

Information Sheet for Procurement Generator Sets

a) Bid Information

#	Description	Size	Quantity
1	Supply of Generator Set	200	01
2	Supply of Generator Set	250	01
3	Supply of Generator Set	350	01
4	Supply of Generator Set	400	03
5	Supply of Generator Set	500	02
6	Supply of Generator Set	800	02
7	Supply of Generator Set	1000	03
8	Supply of Generator Set	1200	01

Quotation shall indicate the following;

a) Price

- The bidder shall quote for delivery to Male' Port, capital of Maldives. (CIF)
- All items shall be quoted in the bid, please refer section (b) specifications
- Quotation shall indicate the unit price, total price for each item and total price of the quotation. The quotation shall separately indicate additional charges such as freight charges, insurance, taxes, etc.

b) Delivery Period

- The delivery period shall be stated in 'calendar days'.
- If the delivery period indicates 'ex-stock', or if the duration is not specified, it shall be taken same as the party offering the longest delivery period.

c) Payment Terms

- The payment terms shall be stated in 'days or months', and the payments will be released in equal monthly instalments.
- No points will be given for payment terms if the bidder requests for Letter of Credit (LC).



- A maximum of 15% of the entire project can be provided as an advance if requested in the bid, however, it cannot be tied to the project starting date.
- For 15% advance bid awarded party has to submit bank guarantee letter along with performer invoice.

d) Technical Specifications

- All the relevant information including the brand shall be given to enable technical evaluation of the items quoted.
- Technical compliance letter will be required to enable technical evaluation
- Generator set should comply our requirements, if not the bid will be rejected
- The documents required for technical evaluation are:
 - Technical data sheets of engine and the alternator
 - Datasheets specifying cooling system rated at ambient temperature 50°C
 - Certificate of Authenticity specifying manufacturer /Assembler is an OEM of a genuine reputed international Engine Brand

e) Quotation validity should be a minimum of 60 days from the date of quotation opening.

f) Bid Security validity is valid for Twenty (20) days beyond the validity of the bid

Note: It is in FENAKA Corporation Limited's discretion to reject/cancel any quotation which does not fulfil or comply the above terms.

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b) Generator Sets Specifications

1- 200kw Generator set specification

S/N:	Description	Unit	Qty
1	<p>200 kW prime rated diesel generator set with parameters 0.8 P.F, 415 Volts, 3 Phase, 4 wires, 50 Hz at 1500 r.p.m. The Generator set shall be powered by an International Branded Engine manufactured by an Original Company's Licenced OEM manufactured/assembler.</p> <p>The engine must produce a mechanical power output (kWm) which should meet the required electric power (kWe) of 200kW and must be coupled with a 200kW Alternator. Alternator should be an internationally recognised reputed brand.</p> <p>Engine to be complete with following auxilliary items :</p> <ul style="list-style-type: none"> • Heavy electrical flywheel • SAE flywheel housing • Air filters, Lubricating Oil Filters, Fuel Filters and all other such filter required for operation of the engine • Low lubricating oil pressure switch • High engine temperature switch • lub oil sender • Water Temperature Sender • All necessary items to run and to protect the engine • Starting equipment fitted to engine, consisting of : <ul style="list-style-type: none"> ▪ 24 Volt charging alternator (Brushless) ▪ 24 Volt starting motor ▪ Fuel Shut-off solenoid ▪ Heavy duty lead acid batteries, supplied in a dry charged condition • Governing System The engine to be fitted with a close tolerance Electronic Governing system, which should include efc, actuators, magnetic pickups, etc, including wiring • Cooling Equipment Cooling equipment comprising a heavy-duty tropical radiator, together with pusher type cooling fan and guards to be fitted. The radiator core should be electroplated with silver solder tin plated to prevent early failure due to corrosion. Coupon plated radiators are acceptable. Radiator has to be mounted on vibration mounts with enough strength to withstand the radiator and vibrations. Radiator must be designed to adequately cool the generator at an ambient temperature of 50°C • Exhaust system 450 mm of stainless steel bellow type flexible exhaust, together with suitable flanges and fittings shall be supplied for each silencer. 	1	No

