संख्या. पी-63013/246/01/2026/मोड-I/सी0सु0बल/2372

भारत सरकार, गृह मंत्रालय
महानिदेशालय सीमा सुरक्षा बल
(रसद निदेशालय: आधुनिकीकरण सैल)
(Email-comdtord@bsf.nic.in)

ब्लाक संख्या . 10,
सीजीओ काम्पलैक्स,
लोधी रोड, नई दिल्ली–03
दिनांक 16 नवम्बर 2026

वरिष्ठ तकनीकी निदेशक
The Senior Technical Director
राष्ट्रीय सूचना–विज्ञान केन्द्र, नोर्थ ब्लाक,
गृह मंत्रालय, नई दिल्ली
NIC, North Block, MHA
New Delhi
(द्वारा ई–मेल)
(ई–मेल पता : mpsugandhi@nic.in)

Sub: **Request for comments of stakeholders/OEM on draft QRs & TDs**

कृपया गृह मंत्रालय के पत्र संख्या IV-24011/12/2011-Prov-I(part)(CFN 3300890)-1710 दिनांक 31st Aug 2015 के सन्दर्भ में।

2. उपरोक्त विष्यान्तर्गत सूचित किया जाता है कि तकनीकी विशेषज्ञों के उप समूह द्वारा **"DIESEL GENERATOR SETS (5, 7.5, 10, 15, 20, 30, 40, 50, 62.5, 75, 82.5, 100, 110, 125, 140, 160 & 250 KVA)"** के गुणातमक आवश्यकता/परीक्षण निर्देशों के मसौदें का प्रारुप दिनांक 03 नवम्बर 2026 को आयोजित सभा के दौरान तैयार किया गया, जिसको इस आश्य से प्रेषित किया जा रहा है कि उक्त उपकरण के गुणात्मक आवश्यकता/परीक्षण निर्देश को गृह मंत्रालय की वैबसाईट पर 15 दिन के लिए अपलोड करने का श्रम करें।

संलग्नः उपरोक्तनुसार

कपिल चाहर 16/11/26
(कपिल चाहर)
उप कमाण्डेंट (मोड)

16/11/26

प्रतिलिपि :-

1.	SO (IT), North Block, MHA **(Through E-mail)** **(E-mail address:** soit@nic.in**)**	:	उपरोक्त उपकरण के गुणातमक आवश्यकता /परीक्षण निर्देशों के मसौदा को आपके सूचनार्थ एवं अग्रिम कार्यवाही हेतु प्रेषित किया जाता है।
2.	IT Wing, FHQ BSF	:	उपरोक्त उपकरण के गुणातमक आवश्यकता /परीक्षण निर्देशों के मसौदे को सीमा सुरक्षा बल की वैबसाईट पर 15 दिन के लिए अपलोड करने का श्रम करें। आपसे अनुरोध है कि उक्त मसौदे को गृह मंत्रालय की वैबसाईट पर भी अपलोड करने हेतु निम्नलिखित पतों पर ई–मेल करने का श्रम करें:- (a) Technical Director, NIC, North Block, MHA **(E-mail : mpsugandhi@nic.in)** (b) SO (IT), North Block, MHA **(E-mail :** soit@nic.in**)**
3.	The DIG (Prov) SSB, East Blck-5, R. K Puram, New Delhi.	:	For information w.r.t your letter No.5906 dated 28.09.2026.
4.	File.		

भारत सरकार, गृह मंत्रालय
महानिदेशालय सीमा सुरक्षा बल
(रसद निदेशालय: आधुनिकीकरण सैल)
ब्लाक संख्या . 10,सीजीओ काम्पलैक्स,लोधी रोड, नई दिल्ली–03
(Email-comdtord@bsf.nic.in)

संख्या. पी-63013/246/01/2026/मोड–I/सी0सु0बल/ दिनांक ___नवम्बर 2026

विषय : **"DIESEL GENERATOR SETS (5, 7.5, 10, 15, 20, 30, 40, 50, 62.5, 75, 82.5, 100, 110, 125, 140, 160 & 250 KVA)"** के गुणातमक आवश्यकता/परीक्षण निर्देशों पर हितधारकों/ निर्माताओं/ विकेताओं की टिप्पणी के लिए अनुरोध।

