Getting the Green Light

The Path to Public Support for Ontario's Power Plans

BY RICHARD CARLSON, ERIC MARTIN, PAMELA NOWINA & MARY ELLEN RICHARDSON

MOWAT ENERGY

School of Public Policy & Governance
UNIVERSITY OF TORONTO

Acknowledgements

The opinions expressed in this report are solely those of the authors. However, our work could not be done without the contribution of others.

The authors are deeply grateful to a number of people for their generosity in sharing their knowledge, experience and expertise with us.

We would like to particularly thank Tatiana Khanberg for her early work on the project, Robert Warren for his clear legal insight, and John McGrath for his keen editor's eye.

We are also very grateful to Peter Fraser (Ontario Energy Board), Amir Shalaby (Ontario Power Authority) and Oskar Sigvaldason (World Energy Council) for their knowledge and their generosity in sharing it.

The report would not be possible without the kind support of the Mowat Energy Steering Committee. Steering Committee members: Colin Andersen (Ontario Power Authority), Rick Birmingham (Union Gas Limited), Bruce Campbell (Independent Electricity System Operator), Elise Herzig (Ontario Energy Association), Julia McNally (Ontario Power Authority), Blair H. Peberdy (Toronto Hydro Corporation), Arunas Pleckaitis (Enbridge Gas Distribution), George Vegh (McCarthy Tétrault LLP), Mark Wilson (Independent Electricity System Operator), Mel Ydreos (Union Gas Limited).

Our work is based largely on the knowledge of our interviewees. We are extremely grateful to them and have listed their names in Appendix I.

MowatEnergy is generously funded by Enbridge Gas, The Independent Electricity System Operator (IESO), The Ontario Energy Association, The Ontario Power Authority, Toronto Hydro, and Union Gas.

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JUNE 2013
WWW.MOWATCENTRE.CA
 ISBN 978-1-927350-51-5

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Executive Summary

For decades Ontario has struggled to gain public support for some aspects of electricity policies and plans. Too often, longer-term plans are battered by short-term controversies. These controversies, experienced by successive governments, arise from shortcomings in Ontario's planning process, most notably a lack of clarity around the role of the public.

Energy assets are long-term investments that require long-term plans. Such plans produce policy consistency and certainty over time. This certainty can only come from an open decision-making process that subjects plans to public scrutiny and debate, with clearly defined roles for elected officials, the public and energy experts. Only through improved processes can Ontario secure the social licence necessary to move forward with ambitious electricity plans.

This report identifies ten principles centred on transparency, accountability and public engagement that, if incorporated into the planning process, would lead to greater public support for long-term energy plans. Ontario and five other electricity jurisdictions (New South Wales in Australia, British Columbia, Great Britain, New York State, and Sweden – as well as an example outside the energy industry – Ontario's Metrolinx) are then measured against the principles.

Compared to Ontario, other jurisdictions incorporate greater democratic review and accountability in planning and are able to secure greater public support for long-term plans. Our conclusion from this is that public input and democratic engagement need to be strengthened in Ontario. This could happen in two ways: through enhanced clarity around the role of the legislature and through more meaningful public consultations and public advocacy. The Ontario government has given indications that it is moving in the direction of more community engagement with electricity plans. For example, the Ontario government has instructed the Ontario Power Authority and the Independent Electricity System Operator to develop a new regional energy planning process that incorporates input from municipalities, communities and the energy sector.

The report concludes that the legislative and governance framework required for effective electricity planning already exists to a large extent. The recommendations made in this report build upon that foundation and are grouped into four themes: public engagement, good governance, integration and transparency. Taken together, they would deepen the public conversations needed to ensure a secure, sustainable and affordable electricity future.

Our recommendations are as follows:

Public Engagement

Public engagement can be seen as an integral part of increasing public support for all policy changes. There are some specific recommendations that will help bring more public participation to the electricity planning process.

RECOMMENDATIONS

1. Legislate a community participation charter.
2. Create a public energy consumer advocate.

Good Governance

Good governance of the electricity sector is necessary for citizens to feel confident that energy plans will be prudent and effective for Ontario.

RECOMMENDATIONS

3. Define the role of ministers and elected officials and limit the use of ministerial directives.
4. Require a provincial energy plan prepared by an independent expert agency.
5. Enhance the Ontario Energy Board's (OEB) review criteria.
6. Give the OEB the ability and resources to review and approve the Ontario Power Authority's (OPA) procurement plans and leave-to-construct applications for new generation, as it does for transmission and distribution; or alternatively, create an independent generation siting board.

Integration

Integrating local and regional plans, goals and concerns with provincial planning will assist in gaining acceptance of the plan from Ontarians.

RECOMMENDATIONS

7. Require regional energy plans be approved by the OEB.

8 Require municipalities to include energy planning in their infrastructure plans and create a framework for integration.

9 Require integration between levels of planning.

Transparency and Accountability

If the planning process is transparent and accountable, people will be more likely to support the plan and accept planning decisions.

RECOMMENDATIONS

10 Improve statistical availability, analysis and reporting.

11 Consider imposing a moratorium on further electricity generation procurement pending the preparation of the next Integrated Power System Plan.

12 Require policy changes and directives to be submitted to the legislature.

Energy plans are inevitably controversial. We must balance economic and environmental concerns, while keeping in mind security of supply and local interests. It is not surprising that energy policies produce heated political debate. By adopting these recommendations, the Ontario government could go a long way toward ensuring that the public, elected officials and expert planners all have ownership of long-term electricity plans. This could provide the certainty and consistency necessary for the next round of energy plans that will be so crucial to Ontario's long-term economic prosperity.