1.2	<p>• Alternator</p> <p>The alternator shall be brushless revolving type alternator, having class H insulation on both the stator and field windings. It shall be built and rated to BS 5000, tropically impregnated with voltage regulation being in the order of +/- 1.5% from no load to full load under the steady state conditions assuming a speed variation not exceeding 4% on the engine. Anti-Condensation Coil to be fitted in the Alternator.</p> <p>• Generator arrangement and drive</p> <p>The simplex type base plate is of heavy duty rolled steel constructed, bolted and electrically welded, drilled on the underside to allow the fitting of foundation bolts. The engine and the alternator are to be mounted on a base plate and vibration mounts to be mounted underside of the base plate. The vibration mounts are to be supplied as loose item.</p> <p>• Finishing</p> <p>After assembling the genset zinc coated self-etching primer should be applied to the complete set.</p>		
	<p>Fuel system</p> <p>A fuel day tank of 12 hours capacity complete with level indicator, drain plug, filler, fuel return with fuel outlet connections and a fuel filter fitted with outlet connection is to be mounted. These mounts are to be supplied as loose item. All necessary fittings to be supplied in conformity with fuel flow diagram.</p>	1	No
1.3	<p>Factory testing</p> <p>The generator should be fully tested at the manufacturer workshop in the presence of client/apointees to check the ratings, overload, functional tests on a dummy load prior to dispatch in case the bidder is unable to provide factory test as required the bidder shall provide an extended warranty of one extra year than mentioned in item no 1.6 of this document.</p>	1	No
1.4	<p>Literature and drawings consisting of :</p> <ul style="list-style-type: none"> • 1 No x Manual on How to handle the generation equipment • 1 Nos x Electrical wiring diagram • 1 No x Engine operation and maintenance manual • 1 No x Engine parts catalogue • 1 No x Generator parts catalogue • 1 No x Generator operation and maintenance manual • 1 No x Generator AVR manual • 1 No x Governor control unit manual • 1 No x Engine shop manual 	1	Lot
1.5	<p>Accessories</p> <p>The Components shall meet the British Standard and ISO standards. Items are for the above mentioned generator sets.</p>		
1.5.1	Primary silencer barrel (to match engine exhaust)	1	No
1.5.2	Secondary silencer barrel (to match engine exhaust)	1	No
1.5.3	3m Exhaust pipe dia (to match engine exhaust)	2	No
1.5.4	Elbows having dia (to match the engine exhaust)	6	No
1.5.5	Flanges having dia (to match the engine exhaust)	4	No

1.5.6	Bolts, Nuts and Washers for the Flanges. (Each set shall include 1 bolt, 2 washers, 1 spring washer 2 Nuts)	1	Lot
1.5.7	Split type rockwool insulation lagging suitable for 75 to 125mm dia. Exhaust pipes. The lagging shall be covered with High Quality Aluminium foil.	1	Lot
1.6	Warranty Generator set should carry a warranty of one year from the date of commissioning	1	Lot

2- 250Kw Generator Set Specification

S/N:	Description	Unit	Qty
1	<p>250 kW prime rated diesel generator set with parameters 0.8 P.F, 415 Volts, 3 Phase, 4 wires, 50 Hz at 1500 r.p.m. The Generator set shall be powered by an International Branded Engine manufactured by an Original Company's Licenced OEM manufactured/assembler.</p> <p>The engine must produce a mechanical power output (kW_m) which should meet the required electric power (kW_e) of 250kW and must be coupled with a 250kW Alternator. Alternator should be an internationally recognised reputed brand.</p> <p>Engine to be complete with following auxilliary items :</p> <ul style="list-style-type: none"> • Heavy electrical flywheel • SAE flywheel housing • Air filters, Lubricating Oil Filters, Fuel Filters and all other such filter required for operation of the engine • Low lubricating oil pressure switch • High engine temperature switch • lub oil sender • Water Temperature Sender • All necessary items to run and to protect the engine • Starting equipment fitted to engine, consisting of : <ul style="list-style-type: none"> ▪ 24 Volt charging alternator (Brushless) ▪ 24 Volt starting motor ▪ Fuel Shut-off solenoid ▪ Heavy duty lead acid batteries, supplied in a dry charged condition • Governing System The engine to be fitted with a close tolerance Electronic Governing system, which should include efc, actuators, magnetic pickups, etc, including wiring • Cooling Equipment 	1	No

	<p>Cooling equipment comprising a heavy-duty tropical radiator, together with pusher type cooling fan and guards to be fitted. The radiator core should be electroplated with silver solder tin plated to prevent early failure due to corrosion. Coupon plated radiators are acceptable. Radiator has to be mounted on vibration mounts with enough strength to withstand the radiator and vibrations.</p> <p>Radiator must be designed to adequately cool the generator at an ambient temperature of 50°C</p> <ul style="list-style-type: none"> • Exhaust system <p>450 mm of stainless steel bellow type flexible exhaust, together with suitable flanges and fittings shall be supplied for each silencer.</p> <ul style="list-style-type: none"> • Alternator <p>The alternator shall be brushless revolving type alternator, having class H insulation on both the stator and field windings. It shall be built and rated to BS 5000, tropically impregnated with voltage regulation being in the order of +/- 1.5% from no load to full load under the steady state conditions assuming a speed variation not exceeding 4% on the engine. Anti-Condensation Coil to be fitted in the Alternator.</p> <ul style="list-style-type: none"> • Generator arrangement and drive <p>The simplex type base plate is of heavy duty rolled steel constructed, bolted and electrically welded, drilled on the underside to allow the fitting of foundation bolts. The engine and the alternator are to be mounted on a base plate and vibration mounts to be mounted underside of the base plate. The vibration mounts are to be supplied as loose item.</p> <ul style="list-style-type: none"> • Finishing <p>After assembling the genset zinc coated self-etching primer should be applied to the complete set.</p>		
1.2	<p>Fuel system</p> <p>A fuel day tank of 12 hours capacity complete with level indicator, drain plug, filler, fuel return with fuel outlet connections and a fuel filter fitted with outlet connection is to be mounted. These mounts are to be supplied as loose item. All necessary fittings to be supplied in conformity with fuel flow diagram.</p>	1	No
1.3	<p>Factory testing</p> <p>The generator should be fully tested at the manufacturer workshop in the presence of client/apointees to check the ratings, overload, functional tests on a dummy load prior to dispatch in case the bidder is unable to provide factory test as required the bidder shall provide an extended warranty of one extra year than mentioned in item no 1.6 of this document.</p>	1	No
1.4	<p>Literature and drawings consisting of :</p> <ul style="list-style-type: none"> • 1 No x Manual on How to handle the generation equipment • 1 Nos x Electrical wiring diagram • 1 No x Engine operation and maintenance manual • 1 No x Engine parts catalogue 	1	Lot

