

Total Energy Solutions Inc.

CONSIDER

-3—15 year return on investment depending on technologies and economies of scale

-Greenhouse gas credits as a marketable commodity

-Utilities as an appreciating asset as opposed to an ongoing liability

-Combined Heat, Cooling and Power as a sustainable development

-Open –ended utility architecture to grow with advances in technology

-Micro-Utilities as profit centers

-Business models to contain and manage risk

-Generous incentives for 'Going Green'

ALTERNATIVE ENERGY STRATEGIES

Making the Right Choices

OUR VALUE PROPOSITION

Total Energy Solutions Inc. provides you with a single window to making the right choices for a greener and more profitable energy future!

Combining one or more technologies to address your energy strategy and leveraging returns on investment is our specialty.

On-site energy production provides multiple benefits.

In a global sense, experts agree that situating the source of power, heat and cooling closest to the demand addresses many concerns relating to efficiency and effectiveness of the use of fuel. A distributed system also addresses issues of

- security in numbers and distribution of the sources of energy,
- economies of scale for bringing new energy on line,
- reductions in line losses, and,
- better grid stability when supplying power where and when needed.

Designing, installing and operating alternative energy technologies can prove a daunting task in a time when technical reliability, economic and environmental considerations must be balanced as parts of an overall energy strategy.

Price per Watt

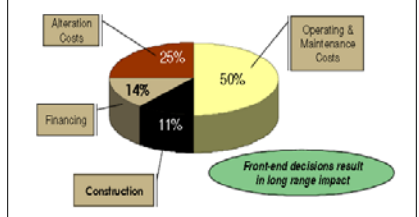


FINDING THE BALANCE

From a whole building perspective, research concludes that new "green buildings" cost the same or only marginally more than new conventional buildings. This is because marginal capital expenditures in green technologies can often eliminate other capital costs and certainly decreases operation and maintenance costs over the building's life time.

The buildings sector is responsible for more than half the nation's total greenhouse gas emissions according to the third greenhouse gas inventory report submitted to the UNFCCC. The biggest source of GHG emissions in the buildings sector in Canada can be attributed to space heating, followed by water heating and then electricity (94% of space cooling in Canada is electric so GHG emissions from cooling is included in the electricity portion)

OWNERSHIP COST SUMMARY (40-year building life cycle approximation)



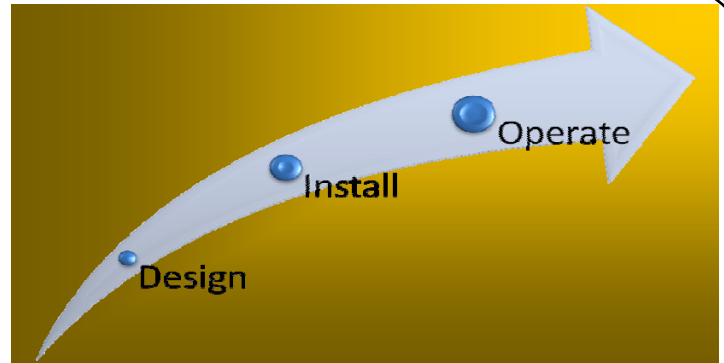
Green is the New Economy. Understand your options.....

'Fail-Safe' Your Energy Project

Total Energy Solutions Inc. provides a single window to design, install, and operate micro-utilities. We bring together a team that is second to none in the industry. To this end, we have also developed strategic partnerships with a number of technical organizations recognized as the best within their particular areas of expertise (see back cover).

Design blends the appropriate combination of technology and business modeling to reach a desired outcome. In most cases, the highest return on investment results from improvements to building envelopes while increasing overall energy efficiencies.

New technologies leverage a building's ability to perform, but new technologies also present risks, many of which are due to personal uncertainties and lack of familiarity on the part of the developers, and design and construction teams entrusted with the owner's investment.



Our powerful and comprehensive risk assessment and management tools ensure you have both the technical and the human risk elements analyzed, prioritized and mitigated before you start.

Installation of on-site combined heating, cooling and power technologies involves the seamless coordination and integration of new technology with standard practices and HVAC delivery systems. Our clearly defined scope of work documentation ensures on-time and on-spec construction. Installation is coordinated and managed to contain risk and provide mutual assurance with other on-site design-build specialists.

Operation of on-site micro-utilities is configured to provide

owners with a 'hands-free' asset while maximizing profitability.

Our business modeling confines the risk on revenues to the utility provider while assuring the end-user receives the best possible pricing for heating, cooling and power.