PROLOGUE:

Two Cautionary Tales

The Deregulation of the Electricity Market

In May of 2002, the Conservative government of then Premier Ernie Eves flipped a switch and dramatically changed the structure and operation of Ontario's electricity system. The government's plan was to transform it from a government-owned and managed system into an open-market system where the private sector would set the price of electricity and generate the supply. The reform was driven by a belief that competition would bring lower prices and require less public investment. The change had been years in the making and the implementation had been delayed twice. Where other jurisdictions had implemented this market "liberalization" in gradual steps, Ontario's government decided to take a "big bang" approach in 2002 and open both the wholesale and retail markets at the same time.

It seemed like a good idea at the time. But contrary to government expectations, and largely due a prolonged period of very hot weather that summer, the retail market price of electricity shot up, more than doubling in price within a matter of weeks. Consumers screamed and Premier Eves quickly decided to freeze the price of electricity supply, as well as distribution and transmission rates, effectively shutting down the competitive electricity system that his government had envisioned. It was never resurrected.

The Integrated Power System Plan

The Ontario Power Authority (OPA) was created through legislation and began operating in early 2005. It was designed to fill a critical need in Ontario's energy system. Since Ontario had neither a competitive market (like the United Kingdom and Sweden) nor an integrated publicly-owned utility (like Quebec and British Columbia), the OPA was to be responsible for the long-term planning of the electricity system and the procurement of the required generation and transmission resources. After significant stakeholder consultation, the OPA released its 20-year Integrated Power System Plan (the IPSP), the first long-term plan the province had seen in 18 years.

Taking its direction from the Ontario Liberal government's very specific green energy policy, the IPSP proposed a blueprint for building an electricity system to meet Ontario's future needs. It identified specific geographic areas in which new generation facilities would need to be built in order to ensure reliable supply, and the transmission infrastructure necessary to connect generation to the customers.

In September of 2008, the Ontario Energy Board (OEB) began a hearing to either approve

or recommend changes to the IPSP. The OEB hearing process included significant stakeholder participation, with interveners from environmental groups, First Nations, industrial and residential electricity consumers and other interested parties. It would have been one of the largest hearings the board had ever had, if it had ever been completed.

A few days into the hearing the then Minister of Energy George Smitherman issued a new directive to the OPA. The directive instructed the OPA to increase the amount of renewable power in the supply plan. As a result, the IPSP that was under discussion was no longer valid, and the hearing was adjourned, never to be resumed. An IPSP has never been subject to review and approval by an independent authority to this date.

SECTION 1:
Introduction

Gaining Public Support

Ontario has struggled for decades to gain public acceptance for new directions in electricity. Good plans and policy have run into public opposition when the public was faced with higher prices or the construction of a facility in their community.

The Ontario government has now announced its intention to review the process of energy planning in the province. Our overarching conclusion is that governments must have the buy-in of the public to successfully implement energy policies and plans. Public support does not come easily and does not come without transparent processes and structures at both the political and community level.

Our research and recommendations focus on how good policy creates good plans and how good plans need to be developed in a way that gains public support. To put it simply, all electricity planning must be based on securing public support for the plan's direction, its individual elements and projects and the related quantitative and qualitative costs of the plan. A failure to gain this acceptance will continue to create public opposition and guarantee more of the knee-jerk policy changes that we have seen over the past two decades. This ironically does not serve the long-term interests of the public who object to the plans.

We acknowledge that gaining public support is difficult. While problems can be minimized with transparent and accountable policy making and planning, planning authorities ultimately have to make decisions that still face opposition when they are required for the greater good of the province. But if the process of making the overall plan is transparent and the reasons behind the projects are publicly discussed and debated, along with their viable alternatives, there will be a greater chance of public acceptance and understanding of what is required.

> **"Public support does not come easily and does not come without transparent processes and structures at both the political and community level."**

For a secure, sustainable and affordable electricity future, Ontario needs the policy certainty that comes from opening the decision-making process to public discussion and debate. It is the only way to arrive at decisions that can withstand changes in

government. Electricity infrastructure has a lifespan of at least 20 years, far outlasting the four-year electoral cycles that dominate politics.

Other jurisdictions have recognized this and engage in extensive consultation and discussion in order to establish public engagement and support for the long-term direction of energy policy. The debate takes place at the political level in parliamentary committees, cross-governmental boards and legislatures. The consultation occurs at the local level with methods and structures that encourage broad consultation and discussion. Ontario can learn from these jurisdictions and our recommendations suggest processes and structures that will expand and strengthen public conversations in our province.[1]

This paper makes a set of specific recommendations to deepen and extend Ontario's democratic conversations. These recommendations are based on a set of ten principles regarding transparency, accountability and public engagement that would produce a plan or set of plans with a higher likelihood of gaining public support. Our recommendations are based on an analysis of Ontario and five other electricity jurisdictions – New South Wales in Australia, British Columbia, Great Britain, New York State and Sweden. It also looks at what can be learned from an example outside the energy industry – the public consultation undertaken by Metrolinx, the Ontario regional transportation authority for the Greater Toronto and Hamilton Area (GTHA). This report then examines how these jurisdictions fare against the principles.

1 Although this report focuses on electricity, the authors emphasize that energy should be looked at holistically, including electricity, heat and transportation.