	<ul style="list-style-type: none"> • 1 No x Generator parts catalogue • 1 No x Generator operation and maintenance manual • 1 No x Generator AVR manual • 1 No x Governor control unit manual • 1 No x Engine shop manual 		
1.5	Accessories		
	The Components shall meet the British Standard and ISO standards. Items are for the above mentioned generator sets.		
1.5.1	Primary silencer barrel (to match engine exhaust)	1	No
1.5.2	Secondary silencer barrel (to match engine exhaust)	1	No
1.5.3	3m Exhaust pipe dia (to match engine exhaust)	2	No
1.5.4	Elbows having dia (to match the engine exhaust)	6	No
1.5.5	Flanges having dia (to match the engine exhaust)	4	No
1.5.6	Bolts, Nuts and Washers for the Flanges. (Each set shall include 1 bolt, 2 washers, 1 spring washer 2 Nuts)	1	Lot
1.5.7	Split type rockwool insulation lagging suitable for 75 to 125mm dia. Exhaust pipes. The lagging shall be covered with High Quality Aluminium foil.	1	Lot
1.6	Warranty Generator set should carry a warranty of one year from the date of commissioning	1	Lot

3- 350Kw Generator set specification

S/N:	Description	Unit	Qty
1	<p>350 kW prime rated diesel generator set with parameters 0.8 P.F, 415 Volts, 3 Phase, 4 wires, 50 Hz at 1500 r.p.m.</p> <p>The Generator set shall be powered by an International Branded Engine manufactured by an Original Company's Licenced OEM manufactured/assembler.</p> <p>The engine must produce a mechanical power output (kWm) which should meet the required electric power (kWe) of 350kW and must be coupled with a 350kW Alternator. Alternator should be an internationally recognised reputed brand.</p> <p>Engine to be complete with following auxilliary items :</p> <ul style="list-style-type: none"> • Heavy electrical flywheel • SAE flywheel housing • Air filters, Lubricating Oil Filters, Fuel Filters and all other such filter required for operation of the engine • Low lubricating oil pressure switch • High engine temperature switch • lub oil sender • Water Temperature Sender 	1	No

	<ul style="list-style-type: none"> All necessary items to run and to protect the engine Starting equipment fitted to engine, consisting of : <ul style="list-style-type: none"> 24 Volt charging alternator (Brushless) 24 Volt starting motor Fuel Shut-off solenoid Heavy duty lead acid batteries, supplied in a dry charged condition Governing System The engine to be fitted with a close tolerance Electronic Governing system, which should include efc, actuators, magnetic pickups, etc, including wiring Cooling Equipment 		
	<p>Cooling equipment comprising a heavy-duty tropical radiator, together with pusher type cooling fan and guards to be fitted. The radiator core should be electroplated with silver solder tin plated to prevent early failure due to corrosion. Coupon plated radiators are acceptable. Radiator has to be mounted on vibration mounts with enough strength to withstand the radiator and vibrations.</p> <p>Radiator must be designed to adequately cool the generator at an ambient temperature of 50°C</p> <ul style="list-style-type: none"> Exhaust system 450 mm of stainless steel bellow type flexible exhaust, together with suitable flanges and fittings shall be supplied for each silencer. Alternator The alternator shall be brushless revolving type alternator, having class H insulation on both the stator and field windings. It shall be built and rated to BS 5000, tropically impregnated with voltage regulation being in the order of +/- 1.5% from no load to full load under the steady state conditions assuming a speed variation not exceeding 4% on the engine. Anti-Condensation Coil to be fitted in the Alternator. Generator arrangement and drive The simplex type base plate is of heavy duty rolled steel constructed, bolted and electrically welded, drilled on the underside to allow the fitting of foundation bolts. The engine and the alternator are to be mounted on a base plate and vibration mounts to be mounted underside of the base plate. The vibration mounts are to be supplied as loose item. Finishing After assembling the genset zinc coated self-etching primer should be applied to the complete set. 		
1.2	Fuel system A fuel day tank of 12 hours capacity complete with level indicator, drain plug, filler, fuel return with fuel outlet connections and a fuel filter fitted with outlet connection is to be mounted. These mounts are to be supplied as loose item. All necessary fittings to be supplied in conformity with fuel flow diagram.	1	No
1.3	Factory testing	1	No

