

NATIONAL POWER CORPORATION

SUPPLEMENTAL /BID BULLETIN NO. 1

to the Bid Documents for the

SUPPLY, DELIEVRY, INSTALLATION, TEST AND COMMISSIONING OF 1X200KW AND 1X100KW MODULAR DIESEL GENSETS AND ASSOCIATED ELECTRICAL EQUIPMENT FOR SARANGANI DPP UNDER PR NO. S4-PIC21-066/ REF. NO. PB220215-NA

08 February 2022

All prospective bidders and authorized copyholders of the bid documents are hereby informed of the change in:

SECTION VI - TECHNICAL SPECIFICATIONS PART II - TECHNICAL DATA SHEETS, MW-MECHANICAL WORKS

Please refer to the attached revised pages:

- p. VI-TDS(MW)-i
- p. VI-TDS(MW)-ii
- p. VI-TDS(MW)-1
- p. VI-TDS(MW)-2
- p. VI-TDS(MW)-3
- p. VI-TDS(MW)-13

All other terms and conditions shall remain the same.

For the information and guidance of all authorized copyholders of the Terms of Reference (TOR) and prospective bidders.

For the Bids and Awards Committee:

ATTY: ROGEL T. TEVES

Vice President, Power Engineering Services and

Chairman, Bids and Awards Committee

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Management System ISO 9001:2015



PART II - TECHNICAL DATA SHEETS

MW - MECHANICAL WORKS

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M-2.0	Fuel Consumption for Diesel Engine Generator Sets	III-TDS(MW)-3	
Annex A.1	Letter of Authorization and Guarantee Statement either from: 1) Original Equipment Manufacturer (OEM); or 2) Certification/Agreement from the OEM as a Licensee; or 3) Authorized Distributor (accompanied by a Certificate of Authorized Distributorship from the OEM/Licensee of the OEM). If from the Licensee, a Certification from the OEM as a Licensee or the Licensee agreement must also be submitted) for the Diesel Engine-Generator Sets	Attachment As Annex A.1	
Annex A.2	"Diesel Engine-Generator Set/Diesel Generating Set (Engine + AC Generator) Performance Curve" @ Reference Site Conditions issued by the Manufacturer/Assembler/Integrator (duly signed with full name) of the Diesel-Generator Set Model/Type being offered	As Annex A.2	
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M-7.0	ISO 9001 Certificate of the Manufacturer/Assembler/Integrator or equivalent for each of the Diesel-Engine-Generator Set Package.	
M-8.0	Standard Certification of the proposed offered model Diesel- Engine-Generator Set from any of the following internationally recognized certifying body/organization:	
	a) Canadian Standard Association (CSA)	
	b) Underwriter's Laboratories (UL)	ł
	c) Japanese Industrial Standards (JIS)	
	d) European Commission (CE)	
	e) Lloyd's Register (LR)	
	f) Germanischer Lloyd (GL)	
	g) Niippon Kaiji Kyokai (NKK)	
	h) American Bureau of Shipping (ABS)	·
M-9.0	Technical Data for Engine and Auxiliarles	Don March 1
		See Attached Forms on page
M-10.0	Power Derate Curves and Details or Certificate/Statement from	_III-TDS(MW)-14
	Integrator that the proposed Diesel Engine-Generator Set have no deration at Reference Site Conditions.	
M-11.0	Manufacturer's/Assembler/Integrator's General Data, Catalogue and Brochures of model/type of equipment offered and published as standard products for the Diesel-Engine-Generator Set which contain the following information: a) Manufacturer/Assembler b) Model/Type c) Prime Rated Power d) Voltage e) Power Factor f) Frequency g) Rated Speed	
. 	h) Arrangement & Number of Cylinders	
M-11.0	Supplier/Manufacturer/Assembler Drawings, Brochures, Instruction Manuals and other Documents as specified in Clause GW-6.3 and other relevant clauses of the Technical Specifications	