Ontario Background: A Short History of Recent Events

MAIN ACTORS IN ONTARIO'S ELECTRICITY SYSTEM

The Ontario Ministry of Energy

The Ministry of Energy works with partners inside and outside of government to develop the electricity generation, transmission and other energy-related facilities that help power Ontario's economy.

Ontario Energy Board

The Ontario Energy Board (OEB) is an independent adjudicative tribunal responsible for regulating Ontario's natural gas and electricity sectors. Part of the OEB's mandate is to protect the interests of consumers with respect to prices and the reliability and quality of electricity service.

Ontario Power Authority

The Ontario Power Authority (OPA) is an independent corporation that coordinates province-wide conservation efforts, plans the electricity system for the long term, and contracts for electricity resources.

Many elements of the current government's proposed electricity policies have already been implemented. For example, the OPA has contracted to purchase power from the new construction of a significant number of hydro, natural gas, solar and wind power generation facilities. The transmission lines from Bruce to Milton have been substantively

upgraded. And the last of Ontario's coal plants is scheduled to be closed in 2014.

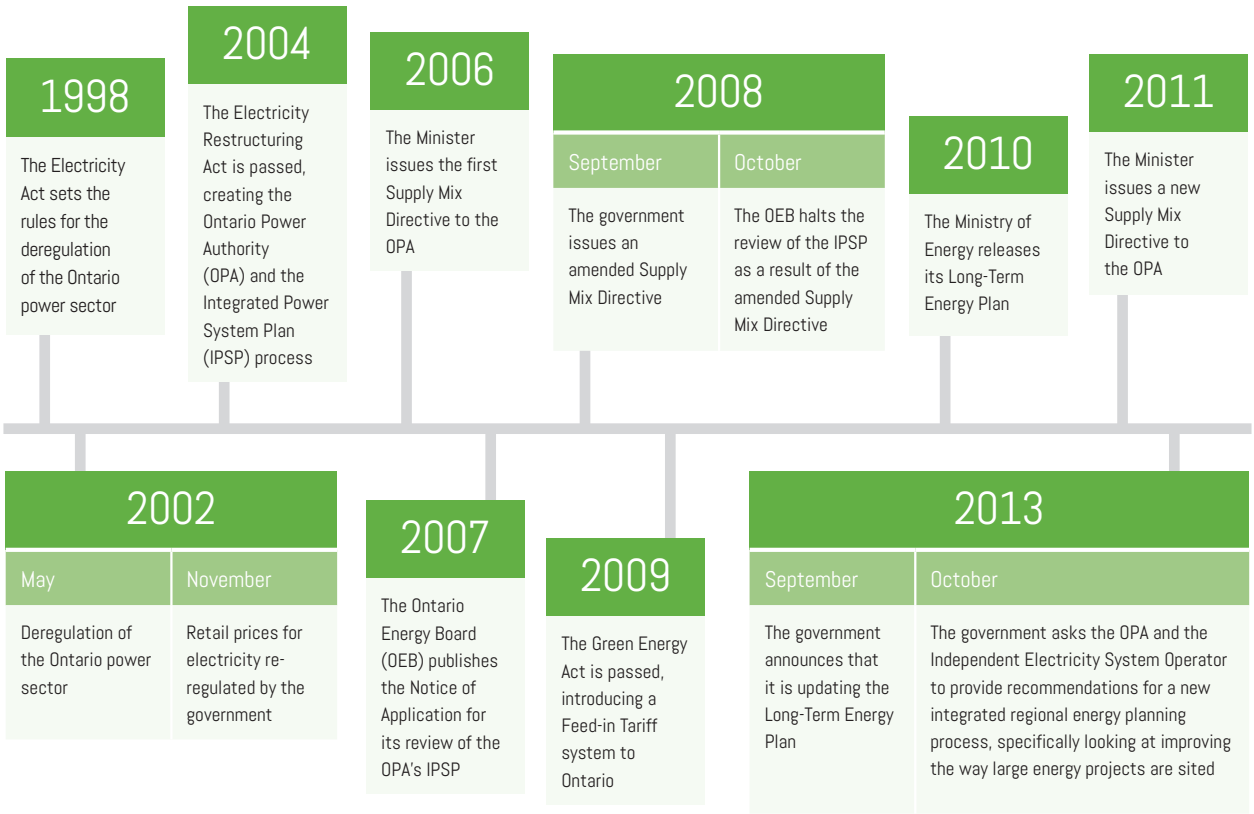
While the public seem to support the general policy direction to develop a greener electricity system in Ontario, several individual elements are controversial. These include the future of nuclear power as well as the siting of gas plants, large-scale wind farms and some transmission lines. Electricity prices are also a big concern, as some academic studies and the Ontario Auditor General's report of 2011 state that Ontarians are paying more than they need to for green energy.[2]

2 Auditor General of Ontario, "Chapter 3.03 Electricity Sector—Renewable Energy Initiatives," 2011 Annual Report, December 5, 2011. At http://www.auditor.on.ca/en/reports_2011_en.htm.

It may be helpful to briefly explore how we got here.

In 2004, the Liberal government began implementing its vision of a greener electricity sector with the passage of the Electricity Restructuring Act, which redrew the governance structure for long-term power planning. The Minister of Energy retained responsibility for setting broad policy objectives for the sector. An arms-length expert agency, the Ontario Power Authority (OPA), would then develop and implement a long-term electricity plan (the Integrated Power System Plan, IPSP). The legislation gave the province's quasi-judicial economic regulator, the Ontario Energy Board (OEB), the

Ontario Power System Timeline



authority to approve the plan through a public hearing process. The OEB's role was to ensure that the plan was cost-effective and met the requirements of the government's directives. The act also gave temporary but broad directive powers to the Minister of Energy; powers that were to disappear when the first IPSP was approved.

