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Energy – Is It A Concern For Business?

By Mike Jenkins, P.Eng

I recently attended a seminar sponsored by the RDA (Regional Development Authority) Association of Nova Scotia on climate change and energy reduction incentives. This seminar demonstrated very effectively the climate change and energy usage issues we currently face here in Nova Scotia. This article is meant to briefly convey the seminar information to our local business community. This article also provides contact information on the various incentive programs and opportunities to invest in energy reduction strategies for our own Pictou County businesses.

Why should businesses in Pictou County be concerned about energy? Canadians in particular, due to our northern climate and relatively large distances from markets and suppliers, are directly affected by energy requirements. Here in Nova Scotia and Pictou County, we rely predominantly on burning coal and other non-renewable fossil fuels for our electrical generation. This results in higher energy costs and greater stack emissions of greenhouse gases and other harmful products relative to most other provinces.

In addition to the higher costs, energy issues have taken on a new sense of urgency. A few facts have made me more aware of the concern. For instance, a single gallon of gasoline is the resultant of refined crude oil produced by 91 tons of biomass, reduced by the earth's pressure and temperature over eons. Another way of stating this is that our current world consumption of oil in one year consumes the equivalent of the total biomass produced by the earth over a period of 13,000 years. This current consumption rate is mainly by the 20% of the world's more developed nations and is likely to increase as other nations increase their development and energy usage. Even the most optimistic reports on proven, accessible oil reserves suggest that we may only have oil and gas for the next 50-100 years.

The more immediate problem with the burning of fossil fuels has been the production of greenhouse gases. These gases have already contributed to global warming and climate change and will continue to negatively impact our communities and country in the near future.

The most immediate and practical way of addressing these concerns is to reduce the current amount of energy we use, especially by non-renewable fossil fuels. This can be accomplished by replacing current energy sources with renewable energy sources, recovering energy from existing sources, and using higher efficiency production processes and buildings. Practical examples of these strategies are described below:

- The use of biomass (renewable resource) heating systems to replace electrical or oil fired kilns.
- The use of district or centralized heating systems. At Nova Scotia Power's Trenton Generating Plant only about 33 % of the energy in the coal it burns is converted to electrical energy. The vast majority of the remaining 66% of the energy contained in the coal is waste heat that can be captured and used for a district heating system. Trenton

Works, a rail car manufacturer next door to the generating plant, currently uses co-generated steam from Nova Scotia Power to assist with its plant heating system.

- The use of energy-efficient lighting systems and high-efficiency motors including variable speed drives in industrial and commercial plants.

Our Federal and Provincial governments have become very aware of these concerns and have put in place dozens of incentive programs to encourage businesses to reduce their use of non-renewable energy sources. Many of our municipal governments are investing in energy-reduction and ecology-enhancement projects using the "Green Funds" program set up together by the Federation of Canadian Municipalities and the Government of Canada.

Two programs I recommend for identifying and evaluating energy-reduction strategies here in Nova Scotia are the "Nova Scotia Eco-Efficiency" program and the Federal government's "Industrial Energy Audit Incentive". The Eco-Efficiency program, offered only to eligible businesses and manufacturers here in Nova Scotia was described in more detail in the January's issue of the "Chamber Update". This program provides reimbursement for costs up to 75% of the total cost, to a maximum of \$6,000 per project, to identify, evaluate and plan energy-reduction strategies. The Federal government, through Natural Resources Canada, also offers energy audit incentives, which reimburses eligible businesses 50% of total costs up to a maximum of \$5,000 per audit. There are also several incentive programs available for the implementation of energy-reduction and alternative energy strategies. These programs typically reimburse businesses with cost contributions of 25% of implementation costs, up to limits of \$80,000 per project. These programs are available to industrial, commercial and institutional businesses. Contact information for these particular programs are listed below.

- The Eco –Efficiency Business Assistance Program www.dal.ca/eco-burnside
- Office of Energy Efficiency for Businesses, Institutions, Governments and Industry www.oeo.nrcan.gc.ca/ici
- Please contact myself or the PRDC office for additional contact information.

The opportunities to invest in energy-reduction now are excellent. The cost of capital is at a long-term low, therefore decreasing the payback time of many projects to only a few years. The risks of this type of investment are low since many energy-reduction technologies are proven and have been around for a number of years. It is very likely that the cost of energy over time will continue to increase and will make an energy-reduction project even more valuable. There is also an intangible benefit in making this kind of an investment - it's knowing that you have contributed to the health of your community by reducing greenhouse gases and conserving non-renewable resources for the future and for more beneficial uses.

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