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PART II – TECHNICAL DATA SHEETS MW – MECHANICAL WORKS

DOCUMENTS TO BE SUBMITTED DURING THE BID OPENING (Sections M-1.0 to M-2.0, Annexes A.1, A.2 and A.3)

NOTES

- The Bidder shall complete this technical data sheet and submit the filled-up forms with the technical proposal. The Bidder shall use continuation sheets as necessary for any other additional information keeping to the format shown herein or by reproducing the same;
- The data required are technical features and characteristics of the Equipment to be provided by the bidder. Bidder's proposal shall at least be equal or superior to the requirements specified by NPC;
- 3. Deviation from the requirements indicated in the technical data sheets M-1.0, M-2.0 and non-submission of the required documents listed as Annexes A.1, A.2 and A.3, shall be ground for disqualification; and
- 4. All data and information shall be in English language.

Name of Firm Name & Signature of Representative Designation	
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M-1.0 DIESEL ENGINE-GENERATOR SET AND ASSOCIATED EQUIPMENT DATA SUMMARY

M-1.1 Diesel Engine-Generator Set/Diesel Generating Set (DG Set) -Prime Duty * Designed, manufactured and tested in compliance with the latest version of the standards listed below, mounted on heavy duty steel base frame with anti-vibration pads contained in a sound attenuated & weatherproof enclosure M-1.1.1 Manufacturer/Assembler/Integrator of D/G Set being offered By Supplier M-1.1.2 Brand Name of DG Set being offered By Supplier By Supplier M-1.1.4 D/G Set Manufacturer/Assembler/ Integrator Experience, Year 5 Supplier M-1.1.5 D/G set Guaranteed Prime Rated Power at Reference Site Conditions & 0.8 Power Factor, kW D/G Set Guaranteed Fuel Rate at Required 200 kW and 100 kW Prime Power Output at Reference Site Conditions, 100 % Rated Load, lik/W-hr M-1.1.7 Voltage, V 480 (±5%) M-1.1.8 Power factor M-1.1.10 No. of Phases, Ø 3 3 M-1.1.11 Maximum Sound Pressure Level @ 1-meter distance, dBA Maximum Permissible Nox, mg/Nm³ 2000 as NO2 M-1.1.18 Maximum Permissible Nox, mg/Nm³ 2000 as SO2 M-1.1.19 Particulates, mg/Nm³ 2000 M-1.1.19 Particulates, mg/Nm³ 2000 M-1.1.19 Particulates, mg/Nm³ 2000 M-1.1.19 Particulates, mg/Nm³ 2000 as CO M-1.1.10 M-1.1.10 Maximum Permissible Nox, mg/Nm³ 2000 as CO M-1.1.10 M-1.1.10 Maximum Permissible Nox, mg/Nm³ 2000 as CO M-1.1.19 Factory Acceptance test Yes M-1.1.10 M-1.1.10 Maximum Permissible Nox, mg/Nm³ 2000 as CO M-1.1.10 M-1.1.10 M-1.1.10 Maximum Permissible CO, mg/Nm³ 2000 as CO M-1.1.10 M-1.1.10 M-1.1.10 M-1.1.10 M-1.1.10 M-1.1.10 M-1.1.10 M-1.1.10 M-1.1.10 M-1.1.11 M-1.1.10 M-1.1.11 M-1.1.10 M-1.1.11 M-1.1.10 M-1.1.11 M-1.1.1	_	EGOIL MEIAL DATA SOMMA	<u> </u>		