The Electricity Restructuring Act contained many of the main elements that reflect the best practice principles of transparency, accountability and consultation. Unfortunately, this blueprint has not been followed.

In June of 2006, the Minister of Energy issued the government's first supply mix directive. Contrary to the Electricity Restructuring Act, it provided very specific policy direction. To give an example, the Minister instructed the OPA to include in the IPSP the development of at least 15,700 MW of renewable energy by 2025 and to ensure that nuclear power would continue to provide 50% of the province's electricity requirements.[3] Based on that direction, the OPA submitted the first IPSP to the OEB for review and approval. During the review, a second supply mix directive halted the hearing in September of 2008. The unexpected new directive specified (among other matters) that the OPA should "enhance… the amount and diversity of renewable energy sources," examine pumped storage, and the availability of distributed energy. The new directive also instructed the OPA to submit the revised IPSP to the OEB within six months. This never happened.

Then, in May 2009, the government passed the Green Energy and Economy Act, which notably removed local planning restrictions to wind energy, and introduced the Feed-in Tariff program for renewable generation.

Next, in November 2010, the government produced its Long-Term Energy Plan (LTEP), a policy document not contemplated in legislation. The LTEP stated, among other things, that nuclear power would continue to supply 50% of total generation, that coal-fired power would be phased out, that energy efficiency programs would be brought in to reduce demand, and that 10,700 MW of new renewable power was to be installed by 2018.

In February of 2011, the Minister issued another directive instructing the OPA to develop and submit a new IPSP, this one based on the LTEP but with increased revised goal of 19,700 MW of renewable energy by 2018. But once again, no new IPSP was submitted to the OEB.

And most recently, in the fall of 2012, the government introduced Bill 75. While the main objective of the bill was to amalgamate the OPA and the Independent Electricity System Operator (IESO), it would also transfer the responsibility for developing future

3 The supply mix directive in June 2006 set the following targets: achieve a peak demand reduction target of 6,300 MW and an energy savings target of 28 TWh from 2005 levels by the end of 2025; increase renewable energy generation to 15,700 MW by 2025; plan for 14,000 MW of nuclear power over the lifetime of the plan; replace coal-fired power; and ensure there is sufficient transmission capacity for the plan. Ontario Ministry of Energy, *Supply Mix Directive*, June 13, 2006. At http://www.powerauthority.on.ca/sites/default/files/page/1870_IPSP-June13,2006.pdf.

electricity plans, including the required generation and transmission resources, from the OPA to the Minister of Energy. Under Bill 75, the Minister would have to submit its plan to the OEB for analysis; however, the OEB would have no authority to require changes to the plan. Although Bill 75 died when the Ontario legislature was prorogued, there are indications that the new government of Premier Kathleen Wynne is taking a second look at merging the IESO and the OPA.

Few people deny the merit of the government's overall energy goals. There appears to be broad support for the government's desire to green the energy sector, so it is only appropriate for the government to be a catalyst and leader in energy policy initiatives. However, it is not clear that the public's support extends to all of the specific details of the government's plans and directives.

Why Long-Term Plans Are Important for Long-Term Public Support

In the absence of a fully competitive market, the provision of electricity supply requires a plan. In Ontario, the OPA enters into power purchase agreements through a competitive tendering process. However, market signals do not dictate the development of the sector as they would in a fully competitive market. In addition, the importance of integrating other planning elements, such as transportation and other land use, makes the development of

"There appears to be broad support for the government's desire to green the energy sector, so it is only appropriate for the government to be a catalyst and leader in energy policy initiatives."

a planning process, in some form, expedient. Furthermore, energy infrastructure assets are long-term assets. Long-term assets require the development of long-term plans. Therefore, Ontario needs a long-term power plan – a plan that is publicly supported, a plan that can be relied upon by investors, and a plan that minimizes the risk of poor and expensive choices.

The electricity delivery system is ubiquitous, delivering an essential commodity that affects the quality of life of millions of people every day. These residents, and the jobs they depend on, require readily available electricity, at an affordable price. Large and complex electricity projects require substantial capital outlays and represent significant employment opportunities.

The way electricity is produced and transmitted is a key determinant of our economic prosperity. Often traversing thousands of kilometres of the province, transmission and distribution systems alter

our physical environment – land, air and water – and affect many landowners and First Nations communities.

Electricity is critical to the economy, and is developed with significant public investment. Like many types of essential public infrastructure (water, roads, waste systems, transit), the electricity system is capital intensive. And those impacted by the development of new electricity infrastructure are not necessarily those who benefit the most. It is therefore natural that electricity would be of significant interest to political leaders. . Even so it would appear that more elections are lost over energy policy than are won by it.

A critical aspect of electricity decisions is that they are for the long term. Power infrastructure has a minimum life of 20 years, and some facilities are still functional several decades after that. Because it requires long-term infrastructure, electricity requires a long-term plan and long-term sustained support from the public.

The World Energy Council believes there is an energy "trilemma" in creating a sustainable energy policy: it begins with the need for both energy security and social equity, and includes the mitigation of its environmental impact. At the same time, policy and plans must be based on technical excellence and reflect the potential for changes in technology and supply. Electricity policy must also withstand the perils of electoral cycles that are shorter than the development and operating lifespans of most system assets. Importantly, this means that – for the public, the future public, and investors – there must be a supporting social contract that stands the test of time.

