



## Venezuela Equipment Sale LM2500 Gas Turbine Generators Scope of Supply

### Unit #1

Qty	Description	Condition	Comments
1	Dresser Rand LM2500 PE Gas Turbine Generator Package. Package configured for Dual Fuel (Nat. Gas / #2 Diesel) with water injection for NOx emission control	Used unit but undergoing total package refurbishment. Gas Turbine will be refurbished per OEM specifications.	Refurbishment will be complete and unit ready to ship by February 28 <sup>th</sup> , 2009
1	Liquid Fuel System complete and self contained on the unit, with connection on the base for customer provided filters distillate fuel at 600 psig	Liquid fuel equipment provided will be new	
1	Natural Gas fuel system, with connection on base plate for customer's filtered fuel supply at 400 psig +/- 20 psig	Natural gas system in existing and used but will be refurbished to like new as required	
1	Brush /Holec 26471 KVA iso rated continuous duty generator, 13,800 Volt, 60 Hz, 3600 RPM, air cooled with Allen Bradley excitation system and voltage regulator. Neutral and line cubicles with CT's, surge protectors and lightning arrestors	Generator is used but rotor is being pulled and complete inspection performed. Refurbishment will be completed as required following inspection.	
1	I-Beam base plates for turbine, generator and unit mounted accessories	Unit has been completely repainted per OEM specification	
1	Acoustic enclosure for gas turbine and generator. Ventilation systems and AC internal lighting		
1	Air Inlet filtration system for both gas turbine and generator	Inlet air has been completely refurbished and will include new filters for each	
1	Electro-hydraulic start system	A new hydraulic start skid will be provided	
1	Water injection metering system and duplex pump skid (NOx control with Nat. Gas and	This is a new skid	



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	liquid fuel system)		
1	Separate oil systems for gas turbine and generator, including duplex filters, duplex air coolers	New air cooler will be provided	
1	Allen Bradley Unit control panel for indoor mounting in a controlled environment, including microprocessor fuel management and sequencing system, generator metering, vibration monitoring, CRT annunciation of alarms and shutdowns, and Ethernet/Modbus interface to customer DCS	Existing Turbine control Panel (TCP) being replaced with new Allen Bradley and TCP	
1	Pre-wired 40ft Modular Control room, housing Unit control panel and unit motor control center	Modular Control Room is new	
1	Unit Motor Control Center (MCC)	MCC is existing but has been function tested and refurbished or components replaced as required.	
1	I/O cubicles mounted on gas turbine enclosure		
1	24V DC control system battery with dual battery chargers	Battery chargers are used but have been completed tested and refurbished as required. Batteries will be new	
1	Fire and gas detection system and extinguishing system for turbine compartments complete with DC battery and charger	The existing fire and gas system will be replaced with new components and interface panel. Chargers are used but checked out and tested, refurbishment as required. Batteries are new	
1	15KV Outdoor Generator Breaker assembly, synchronization controls and generator protection	All of this equipment is new	
1	Exhaust Assembly including flow enhancer to reduce back pressure turning elbow and 45' stack	New	
1	"Soak wash" engine cleaning system		
2	Sets of LM2500 gas turbine O&M manuals		
1	LM2500 familiarization / basic operator training course		

## Unit # 2

Qty	Description	Condition	Comments
1	GE LM2500 PE Gas Turbine Generator Package. Package configured for Dual Fuel (Nat. Gas / #2 Diesel) with water injection for NOx emission control	Used unit but undergoing total package refurbishment. Gas Turbine will be refurbished per OEM specifications.	Refurbishment will be complete and unit ready to ship by March 30 <sup>th</sup> , 2009
1	Liquid Fuel System complete and self contained on the unit, with connection on the base for customer provided filters distillate fuel at 600 psig	Liquid fuel equipment provided will be new	
1	Natural Gas fuel system, with connection on base plate for customer's filtered fuel supply at 400 psig +/- 20 psig	Natural gas system in existing and used but will be refurbished to like new as required	
1	Brush 26000 KVA iso rated continuous duty generator, 13,800 Volt, 60 Hz, 3600 RPM, air cooled with Allen Bradley excitation system and voltage regulator. Neutral and line cubicles with CT's, surge protectors and lightning arrestors	Generator is used but rotor is being pulled and complete inspection performed. Refurbishment will be completed as required following inspection.	
1	I-Beam base plates for turbine, generator and unit mounted accessories	Unit has been completely repainted per OEM specification	
1	Acoustic enclosure for gas turbine and generator. Ventilation systems and AC internal lighting		
1	Air Inlet filtration system for both gas turbine and generator	Inlet air has been completely refurbished and will include new filters for each	
1	Electro-hydraulic start system	This is an existing skid. Skid will be cleaned checked out and refurbished as required	
1	Water injection metering system and duplex pump skid (NOx control with Nat. Gas and liquid fuel system)	This is a new skid	
1	Separate oil systems for gas turbine and generator, including duplex filters, duplex air coolers	New air cooler will be provided	
1	Allen Bradley Unit control panel for indoor	Existing Turbine control	



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	mounting in a controlled environment, including microprocessor fuel management and sequencing system, generator metering, vibration monitoring, CRT annunciation of alarms and shutdowns, and Ethernet/Modbus interface to customer DCS	Panel (TCP) being replaced with new Allen Bradley and TCP	
1	Pre-wired 40ft Modular Control room, housing Unit control panel and unit motor control center	Modular Control Room is new	
1	Unit Motor Control Center (MCC)	MCC is existing but has been function tested and refurbished or components replaced as required.	
1	I/O cubicles mounted on gas turbine enclosure		
1	24V DC control system battery with dual battery chargers	Battery chargers are used but have been completed tested and refurbished as required. Batteries will be new	
1	Fire and gas detection system and extinguishing system for turbine compartments complete with DC battery and charger	The existing fire and gas system will be replaced with new components and interface panel. Chargers are used but checked out and tested, refurbishment as required. Batteries are new	
1	15KV Outdoor Generator Breaker assembly, synchronization controls and generator protection	All of this equipment is new	
1	Exhaust Assembly including flow enhancer to reduce back pressure turning elbow and 45' stack	New	
1	"Soak wash" engine cleaning system		
2	Sets of LM2500 gas turbine O&M manuals		
1	LM2500 familiarization / basic operator training course		