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M-1.1.9 Frequency, Hz. 60 M-1.1.10 No. of Phases , Ø 3 M-1.1.11 Rated Speed, RPM 1800 M-1.1.12 Governor Electronic M-1.1.13 Arrangement & Number of Cylinders In- line and Multi-cylinder M-1.1.14 Maximum Sound Pressure Level @ 1- meter distance, dBA 85 M-1.1.15 Maximum Permissible NOx, mg/Nm³ 2000 as NO₂ M-1.1.16 Maximum Permissible Sox, mg/Nm³ 700 as SO₂ M-1.1.17 Maximum Permissible CO, mg/Nm³ 500 as CO M-1.1.18 Particulates, mg/Nm³ 200 M-1.1.19 Factory Acceptance test Yes M-1.1.20 "Diesel Engine-Generator Set/Diesel Generator)			480 (± 5%)		··
M-1.1.9 Frequency, Hz. 60 M-1.1.10 No. of Phases , Ø 3 M-1.1.11 Rated Speed, RPM 1800 M-1.1.12 Governor Electronic M-1.1.13 Arrangement & Number of Cylinders In- line and Multi-cylinder M-1.1.14 Maximum Sound Pressure Level @ 1- meter distance, dBA M-1.1.15 Maximum Permissible NOx, mg/Nm³ 2000 as NO₂ M-1.1.16 Maximum Permissible Sox, mg/Nm³ 700 as SO₂ M-1.1.17 Maximum Permissible CO, mg/Nm³ 500 as CO M-1.1.18 Particulates, mg/Nm³ 200 M-1.1.19 Factory Acceptance test Yes M-1.1.20 "Diesel Engine-Generator Set/Diesel Generating Set (Engine + AC Generator)			0.80 (min.)		
M-1.1.11 Rated Speed, RPM M-1.1.12 Governor M-1.1.13 Arrangement & Number of Cylinders M-1.1.14 Maximum Sound Pressure Level @ 1- meter distance, dBA M-1.1.15 Maximum Permissible NOx, mg/Nm³ M-1.1.16 Maximum Permissible Sox, mg/Nm³ M-1.1.17 Maximum Permissible CO, mg/Nm³ M-1.1.18 Particulates, mg/Nm³ M-1.1.19 Factory Acceptance test M-1.1.20 "Diesel Engine-Generator Set/Diesel Generating Set (Engine + AC Generator)	_				
M-1.1.12 Governor Electronic M-1.1.13 Arrangement & Number of Cylinders In- line and Multi-cylinder M-1.1.14 Maximum Sound Pressure Level @ 1- meter distance, dBA M-1.1.15 Maximum Permissible NOx, mg/Nm³ 2000 as NO₂ M-1.1.16 Maximum Permissible Sox, mg/Nm³ 700 as SO₂ M-1.1.17 Maximum Permissible CO, mg/Nm³ 500 as CO M-1.1.18 Particulates, mg/Nm³ 200 M-1.1.19 Factory Acceptance test Yes M-1.1.20 "Diesel Engine-Generator Set/Diesel Generating Set (Engine + AC Generator)			3		
M-1.1.13 Arrangement & Number of Cylinders In- line and Multi-cylinder M-1.1.14 Maximum Sound Pressure Level @ 1- meter distance, dBA M-1.1.15 Maximum Permissible NOx, mg/Nm³ 2000 as NO₂ M-1.1.16 Maximum Permissible Sox, mg/Nm³ 700 as SO₂ M-1.1.17 Maximum Permissible CO, mg/Nm³ 500 as CO M-1.1.18 Particulates, mg/Nm³ 200 M-1.1.19 Factory Acceptance test Yes M-1.1.20 "Diesel Engine-Generator Set/Diesel Generating Set (Engine + AC Generator)			1800		
