LANGSON ENERGY

Pressure To Power™

"The Most Powerful Machines in The World"

2012 Edison Award

Water and Steam Applications of the Langson Helical Screw Energy Converter

STEAM & GAS TURBO-EXPANDERS

Modular Skid

Lowest Cost Power

The Team

Dr. Ron DiPippo, Senior Engineer:

- Chancellor Professor Emeritus of Mechanical Engineering and the former Associate Dean of Engineering at the University of Massachusetts Dartmouth (UMD)
- Foremost world authority and consultant on Geothermal Power Plants
- Author of 4 major books including, *Geothermal Power Plants: Principles, Applications and Case Studies*
- 12 pages of other publications and accomplishments listed at http://www.umassd.edu/engineering/mne/people/faculty/dipippo.cfm

Dan Driscoll, CFO, Secretary, Treasurer, Director :

- CPA with over 30 years of experience in financial leadership
- Proven ability to maintain profitability during growth cycle

Chris Coté: Executive Vice President, Director

- Experience as a CPA
- Experience with sales and marketing in the energy market

Don Langson, Vice President, Project Development:

- Over 40 years in industry
- Proven ability to maintain profitability during growth cycle

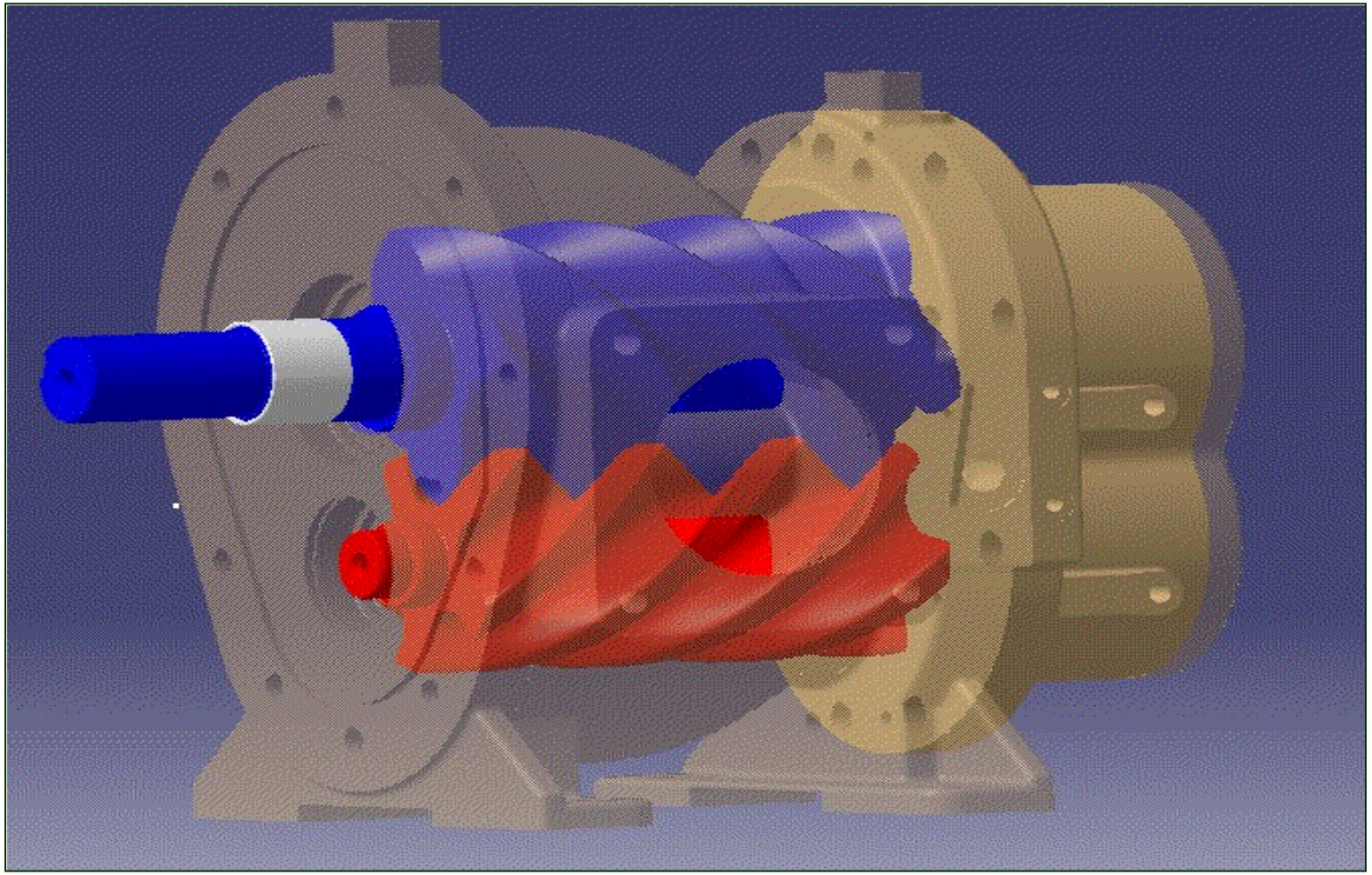
Our Technology

- 45 Years Experience
- Generates electricity from waste

heat & pressure

- Utilizes helical screw technology

What is the Technology?

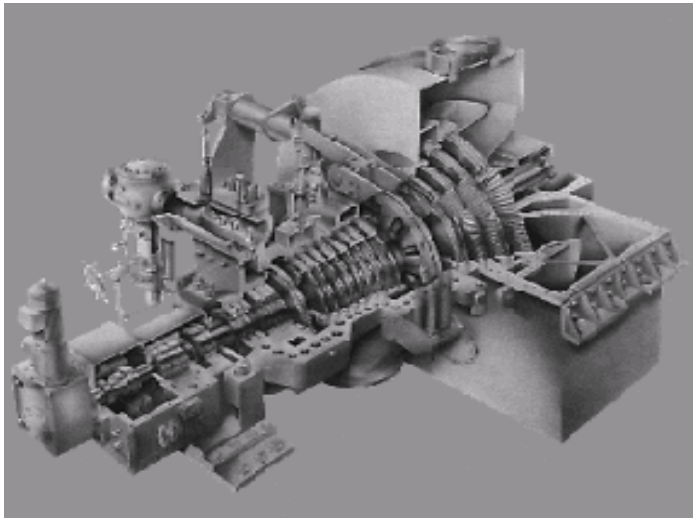


Helical Twin Screw Rotors in casing

Technology Comparison

Langson **Steam Machine** vs. SteamTurbines

vs.



- **Lowest Capital cost**
- **Lowest Operating cost**
- **Allows changes in flow rates and pressure changes**
- **Robust, proven technology, millions of ours of proven efficiency**
- **Allows all gases, dry or wet steam, impurities & contaminates directly into the machine**

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.

