



Devoting energy to our future

**By Heather Douglas, President & CEO, The Calgary Chamber of Commerce
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Isn't the world a funny place? Our hunter-and-gatherer forefathers stalked woolly mammoths and used branches to cook dinner and heat their caves.

Our agrarian grandparents roped cattle and barbecued their steaks with charcoal, then used the coals to warm their sod shacks.

Our parents drive to local supermarkets and purchase boneless, free-range chickens to grill in convection ovens. We nuke pork dumplings and install solar panels to generate heat and light.

What will our children and grandchildren do?

As the world shakes free of the industrial revolution's constraints of coal and petroleum, it is propelled by bouncing sound waves from Earth-to-satellite in a communication age emerging into an energy renaissance era.

Will Alberta be able to participate in this transformation? After all, this province's economic prosperity is based on drilling or digging into the Western Canadian Sedimentary Basin for oil (175 billion barrels), natural gas (167 trillion cubic feet), and coal (34 billion tonnes) -- all industrial age sources of energy.

We are leaders in non-renewable energy. Can we catch up to the Europeans and their sophisticated energy sources? They are old hands at using solar, wind and nuclear to power the electricity grid.

Can we adapt to a world demanding green energy and minimal carbon footprint? Perhaps we could surpass them by inventing the second and third generations of renewable energies. The odds are not good.

In the 1980s, Alberta invested much more into research and development. The government created the Alberta Oil Sands Technology Research Authority and, along with industry, poured \$2 billion into it. This was the drive that lowered the costs to produce a barrel of synthetic crude by solving technical challenges.

Sadly, says Dr. Robert Mansell, of the University of Calgary, R&D investment today is about one-third the amount of 20 years ago. Only a few companies and banks, venture capitalists and entrepreneurs quietly finance some renewable technologies.

What's lacking is a pool of research money to invest in high-risk, high-cost energy innovation. The Calgary Chamber of Commerce believes the province should create a new endowment, the Alberta Heritage Energy Research Fund and invest \$5 billion immediately.

Think what such a fund could do:



- Solve environmental challenges inherent in our carbon-based resources.
- Invent the next wave of energy patents to improve cooking, cooling and heating.
- Fuel planes, trains, and autos with renewables and create technologies to dominate the global economy.

If Premier Ed Stelmach and his cabinet decide to take our advice, we encourage them to hire brilliant entrepreneurial fund managers. They, in turn, would need a rigorous, merit-based selection process to monitor R&D projects. They could call this REFIT: Research in Energy Futures, Innovation and Technology.

This bold move would stimulate private and public companies to dedicate their best and brightest scientists and engineers to invent, design and commercialize renewable energy technologies. It would attract international talent eager to build relationships with Alberta and Canada's finest companies, exceptional academic researchers and manufacturers.

To ensure REFIT remains vital, the government should invest 35% of its annual royalties from non-renewables into it and other endowments. In our generation, we leapt from dial telephones to sending and receiving e-mail and streaming video via satellites.

Think what REFIT can do for our children.

Perhaps they will power their high-tech toys or cook their gourmet meals by hydrogen fuel cells, synchrotron light sources, and geothermal.

The world is indeed a funny place.