	The generator should be fully tested at the manufacturer workshop in the presence of client/apointees to check the ratings, overload, functional tests on a dummy load prior to dispatch in case the bidder is unable to provide factory test as required the bidder shall provide an extended warranty of one extra year than mentioned in item no 1.6 of this document.		
1.4	Literature and drawings consisting of : <ul style="list-style-type: none"> • 1 No x Manual on How to handle the generation equipment • 1 Nos x Electrical wiring diagram • 1 No x Engine operation and maintenance manual • 1 No x Engine parts catalogue • 1 No x Generator parts catalogue • 1 No x Generator operation and maintenance manual • 1 No x Generator AVR manual • 1 No x Governor control unit manual • 1 No x Engine shop manual 	1	Lot
1.5	Accessories		
	The Components shall meet the British Standard and ISO standards. Items are for the above mentioned generator sets.		
1.5.1	Primary silencer barrel (to match engine exhaust)	1	No
1.5.2	Secondary silencer barrel (to match engine exhaust)	1	No
1.5.3	3m Exhaust pipe dia (to match engine exhaust)	2	No
1.5.4	Elbows having dia (to match the engine exhaust)	6	No
1.5.5	Flanges having dia (to match the engine exhaust)	4	No
1.5.6	Bolts, Nuts and Washers for the Flanges. (Each set shall include 1 bolt, 2 washers, 1 spring washer 2 Nuts)	1	Lot
1.5.7	Split type rockwool insulation lagging suitable for 75 to 125mm dia. Exhaust pipes. The lagging shall be covered with High Quality Aluminium foil.	1	Lot
1.6	Warranty Generator set should carry a warranty of one year from the date of commissioning	1	Lot

4- 400Kw Generator set specification

S/N:	Description	Unit	Qty
1	<p>400 kW prime rated diesel generator set with parameters 0.8 P.F, 415 Volts, 3 Phase, 4 wires, 50 Hz at 1500 r.p.m.</p> <p>The Generator set shall be powered by an International Branded Engine manufactured by an Original Company's Licenced OEM manufactured/assembler.</p> <p>The engine must produce a mechanical power output (kWm) which should meet the required electric power (kWe) of 400kW and must be coupled with a 400kW Alternator. Alternator should be an internationally recognised reputed brand.</p>	1	No

	<p>Engine to be complete with following auxilliary items :</p> <ul style="list-style-type: none"> • Heavy electrical flywheel • SAE flywheel housing • Air filters, Lubricating Oil Filters, Fuel Filters and all other such filter required for operation of the engine • Low lubricating oil pressure switch • High engine temperature switch • lub oil sender • Water Temperature Sender • All necessary items to run and to protect the engine • Starting equipment fitted to engine, consisting of : 		
	<ul style="list-style-type: none"> ▪ 24 Volt charging altenator (Brushless) ▪ 24 Volt starting motor ▪ Fuel Shut-off solenoid ▪ Heavy duty lead acid batteries, supplied in a dry charged condition • Governing System The engine to be fitted with a close tolerance Electronic Governing system, which should include efc, actuators, magnetic pickups, etc, including wiring • Cooling Equipment 		
	<p>Cooling equipment compromising a heavy-duty tropical radiator, together with pusher type cooling fan and guards to be fitted. The radiator core should be electroplated with silver solder tin plated to prevent early failure due to corrosion. Coupon plated radiators are acceptable. Radiator has to be mounted on vibration mounts with enough strength to withstand the radiator and vibrations.</p> <p>Radiator must be designed to adequately cool the generator at an ambient temperature of 50°C</p> <ul style="list-style-type: none"> • Exhaust system 450 mm of stainless steel bellow type flexible exhaust, together with suitable flanges and fittings shall be supplied for each silencer. • Alternator The alternator shall be brushless revolving type altenator, having class H insulation on both the stator and field windings. It shall be built and rated to BS 5000, tropically impregnated with voltage regulation being in the order of +/- 1.5% from no load to full load under the steady state conditions assuming a speed variation not exceeding 4% on the engine. Anti-Condensation Coil to be fitted in the Alternator. • Generator arrangement and drive The simplex type base plate is of heavy duty rolled steel constructed, bolted and electrically welded, drilled on the underside to allow the fitting of foundation bolts. The engine and the alternator are to be mounted on a base plate and vibration mounts to be mounted underside of the base plate. The vibration mounts are to be supplied as loose item. • Finishing After assembling the genset zinc coated self-etching primer should be applied to the complete set. 		

1.2	Fuel system	1	No
	A fuel day tank of 12 hours capacity complete with level indicator, drain plug, filler, fuel return with fuel outlet connections and a fuel filter fitted with outlet connection is to be mounted. These mounts are to be supplied as loose item. All necessary fittings to be supplied in conformity with fuel flow diagram.		
1.3	Factory testing The generator should be fully tested at the manufacturer workshop in the presence of client/apointees to check the ratings, overload, functional tests on a dummy load prior to dispatch in case the bidder is unable to provide factory test as required the bidder shall provide an extended warranty of one extra year than mentioned in item no 1.6 of this document.	1	No
1.4	Literature and drawings consisting of : <ul style="list-style-type: none"> • 1 No x Manual on How to handle the generation equipment • 1 Nos x Electrical wiring diagram • 1 No x Engine operation and maintenance manual • 1 No x Engine parts catalogue • 1 No x Generator parts catalogue • 1 No x Generator operation and maintenance manual • 1 No x Generator AVR manual • 1 No x Governor control unit manual • 1 No x Engine shop manual 	1	Lot
1.5	Accessories		
	The Components shall meet the British Standard and ISO standards. Items are for the above mentioned generator sets.		
1.5.1	Primary silencer barrel (to match engine exhaust)	1	No
1.5.2	Secondary silencer barrel (to match engine exhaust)	1	No
1.5.3	3m Exhaust pipe dia (to match engine exhaust)	2	No
1.5.4	Elbows having dia (to match the engine exhaust)	6	No
1.5.5	Flanges having dia (to match the engine exhaust)	4	No
1.5.6	Bolts, Nuts and Washers for the Flanges. (Each set shall include 1 bolt, 2 washers, 1 spring washer 2 Nuts)	1	Lot
1.5.7	Split type rockwool insulation lagging suitable for 75 to 125mm dia. Exhaust pipes. The lagging shall be covered with High Quality Aluminium foil.	1	Lot
1.6	Warranty Generator set should carry a warranty of one year from the date of commissioning	1	Lot