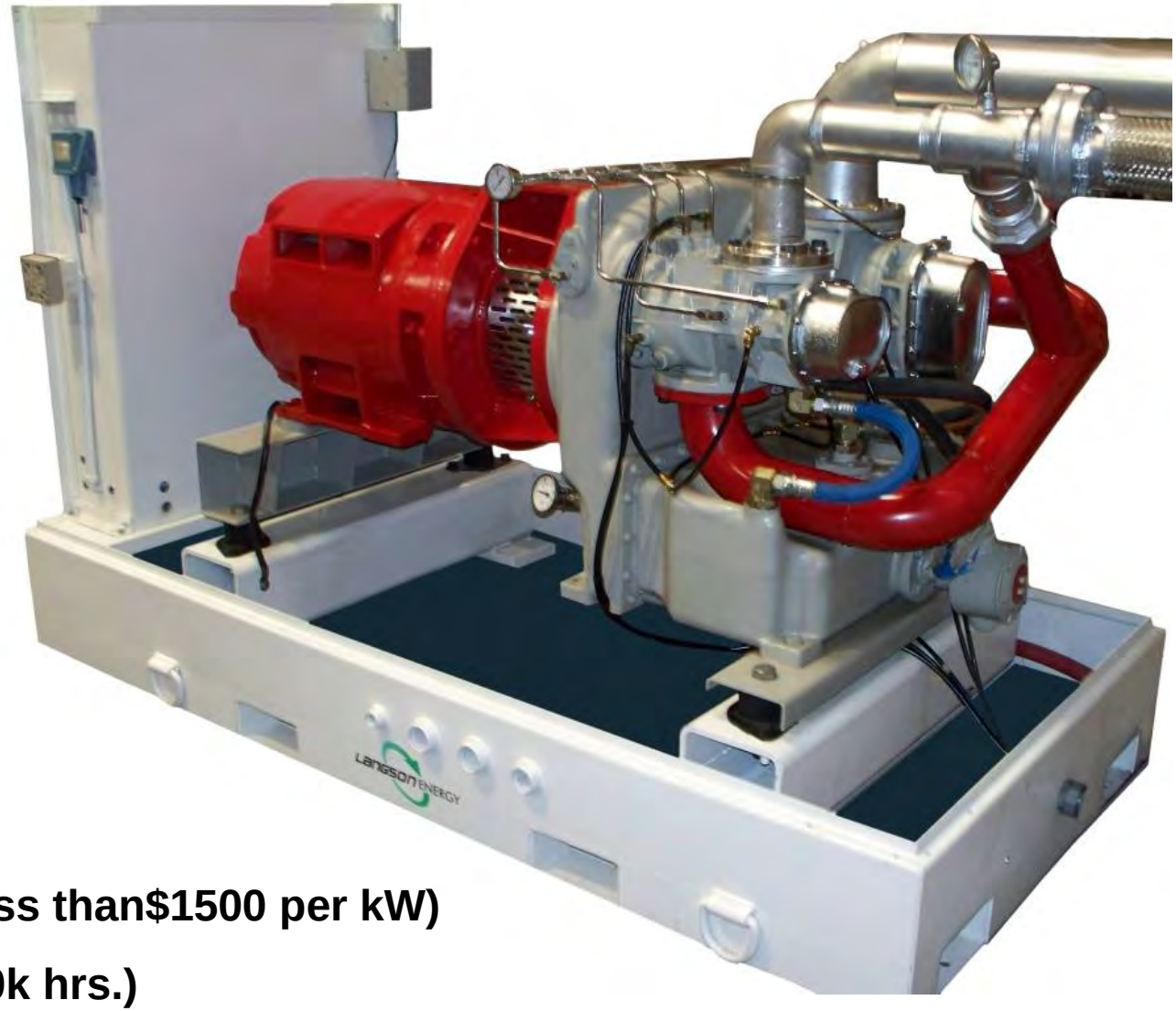
Author:
Roger X. Lenard

- 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 Geo-pressure**

Steam Machine 1– 50 MW



- **Low Installed Cost (less than$1500 per kW)**
- **Low Maintenance (100k hrs.)**
- **All In Generating Cost 2 ½ ¢ per kW**