The structure of Ontario's electricity sector has made it difficult to achieve this.

For one thing, the development and construction of transmission and distribution networks receive more scrutiny and public examination than is given to the plants that generate the electricity. Transmission and distribution networks usually have to apply to the OEB for the recovery of their costs through rates. This gives the proponent a comfortable certainty of revenue recovery, it also gives the consumer a level of cost scrutiny which, while not necessarily ensuring public support, does ensure transparency. Proposals for the building of generation do not share this level of scrutiny.

With generation, the OPA enters into 20-year financial contracts with generators to encourage private-sector investment in new and refurbished infrastructure. These contracts are not subject to the same regulatory oversight as are the investments of rate-regulated transmission and distribution entities. Nor are they subject to the discipline of market forces. In the end, ratepayers and taxpayers pay for the Ontario electricity system, while very little private investment is at risk.

An Integrated Approach to Policy and Planning

Electricity system planning in Ontario is performed on a number of levels:

- Bulk system planning, primarily involving transmission and transmission-connected assets;
- Regional system planning, which involves a number of distribution companies as well as transmission companies;
- And community system or local planning, which includes the local distribution company as well as the host communities.

The IPSP and the Minister's directives are concentrated at the provincial "bulk system" level, and focused on the conservation, generation and transmission of electricity. These plans do not include regional plans, distribution plans or community plans. There is logic to this development. At the time of the original IPSP, the looming problems were a potential shortage of electricity supply and a growing concern regarding the environmental and health impacts of coal-fired power. Natural gas prices were high and expected to go even higher as traditional sources were depleted. Transmission lines were not in place to connect future hydro and wind development.

Many of these problems have now been addressed. As a result of the government's push for green power and conservation, and a loss of industrial load, there appears to be an abundant, even over-abundant, supply of electricity in the short and medium term. The supply of natural gas has substantially increased due to technological advances in hydraulic fracking and drilling, thus reducing costs. Major enhancements to the transmission grid have been designed, approved and are being built.

However, as these issues have settled, it has become more apparent to the government and its agencies – the OEB and the OPA – that significant problems exist at the regional and community levels, such as lack of transmissions and distribution capacity. The agencies have made some progress in addressing these issues. The OPA is working with a number of communities to develop integrated regional power plans to solve local problems.

"As a result of the government's push for green power and conservation, and a loss of industrial load, there appears to be an abundant, even over-abundant, supply of electricity in the short and medium term."

The OEB is leading a series of consultations on regional infrastructure plans with agencies, consumer groups, distributors and transmitters. It is also requiring distribution companies, when making submissions to the board, to submit regional plans that have been developed under the leadership of the local transmission company. Based on the report of a working group on regional plans, the OEB has proposed to go even further and require a more structured process, with the mandatory submission of five-year regional plans to be developed with stakeholder consultation. It will also introduce an information sharing system between distributors and transmitters. When preparing applications to the OEB, the distributors will also have to show that their proposal fits with the regional plan. The OEB has indicated that regional plans will be completed in cooperation with the OPA, although both agencies will continue to work on their regional plans separately.[4]

Despite these developments, significant gaps remain in the integration and information sharing between regional and community needs and the bulk plans.

Community energy planning is important to ensure public engagement. [5] But it has other benefits as well. Many of the new technical advances in energy production and energy use will be implemented at the community level.

4 For more information see Ontario Energy Board (OEB), "Regional Planning for Electricity Infrastructure (EB-2011-0043) (May 2013)." At http://www.ontarioenergyboard.ca/OEB/Industry/Regulatory%20Proceedings/Policy%20Initiatives%20and%20Consultations/Regional%20Planning.

5 Energy in this context refers not only to electricity but also to thermal energy – the energy required to heat and cool buildings.

"An integrated approach, one that includes bulk, regional and community plans, is required to align electricity planning with public needs and demands."

The local community is also where the greatest resistance to change often occurs. Community energy planning could reduce this push back by engaging the community in issues such as energy efficiency and conservation measures, the promotion of local renewable energy generation and the coordination of energy planning with other infrastructure planning, such as for transportation. These community energy opportunities have remained largely unexplored in previous government directives and prior IPSP discussions.

An integrated approach, one that includes bulk, regional and community plans, is required to align electricity planning with public needs and demands. This is the way to incorporate public engagement into energy planning, and make it transparent and accountable.

SECTION 2:

Principles of Long-Term Electricity Planning

There are a number of principles that should be used to guide electricity planning if the resulting plan is to receive public support. The following principles were informed by the authors' experience and developed after in-depth interviews with stakeholders and project advisors. A global review of the general principles for public infrastructure planning validated these principles.

1 The planning process should be based on public policy objectives which have been broadly debated and democratically accepted.

Long-term electricity planning should be based on clearly articulated and publicly available statements of government policy. These policy objectives might include direction on carbon pricing frameworks, energy self-sufficiency, low-cost energy for the purpose of economic development, and other elements of intergenerational social, economic and environmental sustainability.

2 There should be a clear distinction between the roles of the policy maker, the planner, and the reviewer/regulator. Each entity must have a clear and accessible process for public engagement.

3 The planning process needs to be contextual and comprehensive.

Any long-term plan has to build on the current supply and demand mix for electricity and existing market conditions. It must identify and take into account sustainability issues and changes in electricity technologies and end uses. All significant options and impacts need

to be considered and presented to the public for scrutiny and comment.

4 The planning process has to be integrative.

The planning process and the ensuing plans must establish links between the different system levels (e.g. bulk, regional, community) and different types of plans (supply, transmission, distribution, water and other infrastructure). It should identify and establish paths for sharing planning information with decision makers at every level and the public at large.

