

EXECUTIVE SUMMARY AND KEY RECOMMENDATIONS

EXECUTIVE SUMMARY

Canada enjoys the advantage of a diverse and balanced portfolio of energy resources and is one of IEA's largest producers and exporters of energy. The importance of the energy sector for the Canadian economy, and for global energy security, has grown steadily over the last decade. The country's abundant resource base has the potential to deliver even greater volumes of energy. Nonetheless, like other energy-producing economies, Canada faces a number of challenges. The most significant of these relates to sustainability; Canada is one of the highest per-capita emitters in the OECD and has higher energy intensity, adjusted for purchasing power parity, than any IEA country, largely the result of its size, climate (*i.e.* energy demands), and resource-based economy. Conversely, the Canadian power sector is one of OECD's lowest emitting generation portfolios, producing over three-quarters of its electricity from renewable energy sources and nuclear energy combined.

POLICY FRAMEWORK

An understanding of the roles of Canada's provinces and territories, and their ability to influence and shape energy policy formation and implementation, is an important feature of Canadian energy policy analysis. Respect for jurisdictional authority and the role of the provinces form an important pillar of energy policy.

A key feature of the Canadian context is that provinces, jurisdictions that receive their power and authority directly from the Constitution Act of 1867, are owners of their ground resources apart from those located in aboriginal lands and some federal lands. Provincial governments are the direct managers of most of Canada's resources and have primary responsibility for shaping policies implemented in their jurisdictions. Unlike the provinces, the territories of Canada have no inherent jurisdiction. They do not own their ground resources, but have some management responsibility. Policy co-ordination between the federal and the provincial governments takes place through formal high-level committees and informal contacts and consultations.

Three key underlying principles of Canadian energy policy are: market orientation; respect for jurisdictional authority and the role of the provinces; and, where necessary, intervention in markets to achieve specific policy objectives. Canadian energy policy relies on competitive markets to determine

supply, demand, prices, and trade, and is guided by a drive for cleaner production and use of energy. The government of Canada seeks to achieve a balance between the environmentally responsible production and use of energy, the growth and competitiveness of the economy, and secure and competitively priced energy and infrastructure.

SOUND RESOURCE POLICIES

The federal, provincial and territorial governments of Canada share a strong commitment to the sustainable development of the country's natural resources and have a long-standing and informed awareness of the dangers posed by climate change and the need for each to contribute to the development of a long-term solution.

In many parts of Canada, the regulatory framework in potential natural gas- and oil-producing regions appears complex. This is further complicated by the requirement to negotiate and settle aboriginal land claims. A repeated criticism is that the environmental outcomes of the energy project approval process are unpredictable and untimely. The establishment of the Major Projects Management Office is a helpful step towards a more predictable and timely review process. As a general principle, the aim should be that environmental evaluation by all regulatory bodies should be carried out on the basis of a single environmental assessment.

One of the greatest challenges facing Canada is its ability to continue to develop its vast unconventional oil resources in a sustainable manner. In this regard, the forecast increase in production from the Alberta oil-sands poses the greatest test. Canada must take care to develop this resource without a disproportionate increase in emissions and incurrence of excessive emissions penalties while at the same time managing the broader environmental impacts of new energy developments such as water management, post-mining reclamation and tailing ponds.

There are a number of strategic investment issues facing the upstream oil and gas industry, one of which is exploring the possibility of expanding international markets beyond the United States, the only significant market for Canada's oil and natural gas exports at present. Policy makers and industry must therefore start to focus on identifying new export markets and on the infrastructure needed to access these markets. The federal government should continue to support this process and keep under review the impact that taxation and regulatory policies may have on the outcome. Furthermore, it should also maintain its broad policy approach in which investment decisions are left to the private sector.

Canada's coal reserves are abundant, constituting by far the largest hydrocarbon reserves in a resource-rich country. Accounting for just over 10% of global coking

coal exports, Canada's coal exports add an important element of competition to what is otherwise a relatively concentrated market by providing an alternate source of coking coal for consumers around the world.