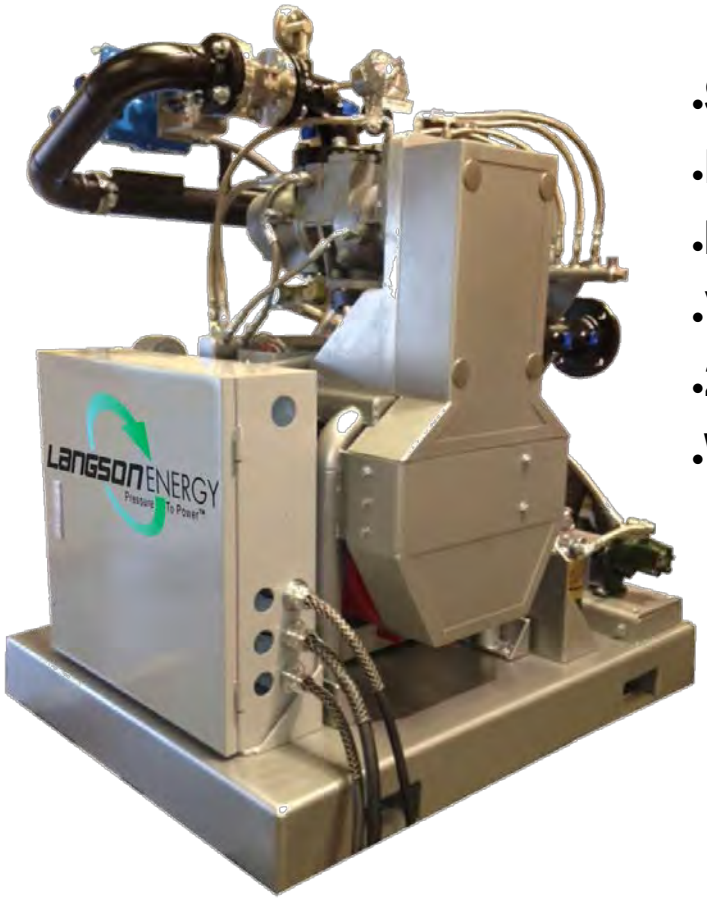
1 to 50 MW Modular Skids

From Steam & Gas Pressure

Applications

STEAM MACHINE

- 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

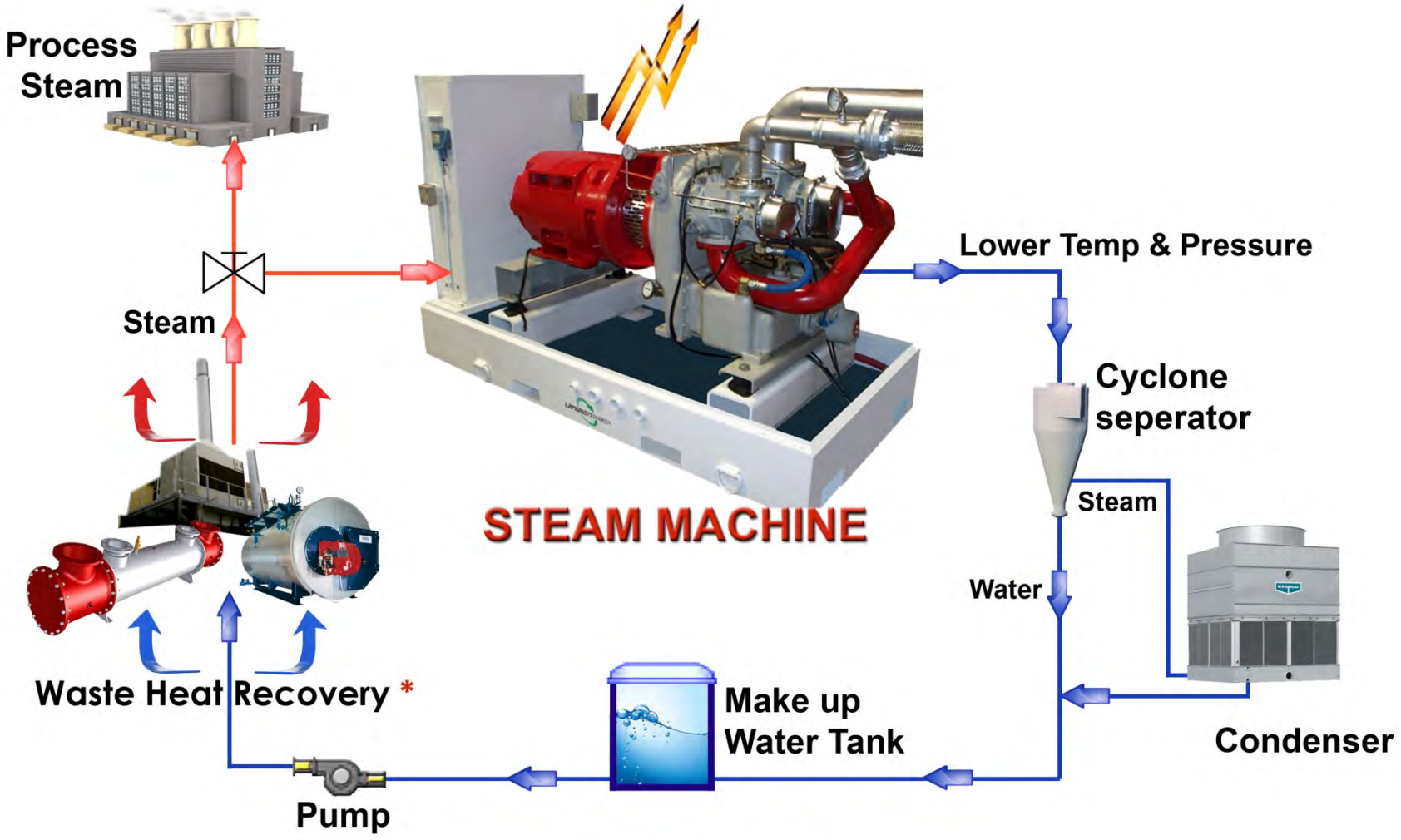


