

## STRATEGIC IMPERATIVES FOR BRITISH COLUMBIA'S ENERGY FUTURE

### *Executive Summary*

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The BC Progress Board, established by Premier Gordon Campbell in July 2001, is an independent panel of 18 senior business and academic leaders. The Board is tasked with benchmarking BC's economic and social performance over time and relative to other jurisdictions. The Board also provides strategic advice to the Premier and the government on ways to improve the economy and provincial social policy supports.

This BC Progress Board report outlines energy opportunities for British Columbia along with specific actions that should now be taken in the energy sector<sup>1</sup>. It does so with the benefit of the provincial energy plan released in 2002. The Report has been informed by a number of participants involved in various aspects of the energy business.

Energy is central to our way of life in Canada. It heats our homes, powers our appliances and automobiles, and plays a direct role in the business success of our economy, whether in energy-intensive industries such as forestry or in supporting the information technology world we now work and live in.

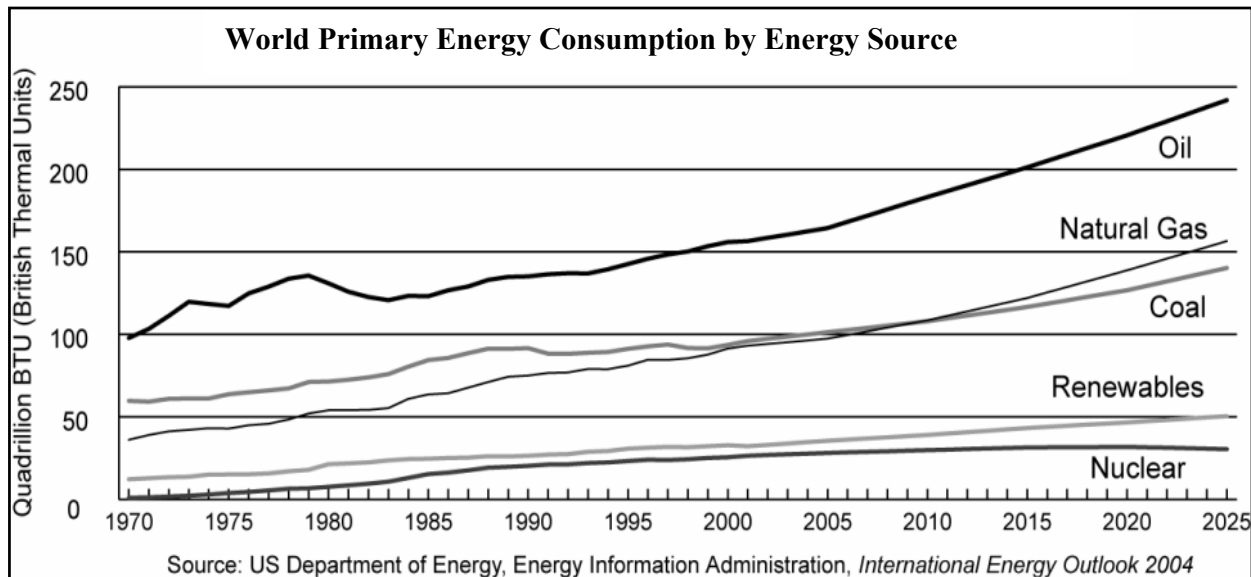
The surprising thing about energy is that we generally take it for granted. This is because our part of the world has historically had a good supply of reliable and relatively inexpensive energy. This is not true in some other parts of the globe. Even in North America, as witnessed in California and Ontario, energy can be both unreliable and expensive if energy policy is inadequate and/or not implemented well.

This Report provides a number of forward-looking recommendations on how British Columbia's energy sector can be enhanced. These recommendations take global as well as North American energy developments into account. The recommendations follow from six emerging strategic imperatives. Taken together, the recommendations are designed to improve the British Columbia economy and our way of life.

The demand for energy remains strong. From 2001 to 2025 world energy consumption is expected to increase by 59 percent. Energy consumption in the developing world, which includes China and India, is projected to grow by 2.8 percent per year, well above the 1.3 percent per year projected for the industrialized world. Oil will remain the dominant fuel, continuing to represent 39 percent of energy sources by 2025. Natural gas will be the next largest energy source growing at the highest rate of all energy sources. Natural gas is also used for electricity generation, as it is efficient and burns more cleanly than either coal or oil. Coal will remain an important energy source. Renewable energy, which includes hydropower, though still modest in size, will grow while nuclear energy will remain a small portion of total energy sources. See Chart below.

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<sup>1</sup> The energy sector is defined for this paper as including all sources of energy for household and industrial use, with the exception of refined petroleum products for vehicular use.



Although still very small in global terms, British Columbia has become an important source of energy for Western Canada. It is also a major exporter of natural gas to the US Pacific Northwest and coal to Asia, Europe and the United States. British Columbia's energy success is the result of the following:

- A diversified supply of energy in the province that includes abundant natural gas and coal resources, significant hydroelectric resources developed on both the Peace and Columbia Rivers, good conditions for the development of renewable energy sources, and the development of technology to support innovation in energy;
- The foresight of government and the private sector to develop transportation systems to get energy to market. Approximately 50 percent of British Columbia's natural gas serves the needs of the United States (mainly in the US Pacific Northwest) and this has been the case for more than 50 years. There is also an extensive electricity transmission system in the province given the distance between generation on the Peace and Columbia rivers and the bulk of demand which is in the Lower Mainland;
- Ongoing efforts by government and industry to develop an efficient regulatory regime for natural gas and specific measures by government to improve the environmental assessment process for major projects; and,
- A provincial energy policy that is balanced and forward-looking and recognizes the interrelationship between economic and environmental issues, the importance of reliable and appropriately-priced energy to domestic industry and households, and the need to grow the energy sector to support economic growth at home and to take advantage of trading opportunities with other jurisdictions.