"DIESEL GENERATOR SETS (5, 7.5, 10, 15, 20, 30, 40, 50, 62.5, 75, 82.5, 100, 110, 125, 140, 160 & 250 KVA)" के गुणातमक आवश्यकता और परीक्षण निर्देशों को परिशिष्ट 'ए' के रुप में संलग्न किया गया है। हितधारकों/निर्माताओं/विकेताओं से अनुरोध किया जाता है कि वे उस उत्पाद की विस्तृत एवं स्टीक जानकारी दें। साथ ही प्रत्येक पैरामीटर के अनुरुप अपने उत्पाद के सही विवरणों को प्रस्तुत करें । सिर्फ 'अनुपालना' या ' अनुपालना नहीं' वाली टिप्पणी स्वीकार नहीं की जाएगी।

- क्या आप मूल उपकरण निर्माता/विकेता हैं?
- यदि विकेता मूल उपकरण निर्माता का विवरण देता है।
- मूल उपकरण निर्माता से प्राधिकरण प्रमाण पत्र।
- उत्पाद की मूल सूची।
- उत्पाद ब्रोशर एवं साहित्य रचना का ब्यौरा

1. आवश्यक जानकारी/विवरण 30 नवम्बर 2026 तक निम्नलिखित पते पर भेजे जा सकते हैं।

रसद निदेशालय, सीमा सुरक्षा बल
लेवल–8, ब्लाक–10,
केन्द्रीय कार्यालय परिसर, लोधी रोड,
नई दिल्ली–110003
ईमेलः– comdtord@bsf.nic.in

2. शीघ्र प्रतिक्रिया का अनुरोध किया जाता है।

कपिल चाहर 16/11/26
(कपिल चाहर)
उप कमाण्डेंट (आधुनिकीकरण)

Government of India
Ministry of Home Affairs
Directorate General Border Security Force
(Prov Dte: Mod Cell)
Block No.10, CGO Complex, Lodhi Road, New Delhi-03
(Email-comdtord@bsf.nic.in)

No. P-63013/246/01/2026/Mod-I/BSF/ Dated, the __Nov 2026

Subject : Request for comments of stakeholders/OEM/Firms on QRs (Qualitative Requirements) & TDs (Trial Directives) of "DIESEL GENERATOR SETS (5, 7.5, 10, 15, 20, 30, 40, 50, 62.5, 75, 82.5, 100, 110, 125, 140, 160 & 250 KVA)"

The draft QRs/TDs **"DIESEL GENERATOR SETS (5, 7.5, 10, 15, 20, 30, 40, 50, 62.5, 75, 82.5, 100, 110, 125, 140, 160 & 250 KVA)"** is attached as **Appendix-'A'.** The OEMs/Vendors are requested to forward information of the product, which they can offer and also forward correct specifications of their system against each parameter. Only complied or not complied remarks will not be accepted. The firms are also requested to furnish the following details:-

- Whether you are OEM/Vendor?
- If vendor details of OEM.
- Authorization certificate from OEM.
- Original catalogue of the product
- Brochure/Literature of the product

2. The required information/details may please be forwarded at the following addresses by 30.11.2026.

Directorate General BSF,
Level-8, Block No. 10,
CGO Complex, Lodhi Road,
New Delhi-110003
Email: comdtord@bsf.nic.in

3. An early response is requested.

(Kapil Chahar)
Dy. Commandant (Mod)

DRAFT QUALITATIVE REQUIREMENTS AND TRIAL DIRECTIVES OF DIESEL GENERATOR SETS (5, 7.5, 10, 15, 20, 30, 40, 50, 62.5, 75, 82.5, 100, 110, 125, 140, 160 & 250 KVA)