STEAM TYPES

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

STEAM MACHINE

Heat Recovery "CHP"



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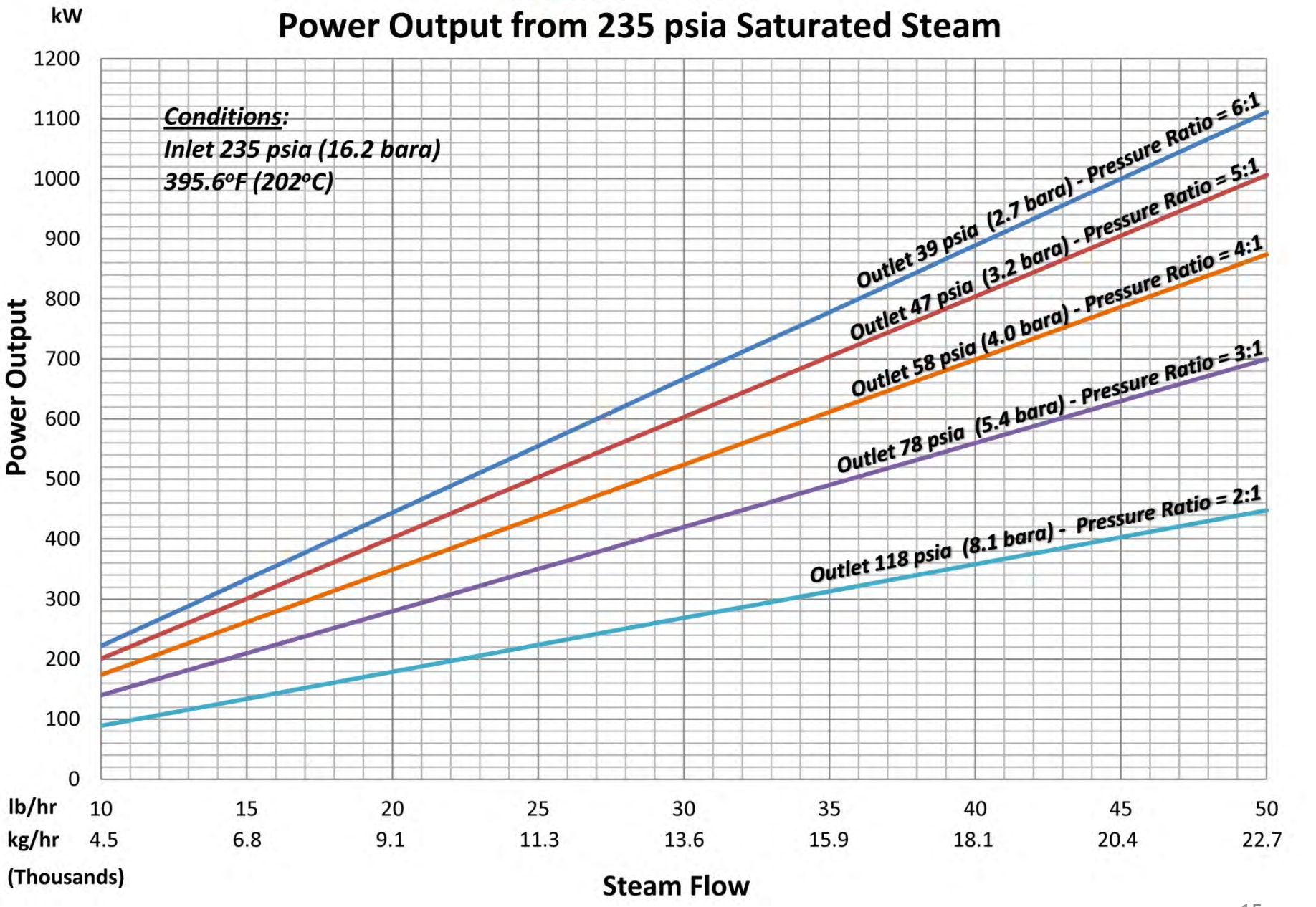
***Some Applications:**