5 The planning process has to include a clear economic analysis.

An economic analysis identifies the prudence and cost-effectiveness of the elements of the plan, the economic impact of differing scenarios and contingency plans, and the economic effect of various implementation schedules so the public can understand the costs and trade-offs of various options.

6 The planning process has to be transparent and accessible to all stakeholders and the public.

Members of the public must have meaningful and easily accessible ways to express their views on the draft plan before it is approved. All non-confidential information available to decision makers should also be readily available in a timely manner to both industry stakeholders and the public

7 The planning process needs to be informative.

The full analysis that led to the final conclusions should be made available to the public, including an explanation of how planners took the comments and interventions of individuals and parties into account.

8 The planning process has to be iterative and flexible.

The planning process needs to explicitly recognize the need for contingency plans, off-ramps[6] and a process for review and renewal. It should identify the organizations and ongoing governance systems that will maintain and renew the plan.

9 The plan must be developed by experts.

Experts (for example in the fields of engineering, economics, finance, environmental sustainability, communications and land use and city planning) need to help develop the plan in order to give the public confidence that the plan is achievable and balanced.

10 The results of the plan should be measured and publicly reported.

6 An “off-ramp” means an explicit method to reconsider a portion of, or the entire, plan, due to a failure to realize expectations or to a significant change in circumstances.

SECTION 3:

Comparison of Jurisdictions by Principle

Overview

In order to provide a context for the planning situation in Ontario, the authors have examined how the planning principles identified in Section 2 are applied in Ontario and other jurisdictions. By evaluating how different jurisdictions employ the planning principles, we single out some best practices that would improve the planning outcomes in Ontario. Specifically, the paper examines the energy planning systems in British Columbia (BC),[7] New York State, the United Kingdom (UK),[8] Sweden, and the state of New South Wales in Australia. In addition, we look at Metrolinx, the government agency coordinating transportation policy in the Greater Toronto and Hamilton area, as an example on how planning is done in a non-energy sector in Ontario.

Please see the appendices for a more complete description of each jurisdiction. This section will only explore the most salient examples for each jurisdiction.

When reading this section, it is important to keep several factors in mind.

First, given the impact of differing market structures on the evolution of each jurisdiction's electricity sector, one must recognize that the broad planning principles will be applied in different ways. Varied – and continually changing – responsibilities and relationships mean there are differences in the parties that plan, build, own and operate infrastructure.

While all jurisdictions must plan to ensure an adequate and reliable supply of electricity, there is considerable variability in how the planning principles can actually be applied because "different actors have responsibility for different systems."

Second, as discussed earlier, it is important to recognize that there are a number of different types of plans, ranging from broad provincial plans to very specific plans for local projects. Each has its own requirement for public engagement.

This report is primarily concerned with the dynamic relationship between the policy framework and the overarching electricity system plan, and the legislative framework that supports the plan's implementation.

7 Given the preponderance of BC Hydro (it serves 94% of the BC population) and its statutory requirements to meet the government's objectives, the comments primarily relate to how they operate.
8 This discussion concerns only Great Britain (England, Scotland and Wales) as Northern Ireland, while part of the UK, has a different planning regime and market structure. However, government targets, such as for renewable energy and greenhouse has reduction, apply throughout the entire UK, including Northern Ireland.

In countries with de-regulated or "liberalized"[9] energy sectors, governments use comprehensive policy statements and regulatory systems to shape and influence the development of the sector. This occurs regardless of the exact proportion of the market served by private investors. Even here though, there are differences between the way policy is developed and implemented – for example, the British model is legalistic, with a tradition of committees, parliamentary approvals and judicial oversight, while the Swedish model emphasizes informal collaboration, discussion and decision making that is delegated to local authorities.

New South Wales and New York fall between these two models. Both have a legalistic framework, but authority is less centralized than in the British model and more centralized than in the Swedish model.

British Columbia has only a relatively small portion of its electricity supply coming from the private sector, so the provincially owned vertically integrated utility, BC Hydro, continues to plan, own and operate the majority of the province's generation, transmission and distribution facilities. This means the provincial government is able to specify objectives and targets that BC Hydro must plan to meet.

Good governance is key. This is consistent among all the jurisdictions we studied. Regardless of the particular market structure, there is an emphasis on ensuring that the planning processes are transparent and clear, that there is accountability and that there is sufficient public consultation to achieve public support. These elements have, in part, been missing from Ontario's planning processes. The following comparison will highlight the planning processes in different jurisdictions and in Ontario, and how well those processes engage the public.

Comparison by Principle

1 The planning process should be based on public policy objectives which have been broadly debated and democratically accepted.

In general, every one of the national or provincial governments examined provides an overall policy framework with respect to environmental policy (such as the reduction of greenhouse gas emissions or targets for renewable energy), economic imperatives and

"Good governance is key."

9 Throughout this report, we use the commonly used term "liberalized" to refer to an electricity market that is open to private ownership and is not directly controlled by the government or government agencies.

supply security standards. Sweden and the UK must meet high-level long-term targets set by the European Union (EU). But there are differences in how governments achieve these goals.

Because the UK, Australia and Sweden are deregulated markets, these governments do not dictate when and where generation should be built. Rather, the government's responsibility is to set a policy framework and targets, and then to provide incentives to private sector investors to achieve those targets. In these countries, the government's targets do not prescribe the specific elements of the supply mix (excepting nuclear power, which is sometimes treated differently). Instead, they impose a desired outcome (e.g., Australia's 20% renewable power generation target). Incentive schemes are then developed to hopefully ensure that private sector companies will invest in the generation that will achieve those targets.

