

Atrex Energy's ARP Series Remote Power Generation System is a superior solution for providing continuous, unattended power for remote or off-grid applications. This field-proven power generation system operates in the harshest conditions with high levels of fuel efficiency. Based on state of the art solid oxide fuel cell technology, these generators use commercially available natural gas or propane to produce power without external reforming. With a power output range of 150 watts to 4500 watts at 5VDC to 60VDC these DC generators offer one of the highest power densities in the smallest package.

The power generator takes natural gas or propane and, using an electrochemical process, converts the fuel's energy into DC electricity. This process does not burn or combust fuel like other power generation technologies. This electrochemical process allows the generator to be inherently more efficient so it can deliver more usable energy for the same amount of fuel. In addition, as load requirements drop, the generator will "follow the load" and throttle back fuel consumption. Increased fuel efficiency translates into lower fuel consumption and reduced refueling visits resulting in significant cost savings.

Because the Atrex Energy generators do not burn fuel, the only emissions are small amounts of water vapor and CO2. No harmful NOx or SOx emissions contribute to air pollution. A state of the art User Interface Panel with touchpad and LED screen increases the ability to remotely monitor, control and adjust system parameters, reducing site visits. An industrial grade computer and 4G communication system improves on-line availability to systems deployed in the field.

Atrex Energy offers a feature rich system with a full complement of options and accessories that allow user optimization to meet custom requirements. This flexible and highly efficient power generation system can be used in a wide variety of applications in the harshest conditions while delivering an attractive Total Cost of Ownership.

Applications:

- **Oil & Gas** – Cathodic Protection, SCADA & Instrumentation, Chemical Injection Pumps, Valve Actuation
- **Telecom & Radio** – Off-grid Microwave and Broadband Repeater Stations, Radio Transmitters, Cellular Base Stations
- **Rail** – Signaling and Control
- **Environmental Monitoring** – LIDAR, SODAR, Meteorology Stations
- **Mining & Construction** – Lighting, Surveillance



User Interface Panel



Key Benefits

Competitive Total Cost of Ownership

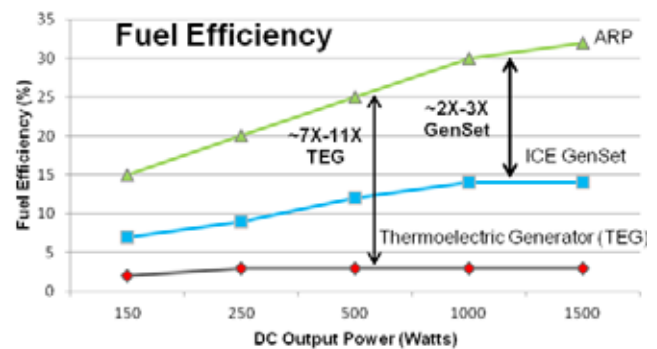
Natural gas and propane models

High efficiency = low fuel consumption = significant fuel savings

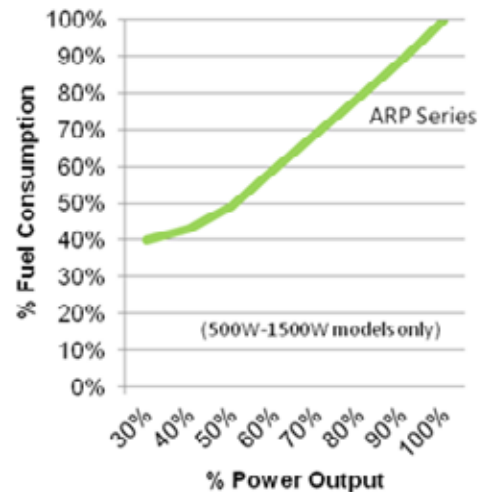
Remote monitoring and control

Quiet, safe, clean with minimal emissions = Green

CSA Certified to FC-1 standard



Fuel Consumption vs Power Output



Atrex Energy provides clients with money-saving, smart and reliable power solutions.