(Proposed as an extension of MHA approved "Revised QRs & TDs of Diesel Generator Set (5, 7.5, 10, 20 & 30 KVA) - Part-I")

S.No.	Parameters	Specification	Trial Directives	Result expected/desired	Remarks
1	Diesel Generator Set (complete unit)	Diesel Generator set complete with multi-cylinder Diesel Engine (Naturally Aspirated or Pressure Charged / Turbo charged / Turbo charged & after-cooled as per rating and OEM standard design), Alternator and AMF/Manual Control Panel fitted along with Acoustic Enclosure. Engine and Alternator shall be closely coupled or provided with flexible coupling and mounted on a common base frame of robust construction with anti-vibration mounts. Note: For lower ratings (up to 30 KVA) Naturally Aspirated engines are acceptable. For 40 KVA to 250 KVA ratings, engines are generally pressure charged (turbo charged / turbo charged & after-cooled) as per prevailing industry design and OEM standards.	To be physically checked by the BOO.	DG Set must have all requirements as mentioned in parameters.	
2	Control Panel with IP rating	Digital microprocessor-based controller with AMF (Auto Mains Failure) panel for protection, metering and operation, with LCD/LED graphical display of voltage, current, frequency, KW, KWH, p.f., and	To be checked physically by BOO. Firm has to submit National	Must have auto mains failure panel and required IP rating.	

S.No.	Parameters	Specification	Trial Directives	Result expected/desired	Remarks
		engine parameters (lube oil pressure, coolant temperature, RPM, battery voltage, run hours, no. of starts) and fault annunciation. IP 53/IP 54/IP 55.	accredited Lab certificate/any Indian Govt Lab certificate in respect of the same.		
3	AMF Panel (Automatic Mains Failure)	As per IS/IEC 60947 & IS 2147, the panel shall have IP-42 type protection or better. AMF panel normally consists of relays, contactors, timers/microprocessor controller for automatic operation on Mains failure as well as for manual operation. Suitably rated 4-pole changeover arrangement (Contactor/MCCB/ACB based as per rating) shall be provided.	Operation of AMF panel will be checked by BOO by manually switching off the mains power to check immediate and smooth transfer on DG set and vice versa. All these observations are to be made on full load which should not be less than 30 to 40% of DG set capacity.	Panel should be IP-42 or better. Equipment to test healthiness of DG set with test mode & with load on mains. Energy analyzer or load manager with selector switch/button to view readings of voltage, current, KW, KWH, p.f., frequency etc. Audio-visual alarm indication/annunciation facility. Engine/DG shutdown device (fault/abnormality). Battery charger, excitation control, voltage regulating equipment. Circuit Breaker of suitable rating. Auto/manual mode selector switch.	
4	Nominal rated capacity (KVA)	5 KVA, 7.5 KVA, 10 KVA, 15 KVA, 20 KVA, 30 KVA, 40 KVA, 50 KVA, 62.5	To be physically checked by the	DG set must be of the indented rating (Prime	

S.No.	Parameters	Specification	Trial Directives	Result expected/desired	Remarks
		KVA, 75 KVA, 82.5 KVA, 100 KVA, 110 KVA, 125 KVA, 140 KVA, 160 KVA & 250 KVA. Rating shall be Prime Power as per ISO 8528-1 at 0.8 power factor (lagging) at standard reference conditions, with 10% overload capability for 1 hour in every 12 hours of operation. (User to specify the required rating at the time of indent.)	BOO and NABL certificate also submitted by firm in respect of same.	Power).	
5	No. of phase	Single phase (230V AC) or 3 phase (4-wire, 415V AC), 50 Hz as per user requirement / indent capacity. (Typically 5 KVA to 10 KVA can be single or three phase; 15 KVA and above shall be 3 phase, 4 wire, 415 V AC). Voltage variation and frequency variation shall be within limits of ISO 8528-5 performance class G2 or better.	To be physically checked by the BOO.	Nos. of phase must be as per specification; also, there must be a current meter facility available for each phase.	
6	Engine::Cooling	Air cooled or Liquid cooled (water/coolant cooled) with engine mounted radiator and blower fan as per OEM design and rating capacity. DG set engine must be 4 stroke.	To be physically checked by the BOO and OEM certificate also submitted by firm in respect of same.	DG set engine should be Make in India certified. Engine must be 4 stroke, air/liquid cooled.	