5- 500Kw Generator set specification

S/N:	Description	Unit	Qty
1	<p>500 kW prime rated diesel generator set with parameters 0.8 P.F, 415 Volts, 3 Phase, 4 wires, 50 Hz at 1500 r.p.m. The Generator set shall be powered by an International Branded Engine manufactured by an Original Company's Licenced OEM manufactured/assembler.</p> <p>The engine must produce a mechanical power output (kWm) which should meet the required electric power (kWe) of 500kW and must be coupled with a 500kW Alternator. Alternator should be an internationally recognised reputed brand.</p> <p>Engine to be complete with following auxilliary items :</p> <ul style="list-style-type: none"> • Heavy electrical flywheel • SAE flywheel housing • Air filters, Lubricating Oil Filters, Fuel Filters and all other such filter required for operation of the engine • Low lubricating oil pressure switch • High engine temperature switch • lub oil sender • Water Temperature Sender • All necessary items to run and to protect the engine • Starting equipment fitted to engine, consisting of : <ul style="list-style-type: none"> ▪ 24 Volt charging alternator (Brushless) ▪ 24 Volt starting motor ▪ Fuel Shut-off solenoid ▪ Heavy duty lead acid batteries, supplied in a dry charged condition • Governing System The engine to be fitted with a close tolerance Electronic Governing system, which should include efc, actuators, magnetic pickups, etc, including wiring • Cooling Equipment Cooling equipment comprising a heavy-duty tropical radiator, together with pusher type cooling fan and guards to be fitted. The radiator core should be electroplated with silver solder tin plated to prevent early failure due to corrosion. Coupon plated radiators are acceptable. Radiator has to be mounted on vibration mounts with enough strength to withstand the radiator and vibrations. <p>Radiator must be designed to adequately cool the generator at an ambient temperature of 50°C</p> <ul style="list-style-type: none"> • Exhaust system 450 mm of stainless steel bellow type flexible exhaust, together with suitable flanges and fittings shall be supplied for each silencer. 	1	No

1.2	<p>• Alternator</p> <p>The alternator shall be brushless revolving type alternator, having class H insulation on both the stator and field windings. It shall be built and rated to BS 5000, tropically impregnated with voltage regulation being in the order of +/- 1.5% from no load to full load under the steady state conditions assuming a speed variation not exceeding 4% on the engine. Anti-Condensation Coil to be fitted in the Alternator.</p> <p>• Generator arrangement and drive</p> <p>The simplex type base plate is of heavy duty rolled steel constructed, bolted and electrically welded, drilled on the underside to allow the fitting of foundation bolts. The engine and the alternator are to be mounted on a base plate and vibration mounts to be mounted underside of the base plate. The vibration mounts are to be supplied as loose item.</p> <p>• Finishing</p> <p>After assembling the genset zinc coated self-etching primer should be applied to the complete set.</p>		
	Fuel system	1	No
	<p>A fuel day tank of 12 hours capacity complete with level indicator, drain plug, filler, fuel return with fuel outlet connections and a fuel filter fitted with outlet connection is to be mounted. These mounts are to be supplied as loose item. All necessary fittings to be supplied in conformity with fuel flow diagram.</p>		
1.3	<p>Factory testing</p> <p>The generator should be fully tested at the manufacturer workshop in the presence of client/apointees to check the ratings, overload, functional tests on a dummy load prior to dispatch in case the bidder is unable to provide factory test as required the bidder shall provide an extended warranty of one extra year than mentioned in item no 1.6 of this document.</p>	1	No
1.4	<p>Literature and drawings consisting of :</p> <ul style="list-style-type: none"> • 1 No x Manual on How to handle the generation equipment • 1 Nos x Electrical wiring diagram • 1 No x Engine operation and maintenance manual • 1 No x Engine parts catalogue • 1 No x Generator parts catalogue • 1 No x Generator operation and maintenance manual • 1 No x Generator AVR manual • 1 No x Governor control unit manual • 1 No x Engine shop manual 	1	Lot
1.5	<p>Accessories</p> <p>The Components shall meet the British Standard and ISO standards. Items are for the above mentioned generator sets.</p>		
1.5.1	Primary silencer barrel (to match engine exhaust)	1	No
1.5.2	Secondary silencer barrel (to match engine exhaust)	1	No
1.5.3	3m Exhaust pipe dia (to match engine exhaust)	2	No
1.5.4	Elbows having dia (to match the engine exhaust)	6	No
1.5.5	Flanges having dia (to match the engine exhaust)	4	No

1.5.6	Bolts, Nuts and Washers for the Flanges. (Each set shall include 1 bolt, 2 washers, 1 spring washer 2 Nuts)	1	Lot
1.5.7	Split type rockwool insulation lagging suitable for 75 to 125mm dia. Exhaust pipes. The lagging shall be covered with High Quality Aluminium foil.	1	Lot
1.6	Warranty Generator set should carry a warranty of one year from the date of commissioning	1	Lot