M-1.1.14 Maximum Sound Pressure Level @ 1- meter distance, dBA M-1.1.15 Maximum Permissible NOx, mg/Nm³ 2000 as NO₂ M-1.1.16 Maximum Permissible Sox, mg/Nm³ 700 as SO₂ M-1.1.17 Maximum Permissible CO, mg/Nm³ 500 as CO M-1.1.18 Particulates, mg/Nm³ 2000 M-1.1.19 Factory Acceptance test Yes M-1.1.20 "Diesel Engine-Generator Set/Diesel Generating Set (Engine + AC Generator)			Electronic		
meter distance, dBA M-1.1.15 Maximum Permissible NOx, mg/Nm³ 2000 as NO₂ M-1.1.16 Maximum Permissible Sox, mg/Nm³ 700 as SO₂ M-1.1.17 Maximum Permissible CO, mg/Nm³ 500 as CO M-1.1.18 Particulates, mg/Nm³ 200 M-1.1.19 Factory Acceptance test Yes M-1.1.20 "Diesel Engine-Generator Set/Diesel Generating Set (Engine + AC Generator)			In- line and Multi-cylinder		
M-1.1.16 Maximum Permissible Sox, mg/Nm³ 700 as SO₂ M-1.1.17 Maximum Permissible CO, mg/Nm³ 500 as CO M-1.1.18 Particulates, mg/Nm³ 200 M-1.1.19 Factory Acceptance test Yes M-1.1.20 "Diesel Engine-Generator Set/Diesel Generating Set (Engine + AC Generator)	M-1.1.14	Maximum Sound Pressure Level @ 1- meter distance, dBA	85		
M-1.1.16 Maximum Permissible Sox, mg/Nm³ 700 as SO₂ M-1.1.17 Maximum Permissible CO, mg/Nm³ 500 as CO M-1.1.18 Particulates, mg/Nm³ 200 M-1.1.19 Factory Acceptance test Yes M-1.1.20 "Diesel Engine-Generator Set/Diesel Generating Set (Engine + AC Generator)		Maximum Permissible NOx, mg/Nm ³	2000 as NO ₂		
M-1.1.17 Maximum Permissible CO, mg/Nm³ 500 as CO M-1.1.18 Particulates, mg/Nm³ 200 M-1.1.19 Factory Acceptance test Yes M-1.1.20 "Diesel Engine-Generator Set/Diesel Generating Set (Engine + AC Generator)					
M-1.1.18 Particulates, mg/Nm³ 200 M-1.1.19 Factory Acceptance test Yes M-1.1.20 "Diesel Engine-Generator Set/Diesel Generating Set (Engine + AC Generator)				 +	
M-1.1.20 "Diesel Engine-Generator Set/Diesel Generating Set (Engine + AC Generator)					
Generating Set (Engine + AC Generator)		Factory Acceptance test	Yes		
Generating Set (Engine + AC Generator)	M-1.1.20	"Diesel Engine-Generator Set/Diesel			
		Generating Set (Engine + AC Generator)		ļ	
Conditions issued by the Manufacturer! To be Submitted/Attachment	ľ	Performance Curve" @ Reference Site	To be Submitted/Attachment		ľ
I postations issued by the MainingChieff I	l	Assembler/Integrates / duby size of the Manufacturer/			
Ly resettible trutte States (dut) Signed Will [Util]	ľ	name) of the Diagram Communication	·- I		ŀ
name) of the Diesel-Generator Set	l	Model/Type being effected			
Model/Type being offered NOTE:	NOTE:	Moder Type being offered			

