



"The Most Powerful Machines in The World"

2012 Edison Award

Water and



Lowest

Cost

Power

Modular Skid



Our Technology

³/₄ 5 Years Experience

³/₄ Generates electricity
from waste

heat & pressure

³/₄ Utilizes helical screw
technology

What is the Technology?



Helical Twin Screw Rotors in casing

Technology Comparison

Langson **Steam Machine** vs Steam Turbines

$\frac{3}{4}$ Lowest Capital cost

$\frac{3}{4}$ Lowest Operating cost

$\frac{3}{4}$ Allows changes in flow rates and pressure changes

$\frac{3}{4}$

Some renewable energy is impractical or too expensive

DOD Report

Manufacturing Readiness Levels in the Department of Defense

Report Date September 6, 2011

Level 7 – Capability to produce systems, subsystems or components in a production representative environment.

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- Bachelor of Science in Physics
- Master of Science in Chemical Physics
- Part of President Reagan's Defense Technology Study Team
- President Bush's Space Exploration Initiative
- Consultant to Raytheon Missile Systems on the NASA Concept Evaluation and Refinement effort



Applications Steam

{ Geothermal & Geopressure

{ Petrochemical and Industrial Pressure

{ LNG & pressurized Gases

{ Coal and Gas-fired Power Plants

{ Biogas & Biomass

{ Oil & Gas Geopressure

Steam Machine 1–50 MW

¾ Low Installed Cost (less than \$1500 per kW)

¾ Low Maintenance (100k hrs.)

¾ All In Generating Cost 2 ½ ¢ per kW

1 to 50 MW Modular Skids

From Steam & Gas Pressure

Applications

- ✕ Geothermal
- ✕ Geo-Pressure
- ✕ Topping Units
- ✕ Bottoming Units
- ✕ Steam Blowdown
- ✕ Process Steam
- ✕ Paper Mills
- ✕ Fertilizer Plants
- ✕ Bio Gas Boiler
- ✕ Petro Chemical
- ✕ Food Processing
- ✕ Steam Plants
- ✕ Solar Thermal

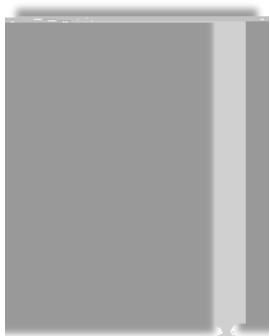
STEAM TYPES

- ✕ Saturated Steam
- ✕ Dry Steam
- ✕ Flash Steam
- ✕ Vented Steam
- ✕ 2 Phase Fluid
- ✕ Waste Steam

Value Proposition Steam Machine

Technology

	Uses Fossil Fuel	Emission Free	Base Load 24/7	Distributed Generation	Generation Cost (1) ¢ / kW
Renewables:					
Langson Energy	no	yes	yes	yes	1½ - 2½ ¢
Geothermal	no	yes	yes	no	5 - 7 ¢
Wind	no	yes	no	no	5 - 10 ¢
Biomass	no	yes	yes	yes	7 - 8 ¢
Solar Thermal	no	yes	no	yes	9 - 12 ¢
Photovoltaics	no	yes	no	yes	12 - 20 ¢



History of Our Technology

- | | |
|---------------------------|----------------------------|
| • 50 gallons per mile | • 300 MPH in 5 seconds |
| • 0 – 100 MPH in ½ second | • 10,000 HP from V8 engine |

Recycling energy worldwide