6- 800Kw Generator set specification

S/N:	Description	Unit	Qty
1	<p>800 kW prime rated diesel generator set with parameters 0.8 P.F, 415 Volts, 3 Phase, 4 wires, 50 Hz at 1500 r.p.m. The Generator set shall be powered by an International Branded Engine manufactured by an Original Company's Licenced OEM manufactured/assembler.</p> <p>The engine must produce a mechanical power output (kWm) which should meet the required electric power (kWe) of 800kW and must be coupled with a 800kW Alternator. Alternator should be an internationally recognised reputed brand.</p> <p>Engine to be complete with following auxilliary items :</p> <ul style="list-style-type: none"> • Heavy electrical flywheel • SAE flywheel housing • Air filters, Lubricating Oil Filters, Fuel Filters and all other such filter required for operation of the engine • Low lubricating oil pressure switch • High engine temperature switch • lub oil sender • Water Temperature Sender • All necessary items to run and to protect the engine • Starting equipment fitted to engine, consisting of : <ul style="list-style-type: none"> ▪ 24 Volt charging alternator (Brushless) ▪ 24 Volt starting motor ▪ Fuel Shut-off solenoid ▪ Heavy duty lead acid batteries, supplied in a dry charged condition • Governing System The engine to be fitted with a close tolerance Electronic Governing system, which should include efc, actuators, magnetic pickups, etc, including wiring • Cooling Equipment 	1	No

<p>1.2</p>	<p>Cooling equipment comprising a heavy-duty tropical radiator, together with pusher type cooling fan and guards to be fitted. The radiator core should be electroplated with silver solder tin plated to prevent early failure due to corrosion. Coupon plated radiators are acceptable. Radiator has to be mounted on vibration mounts with enough strength to withstand the radiator and vibrations.</p> <p>Radiator must be designed to adequately cool the generator at an ambient temperature of 50°C</p> <ul style="list-style-type: none"> • Exhaust system 450 mm of stainless steel bellow type flexible exhaust, together with suitable flanges and fittings shall be supplied for each silencer. • Alternator The alternator shall be brushless revolving type alternator, having class H insulation on both the stator and field windings. It shall be built and rated to BS 5000, tropically impregnated with voltage regulation being in the order of +/- 1.5% from no load to full load under the steady state conditions assuming a speed variation not exceeding 4% on the engine. Anti-Condensation Coil to be fitted in the Alternator. • Generator arrangement and drive The simplex type base plate is of heavy duty rolled steel constructed, bolted and electrically welded, drilled on the underside to allow the fitting of foundation bolts. The engine and the alternator are to be mounted on a base plate and vibration mounts to be mounted underside of the base plate. The vibration mounts are to be supplied as loose item. • Finishing After assembling the genset zinc coated self-etching primer should be applied to the complete set. <p>Fuel system A fuel day tank of 12 hours capacity complete with level indicator, drain plug, filler, fuel return with fuel outlet connections and a fuel filter fitted with outlet connection is to be mounted. These mounts are to be supplied as loose item. All necessary fittings to be supplied in conformity with fuel flow diagram.</p>		
		1	No
<p>1.3</p>	<p>Factory testing The generator should be fully tested at the manufacturer workshop in the presence of client/apointees to check the ratings, overload, functional tests on a dummy load prior to dispatch in case the bidder is unable to provide factory test as required the bidder shall provide an extended warranty of one extra year than mentioned in item no 1.6 of this document.</p>	1	No
<p>1.4</p>	<p>Literature and drawings consisting of :</p> <ul style="list-style-type: none"> • 1 No x Manual on How to handle the generation equipment • 1 Nos x Electrical wiring diagram • 1 No x Engine operation and maintenance manual • 1 No x Engine parts catalogue • 1 No x Generator parts catalogue • 1 No x Generator operation and maintenance manual • 1 No x Generator AVR manual 	1	Lot

	<ul style="list-style-type: none"> • 1 No x Governor control unit manual • 1 No x Engine shop manual 		
1.5	Accessories		
	The Components shall meet the British Standard and ISO standards. Items are for the above mentioned generator sets.		
1.5.1	Primary silencer barrel (to match engine exhaust)	2	No
1.5.2	Secondary silencer barrel (to match engine exhaust)	2	No
1.5.3	3m Exhaust pipe dia (to match engine exhaust)	4	No
1.5.4	Elbows having dia (to match the engine exhaust)	6	No
1.5.5	Flanges having dia (to match the engine exhaust)	8	No
1.5.6	Bolts, Nuts and Washers for the Flanges. (Each set shall include 1 bolt, 2 washers, 1 spring washer 2 Nuts)	1	Lot
1.5.7	Split type rockwool insulation lagging suitable for 75 to 125mm dia. Exhaust pipes. The lagging shall be covered with High Quality Aluminium foil.	1	Lot
1.6	Warranty Generator set should carry a warranty of one year from the date of commissioning	1	Lot