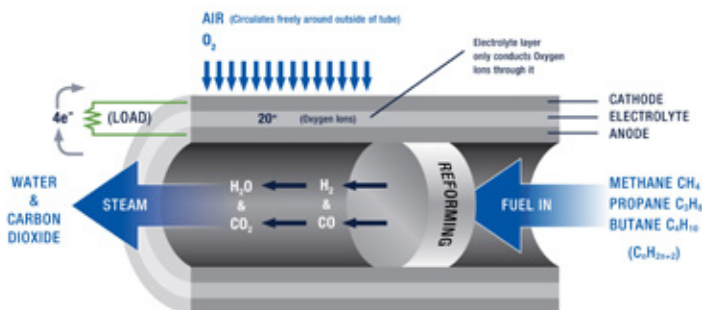


	ARP500	ARP1000	ARP1500
Electricity Efficiency	~25%	~30%	~35%
DC Output Power Max	500W	1000W	1500W
DC Output Voltage	5-60VDC	5-60VDC	5-60VDC
DC Output Current Max ¹	100A	100A	100A
Operating Modes	Current Control (CC), Voltage Control (VC), Battery Charge (Bx, x=12, 24 or 48VDC)		
Start-up Time to Max Output Power	<60 minutes		
ARP Series P/N ²	ARP500xy	ARP1000xy	ARP1500xy
CSA Certified	Yes	Yes	Yes
Fuel Cell Inlet Supply Pressure	2 psig - 5 psig (13.8kPa - 34.5kPa)		
Fuel Supply Pressure with High Pressure Regulator Kit (RP-HWN/RP-HWP)	5 psig - 125 psig (35.5kPa - 861.8kPa)		
Max Sulfur Content	<60ppmw (42mg/m3)		
Max Water Content	<5000ppmv for standard system, non-condensing at operating temperature and pressure		
Fuel Consumption-Propane (HD5)	2.4G/day 9L/day	3.6G/day 13.5L/day	5.2G/day 19.6L/day
Fuel Consumption-Natural Gas	185ft3/day 5.3m3/day	298ft3/day 8.4m3/day	398ft3/day 11.3m3/day
Operating Temperature	-40°C to +50°C (-40°F to +122°F)		
Storage Temperature	-40°C to +55°C (-40°F to +131°F)		
Humidity	5% to 95% (non-condensing)		
Operating & Storage Altitude	0 to 8,000 feet (2,438 meters)		
Unit Dimensions (H x W x D)	26" x 22" x 39" (66cm x 56cm x 99cm)	26" x 28" x 39" (66cm x 71cm x 99cm)	
Unit Weight	293lbs (133kg)	351lbs (160kg)	358lbs (163kg)
Shipping Dimensions (H x W x D)	45" x 46" x 38" (114cm x 117cm x 97cm)	48" x 46" x 38" (121cm x 117cm x 96cm)	
Shipping Weight	359lbs (163kg)	419lbs (190kg)	426lbs (194kg)
Noise Levels (at 1m)	52dBA		
Fuel Connection to ARP-HWP (Propane)	1/2" FNPT		
Fuel Connection to ARP-HWN (Natural Gas)	1/2" FNPT		
Data Interface	MODBUS RTU via Terminal Strip (requires ARP-RSC8 option)		
Local Computer Interface	RJ45		
Electrical Interface	Terminal Block 2/0 - 8 AWG		
Enclosure IP Category	IP23		
Enclosure Construction	powder coated galvanized steel		
Warranty	12 Months after installation or 13 months after date of shipment		

¹ - Current will also be limited by maximum output power of unit

² - x = Fuel (P=Propane, N=Natural Gas); y = CSA Certification (C=CSA certified, U=no CSA certification)

Solid Oxide Fuel Cell SOLID STATE (CERAMIC) CONSTRUCTION



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500-watt Continuous Load, 10 Year Total Cost of Ownership