S.No.	Parameters	Specification	Trial Directives	Result expected/desired	Remarks
7	Number of cylinders (Nos)	Multi cylinder (or single cylinder for very low KVA as per OEM design). 2/3/4/6 or more cylinders, in-line or V configuration, as per OEM standard design for the respective rating.	To be physically checked by the BOO.	Cylinder configuration as per OEM standard design. No restriction on exact number of cylinders so as to allow wider participation of OEMs.	
8	Rated RPM of Engine (RPM)	1500 RPM.	To be physically checked by the BOO.	RPM must be 1500.	
9	Salient features of engine	Naturally aspirated / Turbo charged / Turbo charged after-cooled diesel engine as per OEM design for specific KVA rating. Fuel injection and emission control technology (in-cylinder combustion technology and/or electronically controlled injection with ECU/ECM, with or without exhaust after-treatment) as per OEM certified configuration for CPCB IV+ compliance. Where exhaust after-treatment (EGR/DOC/DPF/SCR or combination thereof) is employed, it shall be as per OEM certified configuration. Where SCR is used, DEF (Diesel Exhaust Fluid) shall conform to ISO 22241 and a suitable DEF tank shall be provided.	To be checked by BOO. CPCB IV+ Type Approval certificate of the engine/genset family to be submitted by firm.	Must fulfill requirement. Emission control technology (with or without after-treatment) shall not be restricted to any single configuration; any OEM-certified CPCB IV+ compliant solution is acceptable.	
10	Type & Class of Governor	Electronic governor (ECU based engine speed control), Class A1 with actuator; or	Firm has to provide	Governor shall be self contained unit capable of	

S.No.	Parameters	Specification	Trial Directives	Result expected/desired	Remarks
		mechanical governor of Class A2, as per ISO 3046/BS-5514/ISO 8528-5. (Governing class G2 or better under ISO 8528-5.)	certificate from NABL accredited lab/OEM test certificate.	monitoring the speed. Governing performance class G2 or better is the governing criterion; both electronic and mechanical governors meeting this class are acceptable so as not to restrict competition.	
11	Starting Voltage	12 Volt DC or 24 Volt DC electric start (as per OEM standard design for the rating).	To be checked by the BOO.	Starting voltage must be 12 V DC or 24 V DC as per OEM design. Both options acceptable to promote competition.	
12	Alternator	The alternator shall be brushless, self-excited, self-regulated, single/double bearing, screen protected, drip-proof as per IP-23 degree of protection or better, conforming to IS 4722/IEC 60034.	To be checked by the BOO.	Alternator IP-23 or above.	
13	Class of insulation	H (both stator and rotor windings).	Firm has to provide National accredited Lab certificate/any Indian Govt lab certificate in respect of the same.	DG set must have H class insulation.	

S.No.	Parameters	Specification	Trial Directives	Result expected/desired	Remarks
14	Automatic Voltage Regulator	Digital/electronic AVR. Voltage regulation ±1% or better from no load to full load. VG2/VG3 or better version.	To be checked by the BOO.	Must have required specification.	
15	Diesel tank & Fuel system	Minimum 8 hours running capacity of fuel tank at full load (integral base tank within enclosure or separate tank, as per user requirement at the time of indent). Indicative minimum capacity as per industry standards for the selected capacity (ranging from approx. 40-50 litres for 5 KVA up to approx. 500 litres for 250 KVA). Fuel level indication, fuel filling arrangement with lockable cap and drain plug shall be provided. Fuel shall be High Speed Diesel conforming to IS 1460.	To be checked by the BOO.	Minimum 8 hours running capacity of fuel tank.	
16	Fuel consumption	Fuel consumption of DG set as per manufacturer, declared as per ISO 3046-1/ISO 8528 reference conditions.	To be checked by the BOO.	Must have the fuel consumption capacity as per specification (ISO-3046-1).	
17	Noise level at 1 meter (dB)	The manufacturer shall offer to the user a standard acoustic enclosure of 75 dB(A) insertion loss and also a suitable exhaust muffler with insertion loss of 75 dB(A), as per CPCB-IV+ norms. Noise level shall not exceed 75 dB(A) at 1 metre distance from the enclosure surface, at 75% load.	To be checked by the BOO and Testing & certification of DG sets for noise compliance as per CPCB norms	Must maintain noise level as per specification.	