7- 1000Kw Generator set Specification

S/N:	Description	Unit	Qty
1	<p>1000 kW prime rated diesel generator set with parameters 0.8 P.F, 415 Volts, 3 Phase, 4 wires, 50 Hz at 1500 r.p.m.</p> <p>The Generator set shall be powered by an International Branded Engine manufactured by an Original Company's Licenced OEM manufactured/assembler.</p> <p>The engine must produce a mechanical power output (kWm) which should meet the required electric power (kWe) of 1000kW and must be coupled with a 1000kW Alternator. Alternator should be an internationally recognised reputed brand.</p> <p>Engine to be complete with following auxilliary items :</p> <ul style="list-style-type: none"> • Heavy electrical flywheel • SAE flywheel housing • Air filters, Lubricating Oil Filters, Fuel Filters and all other such filter required for operation of the engine • Low lubricating oil pressure switch • High engine temperature switch • lub oil sender • Water Temperature Sender • All necessary items to run and to protect the engine • Starting equipment fitted to engine, consisting of : <ul style="list-style-type: none"> ▪ 24 Volt charging alternator (Brushless) 	1	No

	<ul style="list-style-type: none"> ▪ 24 Volt starting motor ▪ Fuel Shut-off solenoid ▪ Heavy duty lead acid batteries, supplied in a dry charged condition • Governing System The engine to be fitted with a close tolerance Electronic Governing system, which should include efc, actuators, magnetic pickups, etc, including wiring • Cooling Equipment 		
<p>1.2</p>	<p>Cooling equipment comprising a heavy-duty tropical remote radiator, with fans driven by Electric Motors (ABB or equivalent) . The radiator core should be electroplated with silver solder tin plated to prevent early failure due to corrosion. Coupon plated radiators are acceptable. The remote radiator must be designed and sized to adequately cool the proposed engine generator set at ambient temperature of 50 degree celsius</p> <ul style="list-style-type: none"> • Exhaust system 450 mm of stainless steel bellow type flexible exhaust, together with suitable flanges and fittings shall be supplied for each silencer. • Alternator The alternator shall be brushless revolving type altenator, having class H insulation on both the stator and field windings. It shall be built and rated to BS 5000, tropically impregnated with voltage regulation being in the order of +/- 1.5% from no load to full load under the steady state conditions assuming a speed variation not exceeding 4% on the engine. Anti-Condensation Coil to be fitted in the Alternator. • Generator arrangement and drive The simplex type base plate is of heavy duty rolled steel constructed, bolted and electrically welded, drilled on the underside to allow the fitting of foundation bolts. The engine and the alternator are to be mounted on a base plate and vibration mounts to be mounted underside of the base plate. The vibration mounts are to be supplied as loose item. • Finishing After assembling the genset zinc coated self-etching primer should be applied to the complete set. <p>Fuel system A fuel day tank of 12 hours capacity complete with level indicator, drain plug, filler, fuel return with fuel outlet connections and a fuel filter fitted with outlet connection is to be mounted. These mounts are to be supplied as loose item. All necessary fittings to be supplied in conformity with fuel flow diagram.</p>		
		1	No
<p>1.3</p>	<p>Factory testing The generator should be fully tested at the manufacturer workshop in the presence of client/apointees to check the ratings, overload, functional tests on a dummy load prior to dispatch in case the bidder is unable to provide factory test as required the bidder shall provide an extended warranty of one extra year than mentioned in item no 10 of this document.</p>	1	No

1.4	Literature and drawings consisting of : <ul style="list-style-type: none"> • 1 No x Manual on How to handle the generation equipment • 1 Nos x Electrical wiring diagram • 1 No x Engine operation and maintenance manual • 1 No x Engine parts catalogue • 1 No x Generator parts catalogue • 1 No x Generator operation and maintenance manual • 1 No x Generator AVR manual • 1 No x Governor control unit manual • 1 No x Engine shop manual 	1	Lot
1.5	Accessories The Components shall meet the British Standard and ISO standards. Items are for the above mentioned generator sets.		
1.5.1	Primary silencer barrel (to match engine exhaust)	2	No
1.5.2	Secondary silencer barrel (to match engine exhaust)	2	No
1.5.3	3m Exhaust pipe dia (to match engine exhaust)	4	No
1.5.4	Elbows having dia (to match the engine exhaust)	6	No
1.5.5	Flanges having dia (to match the engine exhaust)	8	No
1.5.6	Bolts, Nuts and Washers for the Flanges. (Each set shall include 1 bolt, 2 washers, 1 spring washer 2 Nuts)	1	Lot
1.5.7	Split type rockwool insulation lagging suitable for 75 to 125mm dia. Exhaust pipes. The lagging shall be covered with High Quality Aluminium foil.	1	Lot
1.6	Warranty Generator set should carry a warranty of one year from the date of commissioning	1	Lot

8- 1200Kw generator set Specification

S/N:	Description	Unit	Qty
1	1200 kW prime rated diesel generator set with parameters 0.8 P.F, 415 Volts, 3 Phase, 4 wires, 50 Hz at 1500 r.p.m. The Generator set shall be powered by an International Branded Engine manufactured by an Original Company's Licenced OEM manufactured/assembler. The engine must produce a mechanical power output (kWm) which should meet the required electric power (kWe) of 1200kW and must be coupled with a 1200kW Alternator. Alternator should be an internationally recognised reputed brand. Engine to be complete with following auxilliary items : <ul style="list-style-type: none"> • Heavy electrical flywheel • SAE flywheel housing • Air filters, Lubricating Oil Filters, Fuel Filters and all other such filter required for operation of the engine 	1	No