Our Consulting Services:

- Energy Audits
- Pre-engineering and Feasibility studies
- Strategic Planning, Business Modeling and Risk Analysis
- Financing
- Operational support

Our Development & Operations Services:

- Engineering and project design
- Project Management
- Hardware integration and installation

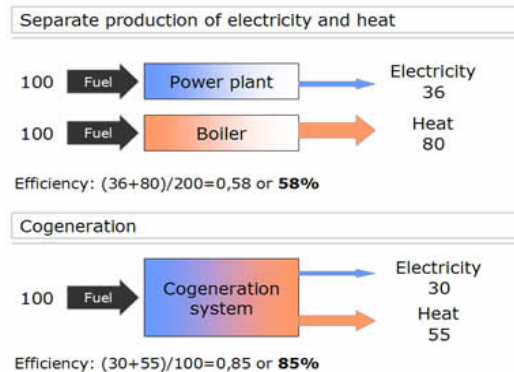
TOTAL ENERGY SOLUTIONS IS YOUR ENERGY AGENT: With powerful, proven analytical tools and compelling business case analysis, we will ensure you get the best value for dollar when considering alternative, on-site energy production.

The Business Case for a Micro-Utility

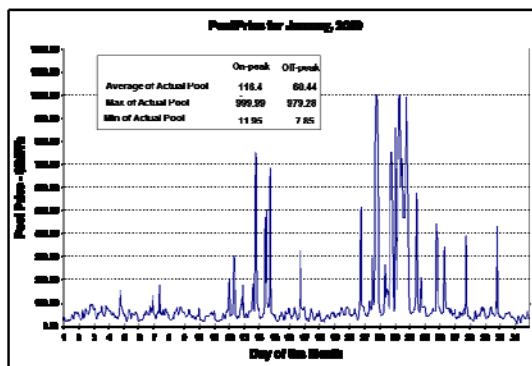
BUSINESS OVERVIEW Why Distributed Energy?

Many Small Plants Make Sense. By utilizing all of the waste heat possible only through a distributed energy source, increased efficiency allows natural gas fired micro-utilities to compete effectively with coal-fired generating plants. For the owner there are multiple benefits including

- Unlimited Power, Heating and Cooling on Demand,
- Reliable 100% commercial backup power,
- Access to power for peak shaving resulting in lower power costs,
- Profit from the sale of power to the grid,
- Mitigating risks against future volatile power prices,
- Tax benefits of clean / green power and heat production, and,
- Numerous government incentives for creation of micro-utilities



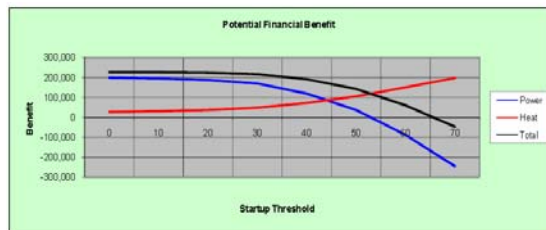
MICRO UTILITIES ARE PROFIT CENTERS: Multiple revenue streams enable micro utilities to value heat, cooling and power as marketable commodities while taking advantage of a host of incentives available to distributed energy producers. Taken together, the return on investment is generally up to 30%.



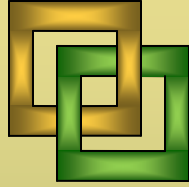
How and Why it Works in Alberta

Power prices spike and fall many times every day. The Alberta Electric Systems Operator (AESO) reports electricity prices live and on line continuously as seen in the chart here. Power prices paid to small electricity producers during the illustrated January, 2009 period varied between \$7.85 to \$999.99 per megawatt hour, with wide fluctuations shown on a daily basis! This pattern is repeated for a variety of reasons every month and can be exploited by a generator with intercon-

nection to the provincial grid via AESO. To participate *at an assured profit*, the generator's on-board computer is programmed to read the AESO-published prices which in turn instructs the generator to sell to the Alberta Power Pool when it can make a profit while valuing and managing the deployment of the waste heat produced by the system as shown in the chart here....



Total Energy Solutions' proprietary software integrates the value of the heat produced by the system with the hourly decision to run or not to run. At current fuel and power rates in Alberta, a one-megawatt configuration is expected to produce annual *net* returns of over \$235,000.00!



Total Energy Solutions Inc.

Total Energy Solutions has assembled a team of experts and strategic partners to ensure that all elements of micro-utility development including DESIGN, ENGINEERING, INSTALLATION, OPERATION AND MAINTENANCE are fully and seamlessly integrated with the standard engineering and construction phases for any development.

Our team consists of leading edge entrepreneurs, engineers, consultants, technologists and environmental specialists dedicated to systems integration and energy optimization.

1872 Robertson Crescent, Edmonton, Alberta, T6W 1N7

Ph. 780.436.1046

www.totalenergysolutions.ca

desiderata ENERGY consulting inc.
Interconnection, Power Retailing

R & D SOLUTIONS
Research and Development Tax Credits



**Canadian Risk
Management Services Limited**

Beyond Energy & Trade Inc.