Gas Turbines, CHP, Biomass, Biogas, Stackgas, Fertilizer, Steel Plants, Petrochemical, Food Processing

"Steam Machine"

Power Output from 235 psia Saturated Steam



Value Proposition

Steam Machine

CAPEX		Gross Income	
I MW……..	$1,350,000	8,640,000 x $ .10 =	$864,000
Installation.....	250,000	Less OPEX x $.0025 =	- 21,600
Total Cost	$1,600,000	Net income	$842,400

Simple Payback..... 1.85 Years

Conditions: Cost of power $.10 per kW, saturated steam
Grid connected, 24/7 operation, 8640 hrs of operation, $.0025 per kW OPEX

Installation Estimate Includes: Shipping in USA, Engineering, Bypass valves, Electrical to Grid, Union labor, Startup, Permits and fees, Additional Service call, Costs subject to site conditions.

Technology

Langson Energy vs. Competing Technologies

	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 ¢
Fossil Fuels:					
Gas Turbines	yes	no	yes	yes	7 - 11 ¢
Public Utilities	yes	no	yes	yes	7 - 12 ¢
Coal Plants	yes	no	yes	yes	8 - 14 ¢
Diesel	yes	no	yes	yes	45 - 150 ¢

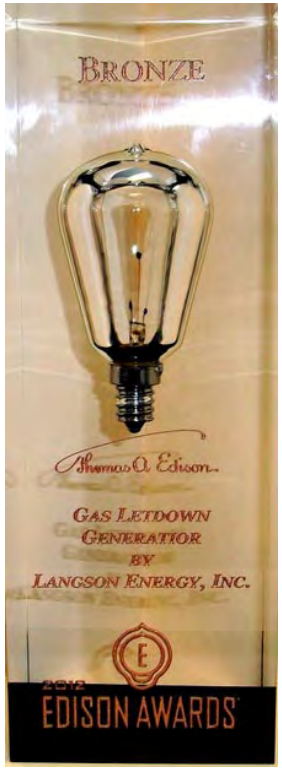
Information derived from various sources including Goldman Sachs Industry Reports, NV Energy & National Renewables Energy Laboratory calculations based data from National Labs, DOE, EPRI, PERI, GPRA and OPT.