	<ul style="list-style-type: none"> • Low lubricating oil pressure switch • High engine temperature switch • lub oil sender • Water Temperature Sender • All necessary items to run and to protect the engine • Starting equipment fitted to engine, consisting of : 		
	<ul style="list-style-type: none"> ▪ 24 Volt charging alternator (Brushless) ▪ 24 Volt starting motor ▪ Fuel Shut-off solenoid ▪ Heavy duty lead acid batteries, supplied in a dry charged condition • Governing System The engine to be fitted with a close tolerance Electronic Governing system, which should include efc, actuators, magnetic pickups, etc, including wiring • Cooling Equipment 		
<p>1.2 Fuel system</p>	<p>Cooling equipment comprising a heavy-duty tropical remote radiator, with fans driven by Electric Motors (ABB or equivalent) . The radiator core should be electroplated with silver solder tin plated to prevent early failure due to corrosion. Coupon plated radiators are acceptable.</p> <p>Radiator must be designed to adequately cool the generator at an ambient temperature of 50°C</p> <ul style="list-style-type: none"> • Alternator The alternator shall be brushless revolving type alternator, having class H insulation on both the stator and field windings. It shall be built and rated to BS 5000, tropically impregnated with voltage regulation being in the order of +/- 1.5% from no load to full load under the steady state conditions assuming a speed variation not exceeding 4% on the engine. Anti-Condensation Coil to be fitted in the Alternator. • Generator arrangement and drive The simplex type base plate is of heavy duty rolled steel constructed, bolted and electrically welded, drilled on the underside to allow the fitting of foundation bolts. The engine and the alternator are to be mounted on a base plate and vibration mounts to be mounted underside of the base plate. The vibration mounts are to be supplied as loose item. • Finishing After assembling the genset zinc coated self-etching primer should be applied to the complete set. <p>A fuel day tank of 12 hours capacity complete with level indicator, drain plug, filler, fuel return with fuel outlet connections and a fuel filter fitted with outlet connection is to be mounted. These mounts are to be supplied as loose item. All necessary fittings to be supplied in conformity with fuel flow diagram.</p>	<p>1</p>	<p>No</p>
<p>1.3 Factory testing</p>		<p>1</p>	<p>No</p>

	The generator should be fully tested at the manufacturer workshop in the presence of client/apointees to check the ratings, overload, functional tests on a dummy load prior to dispatch in case the bidder is unable to provide factory test as required the bidder shall provide an extended warranty of one extra year than mentioned in item no 1.6 of this document.		
1.4	Literature and drawings consisting of : <ul style="list-style-type: none"> • 1 No x Manual on How to handle the generation equipment • 1 Nos x Electrical wiring diagram • 1 No x Engine operation and maintenance manual • 1 No x Engine parts catalogue • 1 No x Generator parts catalogue • 1 No x Generator operation and maintenance manual • 1 No x Generator AVR manual • 1 No x Governor control unit manual • 1 No x Engine shop manual 	1	Lot
1.5	Accessories		
	The Components shall meet the British Standard and ISO standards. Items are for the above mentioned generator sets.		
1.5.1	Primary silencer barrel (to match engine exhaust)	2	No
1.5.2	Secondary silencer barrel (to match engine exhaust)	2	No
1.5.3	3m Exhaust pipe dia (to match engine exhaust)	4	No
1.5.4	Elbows having dia (to match the engine exhaust)	6	No
1.5.5	Flanges having dia (to match the engine exhaust)	8	No
1.5.6	Bolts, Nuts and Washers for the Flanges. (Each set shall include 1 bolt, 2 washers, 1 spring washer 2 Nuts)	1	Lot
1.5.7	Split type rockwool insulation lagging suitable for 75 to 125mm dia. Exhaust pipes. The lagging shall be covered with High Quality Aluminium foil.	1	Lot
1.6	Warranty Generator set should carry a warranty of one year from the date of commissioning	1	Lot

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ދިވެހިރާއްޖެ

c) Required Document and Evaluation criteria



Required Documents

- Quotation (inclusive of the delivery period and the payment terms)
- Certificate of authenticity
- Bid Security
- Details of the company
 - Company profile
 - Company registration certificate
 - GST registration certificate
 - Contact details

Bids lacking the documents above are subjected to fail.

Evaluation Criteria

- **Proposal Cost:** 50 points
 - $(\text{Lowest proposed price} / \text{proposed price}) \times 50$ points
- **Delivery:** 30 Point
 - $(\text{Shortest Delivery Period}) / (\text{Quoted Delivery Period}) \times 30$
- **Payment Terms:** 20 points for the maximum days given for payment
 - $(\text{Proposed credit period} / \text{longest credit period}) \times 20$

Please submit your bids by 06th February 2019, Wednesday on or before 11:00 hrs. (Maldivian time), addressed to;

Tender Ref No: FNK-I/IUL/2019/013

Managing Director

Fenaka Corporation Ltd

Port Complex Building, 7th Floor

Hilaalee Magu, Maafannu

K. Male'

The proposal and the envelope must bear the reference number of the tender. All envelopes must be duly sealed and stamped. Fenaka Corporation will not be liable for the misplacement or

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premature opening of unlabelled sealed proposals. The bids will be opened on 06th February 2019, Wednesday 11:00 noon, in the presence of the bidders. The bids received after the stated time, and the bids received via email will not be accepted.

For more information and clarifications, please email us at tender@fenaka.com.mv

21st January 2019