S.No.	Parameters	Specification	Trial Directives	Result expected/desired	Remarks
			have to be provided from Automotive Research Association of India (ARAI) or CPCB authorised agency.		
18	Battery & Battery charger system	Diesel engines require high initial starting current for cranking; industrial lead acid / maintenance free batteries of suitable AH value (as per OEM recommendation for the engine, single 12 V or 24 V systems as per rating, indicatively 40/80/100/150/180 AH or higher) shall be provided. For battery charging, a static battery charger (mains operated float/boost charger) plus engine driven charging alternator is recommended. Depending upon the capacity of DG set, suitable current rating of charger is selected. Normally 3-attempt starting setting is preferred for engine starting with a sequence of 6 seconds ON and 5 seconds OFF cycle.	To be checked by the BOO. NABL accredited lab certificate has to be provided.	Maintenance free to IS 14257 for high cranking performance.	
19	a) Acoustic	Minimum 1.6 mm CRCA/GI sheet, powder	To be checked	Must fulfil requirement.	

S.No.	Parameters	Specification	Trial Directives	Result expected/desired	Remarks
	enclosure (Sheet thickness)	coated, weather proof, with sound insulation.	by BOO.		
	b) Sound insulation material (thickness & density)	Fire retardant acoustic insulation (foam/mineral wool/rockwool, conforming to UL94-HF1 class or equivalent for flammability) of thickness 25 to 100 mm and density 28 to 96 Kg/m3, as per OEM design, sufficient to achieve CPCB noise norm of 75 dB(A) at 1 metre.	To be checked by BOO.	Must fulfil requirement. Range kept wide to accommodate different OEM enclosure designs and promote competition; achievement of 75 dB(A) is the governing criterion.	
20	Wiring	Supply, laying and termination of interconnecting power and control cable shall be done by the seller. The cable supplied shall be ISI marked heavy duty PVC insulated, armoured cable with PVC outer, of adequate current rating for the DG set capacity.	To be checked by BOO.	Supplier firm has to ensure and get checked from BOO.	
21	Installation & commissioning	With installation, testing and commissioning at consignee site, including load trial.	To be checked by BOO. NABL certificate has to be submitted after commissioning.	Supplier firm has to produce the given result expected/desired.	
22	Operating temperature	-20 to +55 degree C or -40 to +55 degree C, As per the user's requirements at the time	Firm has to provide National accredited Lab	Cold starting kit shall be mandatory wherever the -40^{0}C Operating temperature	

S.No.	Parameters	Specification	Trial Directives	Result expected/desired	Remarks
		of placing the indent. The equipment shall also be capable of operation at altitudes of upto 4500 meters.	certificate/any Indian Govt lab certificate in respect of the same. Vender to provide Net deliverable output at various operating ranges, which shall be verified by the BOO during the trials.	option is specified in the indented.	
23	Earthing	Construction of suitable earthing station and necessary connections shall be done by the seller. The total number of earthing pits/station shall be 4 i.e. 2 for neutral and 2 for body earthing. Neutral earthing shall be done by copper plate and body earthing shall be done by G.I. pipe/copper plate. Consignee should identify the place for earthing station within 10 meters of Power Generator. (Preferably chemical earthing within 10 mtrs distance of Gen Set.)	To be checked by BOO.	All the materials, labour required for construction of earthing station shall be supplied by the seller.	