(1) Includes CAPEX and OPEX

The Founder

Richard K. Langson: Inventor, Founder and Chairman of the Board

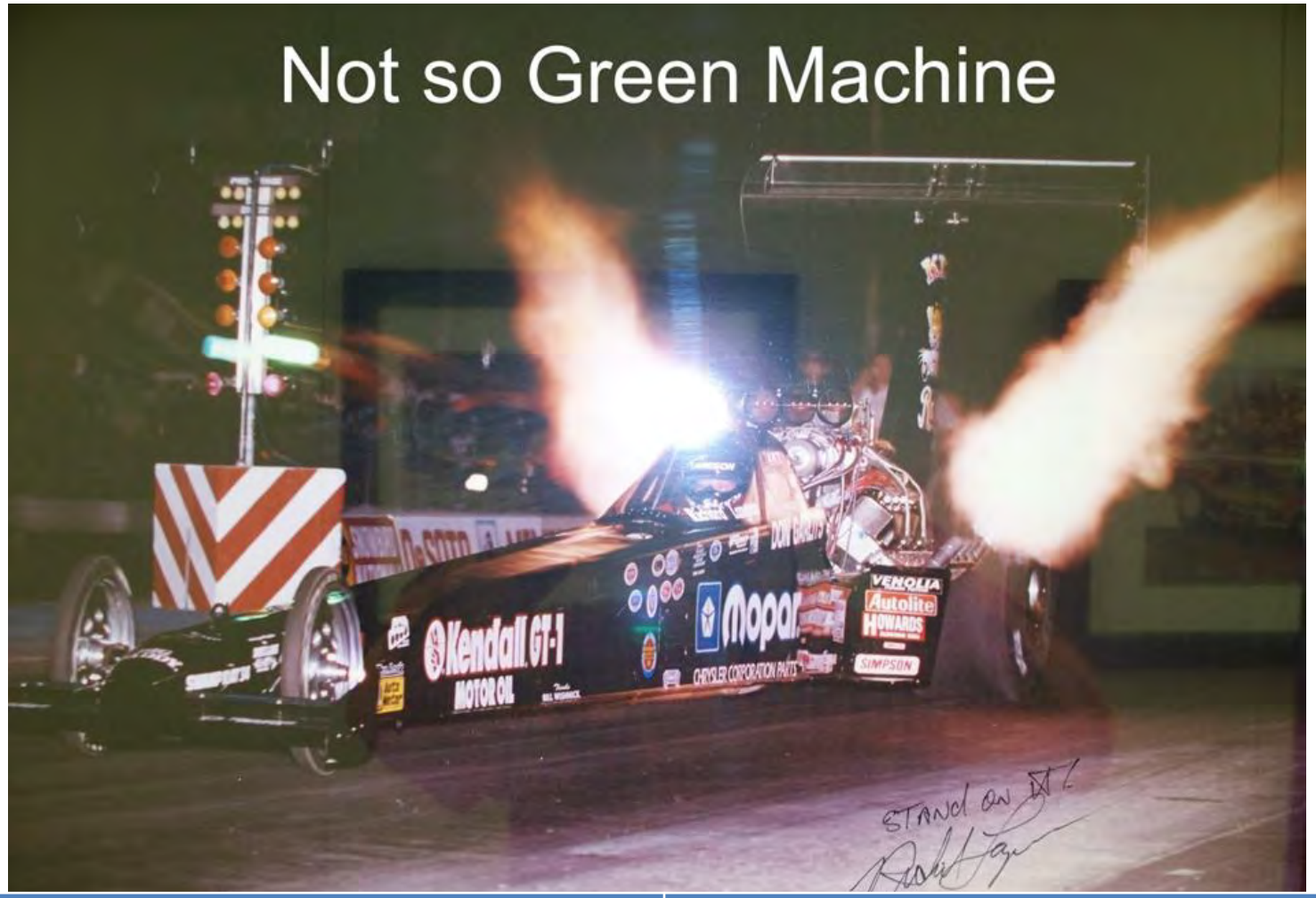
Mr. Langson has proven his talent as a world class entrepreneur and innovator over four decades in business.



LIST OF ACHIEVEMENTS:

- **2012 – Gas Letdown Generator ™ Awarded Bronze Medal – Best Green Energy Implementation**
- **2010 – Langson Energy is Incorporated and files patent for new technology**
- **Inventor and Founder of ElectraTherm's "Green Machine" – World Leader in ORCs**
- **2009 Wall Street Journal Technology Innovation Award – Energy**
- **2009 Entrepreneur of the Year**
- **2008 Popular Science Magazine Best of What's New Award, Green Tech**
- **2007 Geothermal Energy Association - Best of Show**
- **2007 Geothermal Resources Council - Best Scientific Paper Award**
- **1993 World Champion IHRA Top Fuel Race Driver**

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
LANGSON ENERGY