



AESI Business Plan 2006 Appendix C:

**Basic Specifications for the EDF Generator's
Power Inverter and Desalinization Subsystems**

a) The modular DC-to-AC grid-synchronous solid-state power inverter unit that was specially designed for Archer Energy Systems, Inc. by engineers at Power Paragon, Inc. of Anaheim, CA has a nominal cost of \$160,000 and the following basic specifications:

input power rating:	889 kW
input voltage (+/- 2%):	700 VDC
input amperage:	1,270 amps
output power rating:	838 kW
output voltage:	660 VAC, 50 or 60 HZ, 3-phase, 4-wire
output amperage:	1,270 amps (rms)
AC voltage THD:	5%
output overload:	200% for 2 sec., 150% for 30-60 sec.
input & output circuit breaker protection provided	
efficiency:	94-95%
operating temp.:	0-40°C
air-cooled, with redundant fans	
redundant power supplies provided	
dimensions:	90" H x 120" W x 48" D
weight:	9,000 lbs.

b) The modular Multi-Stage Flash (MSF) desalinization system that was specially designed for Archer Energy Systems, Inc. by engineers at Aquatech International Corp. of Hartland, WI has a nominal cost of \$11.4 million installed, and the following basic specifications:

product outlet capacity:	1,650 gpm (2,376,000 GPD)
product water quality:	< 10 mg/l
steam consumption @ ~20 psig:	196,320 lb/hr
gain output ratio (GOR):	4.2
thermal energy consumption:	60 MW
feed water TDS:	36,000 mg/l
feed flow rate:	13,200 gpm
recovery %:	12.5
electrical consumption:	833 kW