


ENERGY

anytime...

Complete solutions for power generation



Owner:	 Petrobras												
Contractor:	Energy International Corp., HVM Engineers, Gecolsa S.A.												
Turbines:	1 x Taurus™ 60 Gas Generator Package from Solar® Turbines												
Location:	Guando, Colombia												
Application:	Generation of power for all of the electrical requirements at this oil field.												
Technical Data:	Electrical output: 1 x 5,200 kW												
	<table><thead><tr><th>Phase I</th><th>Phase II</th><th>Phase III</th></tr></thead><tbody><tr><td>2 x 3.84 kW</td><td>1 x 3.84 kW</td><td>1 x 3.84 kW</td></tr><tr><td>2 x 3,050 kg/h</td><td>1 x 3,050 kg/h</td><td>1 x 3,050 kg/h</td></tr><tr><td>2 x 500 TR</td><td>1 x 500 TR</td><td>1 x 500 TR</td></tr></tbody></table>	Phase I	Phase II	Phase III	2 x 3.84 kW	1 x 3.84 kW	1 x 3.84 kW	2 x 3,050 kg/h	1 x 3,050 kg/h	1 x 3,050 kg/h	2 x 500 TR	1 x 500 TR	1 x 500 TR
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To meet customer objectives, Energy International utilizes Solar® Industrial Gas Turbines for gas turbine-powered plant projects. Solar and Taurus are registered trademarks of Solar Turbines Incorporated.

Guando Phase I, II, & III

Dual Fuel:
Natural Gas, Diesel

Generator:
3 phase synchronous generator
5,200 kW, 416 kV, 60 Hertz

Turnkey Responsibility:
Energy International, Gecolsa
S.A.

Erection/Civil Works:
HVM Engineers, Gecolsa S.A.

Commenced Operations:
March 2005



Customer Benefits

Power Production:

The client was looking for ways to reduce operating costs for their Colombian company.

One aspect of their plan was to source a power plant that could be installed quickly and operated remotely. Energy International was able to supply such a package utilizing two Taurus™ 60 Gas Generator Packages from Solar® Turbines burning Natural Gas and built for continuous duty. The units permitted a dual fuel option burning either natural gas or diesel. The Taurus 60s gas turbine

uses SoLoNOx™ a dry, "lean-premixed combustion technology" for pollution prevention.

This power plant supplies 8.8MW of power @ 4,160 kV varying load based on the requirements of the client's water injection program.

Oil Production Capacity

The power generated by the plant is being used to replace the high speed reciprocating, diesel fired, generator sets powering water re-injection pumps. Under this program, crude oil production increased by 10,000 barrels of oil per day.