In the electricity industry, a major challenge facing the sector is the federal government's commitment to ensure that 90% of electricity needs come from non-emitting sources by 2020. This is an increase of 15% on present levels; therefore, approximately 110 TWh of carbon-emitting output must be displaced. At present, renewable energy accounts for 61% of Canada's electricity output, mostly hydropower, while nuclear energy provides a further 15%. To bridge this potential long-term capacity shortfall, the federal government will have to: work very closely with provincial and territorial authorities in co-ordinating the planning and authorising new generation facilities; commit to long-term, effective and predictable support mechanisms for renewable energy; and proceed with the restructuring of the nuclear industry

CLIMATE CHANGE

The government of Canada was unable to meet its obligations under the Kyoto Protocol, and thus developed an alternative approach to climate change policy, the *Turning the Corner* framework, which was published in 2007. Since then, a number of factors, such as the global economic downturn and a change of government, have led the federal government to place its previous climate change policies, including the *Turning the Corner*, under review, albeit while continuing to pursue the regulation of GHG-emitting industrial facilities.

We strongly encourage the federal government to maintain its very close dialogue with the United States and to commit to participate in any agreed international solution. The announcement, in February 2009, of the commencement of a Clean Energy Dialogue between Canada and the United States with the intention of developing a possible future cap-and-trade system and the development and deployment of clean energy technologies was a very welcome step. The government should build on this momentum and seek further opportunities for engagement and climate change policy co-ordination while continuing to develop its own initiatives.

Furthermore, on 30 January 2010, Canada announced the submission of its 2020 emissions reduction target under the Copenhagen Accord. Canada's 2020 target, an economy-wide 17% reduction from 2005 emissions levels, is aligned with the United States target, and is subject to adjustment to remain consistent with the United States target.

CARBON CAPTURE AND STORAGE

Carbon capture and storage (CCS) is a priority for the federal government and presents Canada with an opportunity to develop a technology that can reduce greenhouse gas (GHG) emissions on a large scale. Western Canada in particular represents a world-class opportunity to advance CCS, with a concentration of large final emitters (*e.g.* oil-sands and coal-based power generation) in close proximity to excellent storage sites. Given the high costs and uncertainties associated with CCS, GHG policies and/or carbon prices alone will not advance this technology. Canada, therefore, needs to develop an integrated long-term policy that brings the technology from large-scale demonstration to commercialisation via economic and/or regulatory incentives.

Various measures to encourage or mandate GHG mitigation, including CCS, exist or are being developed at provincial level. As with other aspects of climate change policy, further work will need to be undertaken by the federal and provincial governments to ensure consistency and compatibility of any CCS-related obligations on industrial entities. Commendably, the federal government and several provinces are taking steps to promote CCS technology and the government of Canada has committed over CAD 1 billion in funding for CCS towards large-scale CCS demonstration projects through various programmes.

Canada should continue to maintain its high profile and leadership in international efforts to promote and implement CCS and then take the next important step: to commit funding to the implementation of projects and advance their construction.

ENERGY EFFICIENCY

Canada has higher energy intensity, adjusted for purchasing power parity (PPP), than any other IEA country. Final energy consumption has grown continuously over the past decade, though at a lower rate than the economy as a whole. Energy intensity levels, although improving, are largely related to Canada's high concentration of output in energy-intensive sectors, its relatively cold climate, large distances travelled and a high standard of living, with minimal constraints on space occupation.

Canada is committed to working to improve and increase energy efficiency. In August 2008, the provinces and territories collectively committed to achieving a 20% increase in energy efficiency by 2020, largely through improvements to building codes, broader regulation of energy-consuming products, green building policies for new government-funded facilities, and home energy audits and retrofit assistance. In addition, federal and provincial or territorial governments are collaborating in different ways to achieve combined energy efficiency objectives.

Across sectors, co-operation between provincial and federal energy ministers on developing a national energy efficiency action plan could be further strengthened. National targets and/or harmonised measurements and timeframes to maximise opportunities for energy savings, with a particular emphasis on road transport and buildings, should be an important feature of this plan.

KEY RECOMMENDATIONS

The government of Canada should:

- ▶ *Develop a co-ordinated climate change policy targeted on the key emitting sectors, including specific cap-and-trade proposals, and actively participate in any forthcoming international agreement.*
- ▶ *Implement a comprehensive national energy efficiency strategy, focused on reducing energy intensity, with an explicit emphasis on policies in the road transport sector and buildings sector.*
- ▶ *Maintain Canada's high profile and leadership in CCS efforts internationally and prepare a national strategy for the implementation of CCS, including the construction of full-scale demonstration facilities as soon as possible.*
- ▶ *Continue to streamline upstream oil and natural gas environmental regulatory processes, develop new natural gas- and oil-export markets and the infrastructure needed to facilitate supply and access to these markets.*