In the UK, legislation provides a statutory framework for the incentive scheme. The government then prepares the actual rules and administration of the incentive scheme and submits those to Parliament. There is almost always a consultation period in the UK during the formation of the policy to allow for public and stakeholder involvement. The standing committee on energy in the Parliament can also hold public hearings. While Parliament is not always required to approve the rules, it can vote to annul them. The threat of parliamentary rejection ensures that the high-level objectives and targets are clear and transparent, and that there is effective public consultation.

In New York State, the policy objectives of the state agencies responsible for energy planning are enshrined in several pieces of legislation passed by the state assembly. For example, the objectives that the Energy Planning Board must meet in its ten-year plan are clearly stated in the law establishing the board.

Given the dominant role of BC Hydro, there is less need in British Columbia to incent the private sector to meet the government's generation targets.[10] The provincial government establishes overall targets, including some very prescriptive targets, such as that 93% of all generation should come from clean and renewable sources, and then instructs the government-owned utility to meet them. BC Hydro does hold substantial public consultations when formulating a plan to implement the government's energy objectives.

In Ontario, it has become the practice of the Ministry of Energy to convey energy policy in the form of directives to the OPA. The Minister also has the power to instruct the OPA to contract with generation suppliers in order to meet its mandated targets. Between March of 2005 and January of 2013, the Minister issued 63 detailed directives to the OPA, many giving specific targets for conservation and renewable

10 BC's largest private utility is Fortis BC, which supplies 22% of total generation, either under contract to BC Hydro or through its own supply and distribution business.

power. The government's targets were initially set in a ministerial directive to the OPA[11] and were further developed in a document entitled The Long-Term Energy Plan. There has been little public debate or legislative consideration of the Minister's directives.

2 There should be a clear distinction between the roles of the policy maker, the planner, and the reviewer/regulator. Each entity must have a clear and accessible process for public engagement.

In the UK and Sweden, policy tends to be set by the respective minister of energy before undergoing a review by the national parliament. Given the federal nature of Australia, there is a joint committee of state and federal ministers where decisions on policy issues are made. The independent Climate Change Authority[12] reviews that country's renewable energy policies, and the independent Committee on Climate Change[13] does the same in the UK.

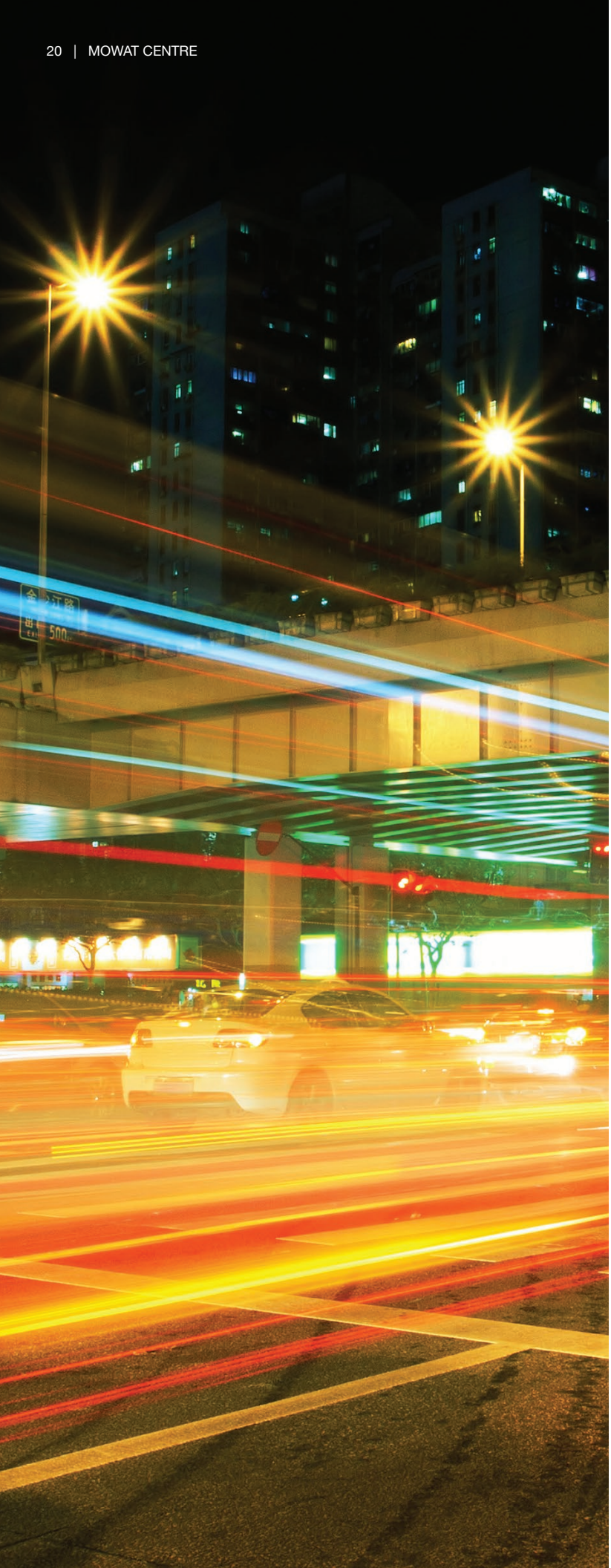
In BC, the government sets policy objectives, and BC Hydro prepares a long-term plan intended to meet those objectives. There is no independent scrutiny of the plan; it is not submitted to the legislature, and is reviewed only by the Minister.

