESO.
- (2) All Oil Marketing Companies, CGD companies & other stakeholders.