As with most public policies, energy policy needs ongoing review and British Columbia's energy situation is no exception. The compelling need to grow the BC energy sector is as follows:

**British Columbia has natural advantages in energy resources and an energy sector that is rapidly matching forestry as the primary economic**

**engine of the province. Growing the energy sector will underpin economic growth in the province over the long term. Growth requires a balanced approach that includes conventional, new, and alternative sources of supply, has a particular focus on efficiency and conservation using new technology, and ensures self-sufficiency and also economic gain through export opportunities. Energy resources are owned by the province and therefore balanced growth will improve the government's finances and its ability to fund public services such as health care and education. The likely result will be a high standard of living in the province in both economic and social terms.**

This Report describes several important Strategic Imperatives that emerged from the analysis and consultations. Some of the main issues related to these Strategic Imperatives are noted below and the primary recommendations are summarized in the next section of the report. To understand the Strategic Imperative it is necessary to read the Description and Analysis of each, which is found in the main body of the report.

- To protect and promote the public interest and our market advantages in the energy sector, the provincial government must have a comprehensive and current energy plan at all times and ensure it is followed by the public agencies responsible, particularly BC Hydro. Public agencies must have the resources and expertise to manage a complex and continuously changing sector. BC needs to be a competitive jurisdiction with regard to royalties and regulation while meeting social and environmental imperatives. Industry, government and First Nations must develop productive working relationships that are beneficial to all parties involved. The government should plan for the best long-term use of oil and gas revenues.
- One of BC's advantages is our natural gas resource. There are many undeveloped or underdeveloped natural gas sources. The northeast of the province is the focus of industry production at present and should remain so as it still has considerable potential as well as infrastructure, services, an experienced labour force and communities who understand the industry.
- BC's other major advantage in energy is our current and potential electricity supply. However we are no longer self-sufficient in electricity. We need to ensure we have an adequate and reliable supply of electricity at a predicable cost over the long term, particularly as the global energy supply becomes more uncertain. Consequently, we need to make some hard choices now about the best new sources of electricity to build in the province.
- Alberta and BC are energy interdependent. Alberta exports its oil and gas though BC. We trade in electricity and we rely on refined petroleum products from Alberta. The Alberta oil sands development is an energy project of global proportions and will fundamentally change the energy sector in Canada and North America. BC must identify and promote its interests in this regard, including ensuring its own natural gas production does not falter due to lack of labour and equipment. We need to negotiate a mutually beneficial strategy with Alberta.
- Conservation and energy efficiency and alternative energy supplies are ways we can reduce greenhouse gas emissions. If electricity rates are set too low, it does not send the right signals to consumers. They over consume electricity, or replace other energy sources such as natural gas with electricity, and drive up demand. There are a vast array of conservation and efficiency

technologies and programs available. The public does not have the information or price incentive to make the most of them.

- BC has had the luxury of a secure supply of energy, which has resulted in complacency about where it will come from in the future and at what cost. BC Hydro is an authoritative voice in the province on energy issues. It needs to communicate our current situation clearly and allow the public to understand the required trade-offs, based on awareness and information, so that we can ensure we have a reliable and affordable supply of energy over the long term.

In conclusion, British Columbia's economy, as with every developed economy, relies on access to energy.

British Columbia is vulnerable with regard to its use of refined oil products, primarily for transportation. We import most of what we use and, as we can see every time we go to the gas pumps, we are price takers in a world of volatile and unpredictable oil prices and supply. Our advantage lies with electricity and natural gas.

With regard to electricity, British Columbia has had a few strong decades of being able to supply its population and others with low-cost, reliable electricity from a renewable source, hydroelectric dams. That's as good as it gets. That advantage has diminished as few new sources of electricity have been developed. We are now net importers of electricity and we import more each year. BC should again be self-sufficient in electricity and, in fact, we should be in a net export position. Being a net importer – as at present – puts us in an increasingly weak position with regard to protecting our economy.

We don't need to be electricity importers. There are options open to us. We could build or expand hydroelectric dams. Depending on the price, we could use our own natural gas to generate electricity. We could build small run-of-river hydro projects. We could put a sincere effort into developing real alternatives such as geo-thermal, wind, tidal and solar generation. And of course we could get serious on a collective and personal level about conservation and efficient use of what we have. A reasonable approach would be to pursue all of these options, subject to price considerations, concurrently and in moderation. Then we will have a diversity of sources of energy while having a reasonable impact on the environment.

With regard to natural gas, we are unique in North America in that our discovered natural gas reserves which are primarily in the Northeast and our production levels are still growing at a time when the demand for natural gas is increasing and reserves elsewhere are declining. We also have significant potential to develop natural gas in the Bowser and Nechako basins and off-shore. However, British Columbians need to use natural gas more effectively. If it is used to replace coal or oil, it produces lower greenhouse gas emissions. In some instances, it can be used very efficiently, depending on the price, for electricity generation and for transportation, in some instances.

We do need to do something, though. We haven't done anything significant to increase our electricity supply for twenty years. We will never be significant players in a global energy market driven by demand in the US, China and India, but we may soon find ourselves in a world taking drastic measures to feed its unsustainable dependency on oil.

The least we can do is to take the opportunity to responsibly meet our own energy requirements where we are best able to do so.