NOTE:

- 1. * IEC 60034, IEC 60085, IEC60529, ISO 901, ISO 3046 and ISO 8528
- 3. Guaranteed Fuel Consumption which is more than the specified maximum value will be ground for rejection of the equipment being offered.
- 4. Experience less than what is required will be ground for rejection of the equipment being offered.

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NATIONAL POWER CORPORATION	731)	VI-TDS (MW)-2

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M-1.0 DIESEL ENGINE-GENERATOR AND ASSOCIATED EQUIPMENT DATA SUMMARY Cont'd...

ITEM	DESCRIPTION	NPC REQUIREMENT	SUPPLIER'S DATA	
		MI-O KEGOIKEMENI	200 kW	100 kW
M-1.2	Diesel Engine			
M-1.2.1	Manufacturer	By Supplier		<u> </u>
M-1.2.2	Manufacturer's Experience, years	10		
M-1.2.3	Place of Manufacture	By Supplier		
M-1.2.4	Brand Name of Diesel Engine being offered	By Supplier		
M-1.2.5	Model/Type	By Supplier		
M-1.2.6	Engine Prime Brake Power Output at Reference Site Conditions, kWm or BHP	By Supplier		
M-1.2.7	Performance Curve @ Reference Site Conditions issued by the Diesel Engine Manufacturer or Diesel Generating Set Manufacturer/Assembler/Integrator (duly signed with full name) for the Diesel Engine Model/Type being offered	To be Submitted/Attachment as Annex A.3		

M-2.0 - FUEL CONSUMPTION FOR DIESEL ENGINE-GENERATOR SETS

Α	B**	С	D*	E
DG Set Guaranteed Prime Power Output at Reference Site Conditions	D/G Set Guaranteed Fuel Rate at Required 200 kW and 100 kW Prime Power Output at Reference Site Conditions	Cost of Fuel	No. of operating hours per year	1-Year Cost of Fuel Consumption, (A x B x C x D)
(Minimum kW)	(liters/kilowatt-hour)	(PhP/itr)	(hrs)	(PhP)
200		40.4	3427	
100		40.4	3427	

NOTES:

- * For evaluation Purposes: The estimated number of operating hours per year is based on 16 hrs/day operation, 25 days PMS, 10% Outages and assumed 70% Load Factor.
- ** Write the Guaranteed Fuel Rate in three decimal places, i.e. 0.270 L/kW-hr. If Fuel Rate is indicated in more than three decimal places, only the first three decimal numbers will be considered regardless of any number written in the fourth decimal number.

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PART II – TECHNICAL DATA SHEETS MW – MECHANICAL WORKS

DOCUMENTS TO BE SUBMITTED DURING THE PROJECT IMPLEMENTATION BUT NOT LIMITED TO

(Sections M-7.0 M-8.0, M-9.0 M-10 M-11 & M-12)

NOTES

- The Bidder shall complete this technical data sheet/documents and submit the filled-up forms during the
 project implementation (during contract stage). The Bidder shall use continuation sheets as necessary for
 any other additional information keeping to the format shown herein or by reproducing the same.
- 2. The data required are technical features and characteristics of the Equipment to be provided by the bidder. Bidder's proposal shall at least be equal or superior to the requirements specified by NPC. The data provided shall be used as basis for evaluation of brochures, drawings and other documents to be submitted for review and approval during the project implementation.
- 3. All data and information shall be in English language.

SECTION		PAGE
M-7.0	ISO 9001 Certificate of the Manufacturer/Assembler/integrator or equivalent for each of the Diesel Engine-Generator Set	
M-8.0	Standard Certification of the proposed offered model Dieset Engine-Generator Set from any of the following internationally recognized certifying body/organization: i) Canadian Standard Association (CSA) j) Underwriter's Laboratories (UL) k) Japanese Industrial Standards (JIS) l) European Commission (CE) m) Lloyd's Register (LR) n) Germanischer Lloyd (GL) o) Niippon Kaiji Kyokai (NKK) p) American Bureau of Shipping (ABS)	
M-9.0	Technical Data for Engine and Auxillaries	See Attached Forms on page III-TDS(MW)-14
M-10.0	Power Derate Curves and Details or Certificate/Statement from Diesel Engine-Generator Set Manufacturer/Assembler/Integrator that the proposed Diesel Engine-Generator Set have no deration at Reference Site Conditions.	
M-11.0	Manufacturer/Assembler/Integrator's General Data, Catalogue and Brochures of model/type of equipment offered and published as standard products for the Diesel Engine-Generator Set which contain the following information: i) Manufacturer/Assembler j) Model/Type k) Prime Rated Power i) Voltage m) Power Factor n) Frequency o) Rated Speed p) Arrangement & Number of Cylinders	
1	Supplier/Manufacturer/Assembler Drawings, Brochures, Instruction Manuals and other Documents as specified in Clause GW-6.3 and other relevant Clauses of the Technical Specifications	

Name of Firm	Name & Signature of Representative	Designation