S.No.	Parameters	Specification	Trial Directives	Result expected/desired	Remarks
24	Warranty of complete Power Generator/DG set	24 months.	To be checked by BOO.	24 months from the date of installation.	
25	Warranty for running hours	5000 hrs.	To be ensured by supplier.	5000 hrs must.	
26	Number of preventive maintenance visits offered in a year during warranty period	At least 3 (three).	To be ensured by supplier.	Ensure by supplier firm.	
27	Response time to attend the complaint during warranty	1 day.	To be ensured by supplier.	Ensured by supplier firm.	
28	Time duration for repairing/replacement of the defective during warranty	3 days.	To be ensured by supplier.	Ensured by supplier firm.	
29	Testing (Emission	Genset shall be CPCB IV+ compliant. Type Approval and Conformity of	To be physically checked by	Certificate required as per CPCB norms from ARAI or	

S.No.	Parameters	Specification	Trial Directives	Result expected/desired	Remarks
	compliance)	Production (COP) certificate as per CPCB norms required from any of the CPCB nominated agencies: Automotive Research Association of India (ARAI, Pune), International Centre for Automotive Testing (ICAT, Manesar), Indian Institute of Petroleum (IIP, Dehradun), Vehicle Research Development Establishment (VRDE, Ahmednagar), or any testing & certification agency having accreditation from NABL for the parameters referred in CPCB System & Procedure, as may be revised from time to time.	BOO. Valid Type Approval certificate for the offered model/engine family to be verified.	CPCB authorised agency.	
30	Documents/certificate	Test report and certificate has to be provided to the buyer during bidding time on demand.	To be physically checked by BOO.	Supplier firm has to ensure supply of required documents/certificate.	
31	User manual	Details of specification with guidelines have to be mentioned in the user manual.	To be physically checked by BOO.	Firm has to produce the given items before the BOO.	
32	Operating manual/technical manual	Detailed operators instruction, technical literature, maintenance manual, inspection standards to be provided with the requirement.	To be physically checked by BOO.	Firm has to produce the given items before the BOO.	
33	Specific tools	Required tools for servicing the Gen sets be provided by the supplier firm.	To be physically checked by BOO.	Firm has to produce the given items before the BOO.	

S.No.	Parameters	Specification	Trial Directives	Result expected/desired	Remarks
34	Remote monitoring (optional)	Provision for remote monitoring/IoT based monitoring of genset parameters, if specified by user at the time of indent. (Optional feature; not a mandatory/disqualifying requirement.)	To be checked by BOO, if indented.	Optional; kept non-mandatory so as not to restrict competition.	
35	Warranty of complete power Generator/ DG Set	Minimum warranty of 02 year. Post-warranty spare parts availability and service support shall be ensured for upto 10 Years.	The same shall be verified by the BOO	Must be as per specification	

Note 1: Prime power rating at 0.8 p.f. as per ISO 8528-1 has been adopted as the reference rating, consistent with industry practice; standby rating, if required, to be specified by the user at the time of indent.

तकनीकी विशेषज्ञों के उप समूह द्वारा यह निश्चित किया गया है कि उक्त गुणातमक आवश्यकता को अधिक बेहतर बनाने के लिए गृह मंत्रालय एवं सीमा सुरक्षा बल की वैबसाईट पर विक्रेताओं/फर्मों के सुझाव प्राप्त करने हेतु 15 दिनों के लिए अपलोड किया जाए।

नोट – सभी विकताओं/फर्मों से निवेदन है कि अपने सुझावों के साथ निम्नलिखित कागजात संल्गन कर ई–मेल पता comdtord@bsf.nic.in पर भेजने का श्रम करें:–

1. उत्पाद की वास्तविक विवरण पुस्तिका।
2. उत्पाद की साहित्यिक रचना का ब्यौरा।
3. गुणातमक आवश्यकताओं के उपर व्यापक टिप्पणीयॉ।

कपिल चाहर 6/11/25

(कपिल चाहर)
उप कमांडेण्ट (आधुनिकीकरण)