

Energy Systems & Design Ltd. (ES&D)

"Innovative Renewable Energy Systems Since 1980"

Postal Address:

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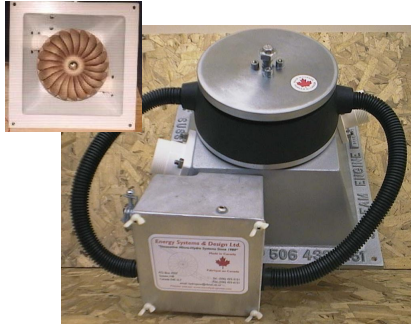
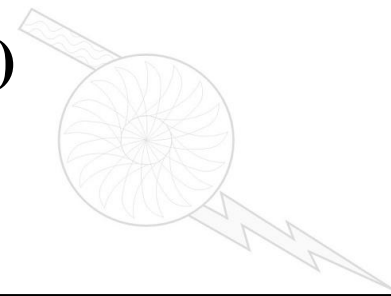
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Energy Systems & Design's Stream Engine is a micro hydro electric turbine generator designed for use in battery-based power systems, with electricity generated at a steady rate, and stored in batteries for use at higher rates than is generated. During times of low demand, power is stored. An inverter is used when AC power is required.

Water from a stream is channeled into a pipeline to gain enough head (the vertical distance the water falls) to power the system. The Stream Engine operates at heads of about two meters (6 feet) and upward. The water passes through a nozzle, where it accelerates, strikes the bronze turgo wheel and turns the generator shaft. Up to four universal nozzles can be installed on one machine, depending on conditions. Each Stream Engine is supplied with a digital multimeter as well as extra nozzles.

Energy Systems & Design 2 Nozzle Stream Engine

Stream Engine Output (Watts Continuous)

Net Head		Flow Rate						
		Liters/sec (Gallons/min)						
		0.67 (10)	1.33 (20)	2.50 (40)	5.00 (75)	6.67 (100)	7.50 (112)	9.50 (150)
Meters	Feet							
3	10	-	20	40	75	100	130	150
6	20	15	40	80	150	200	250	350
15	49	45	100	200	375	500	650	800
30	98	80	200	400	750	1000	*	*
60	197	150	400	800	1500	*	*	*
90	295	200	550	1200	*	*	*	*
120	394	300	700	1500	*	*	*	*
150	492	400	850	1900	*	*	*	*

A Typical "Stand-Alone" Renewable Energy System

