E-FUEL Data Sheet









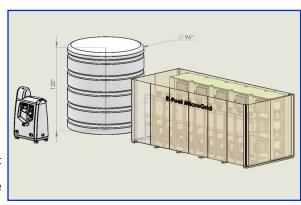
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E-FUEL MICROGRID™Green Scalable Power Generation

The E-Fuel MicroGrid is a revolutionary scalable electricity generation facility powered by carbon neutral renewable energy. Designed to operate 24x7 with fault tolerant redundancy, a MicroGrid can generate up to 100 kW. Each MicroGrid is comprised of a series of GridBusters™, distillation columns and a feedstock storage tank. The distilla-

tion columns process fermented feedstock into ethanol to power the GridBusters. By using a patented heat exchange process between the GridBusters and distillation columns, the heat generated by each GridBuster is captured and routed back to the distillation columns. This heat is used in lieu of electric coils to heat the column which offsets or eliminates the energy costs associated with distillation. Heat which normally would have been lost is now fully and efficiently re -purposed.



- Sensors throughout the MicroGrid allow for 24x7 monitoring by the E-Fuel Global Network (EGN) which tracks vital operating conditions.
- MicroGrid generators run in parallel and are daisy chained one to the other.
 Should one generator fail the system remains operational. Simply "hot swap" the failed generator and replace.
- Through the EGN remedial maintenance procedures may be performed to correct situations on-the-fly without user intervention*
- From any secure browser or Smartphone, subscribers may login at E-Fuel's web site to gain access to the EGN and view your MicroGrid's Dashboard with real-time status information presented in an easy to read graphical interface.
- DOES NOT REPLY ON ANY FOSSIL FUEL—MicroGrid operates on 190 proof wet ethanol through its own internal fuel production system to power a redundant array of generators.
- OPERATES OFF COMMUNITY WASTE OR FARM BIOMASS—using E-Fuel's patented MicroFueler™ distillation column design, various feedstocks may be fermented and processed through MicroGrid's internal redundant fuel processing columns.
- EXCLUSIVE POWER GENERATOR AND FUEL PLANT HEAT EXCHANGE SYSTEM— MicroGrid utilizes a patented heat recovery system to repurpose heat produced by the electrical generators and channels that heat to power fuel production resulting in a 50% to 90% energy efficiency.
- WASTE STORAGE CONTAINER INCLUDED.
- FUEL PRODUCTION FOR VEHICLES—MicroFuelers with a fuel dispensing feature can be added to the MicroGrid to fuel vehicles.

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Inputs	
Fuels	190 Proof Wet Ethanol
Input fuel pressure	Gravity, 1 PSI
Fuel required @ rated pow er	21 gallons per hour/1.5 MBTU/hr
Water required (for startup only	/) None required
Outputs	
Rated pow er output (AC)	100 kW (Need 18 GBs for long life at this output)
Electrical, Fuel, Reactor	50%
Electrical connection	240V @ 60 Hz, 4-w ire 3 phase (6 GB per each phase)
Physical	
Weight	2 tons
Size	224" x 84" x 81"
Emissions	
NOx	Experimental exemption
SOx	none
CO	Experimental exemption
VOCs	Experimental exemption
CO2 @ specified efficiency	Carbon neutral or Carbon negative
Environment	
Standard temperature range	0° to 40° C (extreme w eather kit available)
Max altitude at rated power	4,000 ft. MSL
Humidity	20% - 95%
Seismic Vibration	IBC site class D
Location	Outdoor
Noise @ rated pow er	< 43 DB @ 6 feet
Codes and Standards	
Pending Rule 21 interconnection	n standards
Exempt from CA Air District per	mitting; Experimental permit required
Pending UL listing	
Additional Notes	
Operates in a grid parallel conf	guration
Includes a secure website for	you to show case performance & environmental benefits
Remotely managed and monitor	ed by E-Fuel
Capable of emergency stop base	

Note: Preliminary—Specifications are subject to change without notice.