In all jurisdictions, the regulator reviews the operating and capital expenditure plans of regulated utilities (such as transmission and distribution networks), with the aim of protecting consumers from excessive rate pressure. In more regulated markets, the regulator can have a broader responsibility. In BC, for example, all utilities must make their plans for future projects public and have them evaluated by the British Columbia Utility Commission (BCUC). In addition, the BCUC evaluates a utility's power purchase agreements (unless the government exempts the project from BCUC oversight).

For transportation planning in Ontario, there is clearer adherence to the planning principle of distinct roles. Here, the Minister of Transportation sets the overall policy direction for transportation. Metrolinx submits its long-term regional integrated transportation plan to the Minister, who ensures that it meets the provincial government's policies. Municipalities are also required to design their own transportation plans to meet the government's policies, and these are submitted for review to the Ministry of Transportation and the Ministry of Municipal Affairs and Housing. Transportation planning may be subject to enormous debate and change, as witnessed over the last several years in Ontario. But unlike electricity, the legislative framework for transportation provides more certainty, information sharing and approval protocols that integrate public policy goals and plans.

The process for electricity planning is quite unique in Ontario. The policy maker is the

11 There have been three Supply Mix Directives, one in 2006, one in 2008 and the latest in 2011.
12 The Climate Change Authority is composed of government-appointed experts and academics in environment and climate change as well as people from the finance and business sectors and government officials.
13 The Committee on Climate Change comprises government-appointed experts in related areas, the majority of whom are academics.



Minister of Energy. The OEB regulates the transmission and distribution utilities, approving the economic impact of their capital plans and approves the tariffs that Ontario Power Generation receives for its legacy baseload generation assets. However, the majority of the province's investments in generation, contracted by the OPA through power purchase agreements, escape review by the OEB.

As previously discussed, the OPA was instructed to make a bulk level plan that would indicate what is to be built in the future, based on targets set by the government. However, the OPA has not produced a comprehensive plan since 2008, and that plan was never approved by the OEB as required because the government changed its policies. Currently, the Minister of Energy makes all the decisions on future generation resources by directing the OPA to offer contracts to particular projects. The OEB does not review the ministerial directives.

BILL 75

The distinction between the roles of policy maker and planner was further obscured with the introduction of Bill 75 in the fall of 2012. The bill, which died on the order paper when the legislature was prorogued, would have amended the Electricity Act, 1998, the OEB Act, 1998, and other pieces of energy legislation. One of the primary purposes of Bill 75 was to merge the IESO and the OPA into one agency, the Ontario Electricity System Operator (OESO).

> **"Bill 75's proposed fundamental changes to the planning process and governance framework set in the current legislation need to be discussed."**

This report does not deal with this aspect of the bill. Bill 75's proposed fundamental changes to the planning process and governance framework set in the current legislation need to be discussed.

Unlike the current governance structure, Bill 75 gave the Minister of Energy the sole authority for developing and issuing an energy plan. The bill stated that the Minister may consult with the OESO in the development of the energy plan, but the nature of that consultation is unclear. The proposed structure for Ontario is not found in any of the jurisdictions we studied. Among the jurisdictions studied, the government only sets the overall policy framework; the actual electricity plans are developed by expert, arms-length entities.

Under current legislation, the OEB must approve the IPSP. The changes proposed in Bill 75 would strip the OEB of its authority to approve or amend the IPSP. Instead the OEB is given two much weaker roles.

First, the Minister of Energy must consult with the OEB about how the energy plan would affect consumers' electricity bills and how that would be managed. However, the Minister is not required to amend the plan or take any action based on the consultations with the OEB.

Second and similarly, Bill 75 said the Minister must refer the plan to the OEB for a review of its estimated capital costs, but there is no requirement for the Minister to alter the plan based on the OEB's review.

In addition, the bill does not identify the criteria the OEB would use for its review. Those criteria would be set instead by the Minister at the time of referral, giving the Minister the power to circumscribe how the OEB conducts the review.

If the proposed legislation were ever resurrected in its most recent form, the roles of the OESO and the OEB would be unclear and significantly weakened.[14]

3 The planning process needs to be contextual and comprehensive.

In all jurisdictions, including Ontario, ministries or their delegated agencies or crown corporations develop long-term plans that examine different growth scenarios and evaluate potential problems. System operators or grid network operators also prepare system adequacy reports on the infrastructure requirements needed to meet projected demand and supply for the next ten years or more.

14 See Appendix A for a more detailed discussion of Bill 75.

In the deregulated markets, such as the UK, Sweden and Australia, these plans are not operational in scope as they only examine demand and the supply needed to meet it. It is up to the private sector to respond to the opportunity and price signals to develop new infrastructure. These system adequacy reports ensure that the current and future states of the electricity sector are clear to all participants, policy makers and the public.

In Ontario, the Minister of Energy sets the future generation mix through prescriptive supply mix directives. The OPA then bases its generation and conservation and demand management contracts on these directives. While there is a public consultation on the supply-mix directives, it is not clear how the development of a given directive was affected by the input because the responses are not available on the ministry's website. It is also not apparent if the consultations have examined different supply options.

4 The planning process has to be integrative.

The practices seen in the local and regional planning of energy supply vary more considerably than at the bulk supply level. In Great Britain there is little local or regional energy planning, except in Scotland, which, through the devolution of power from Westminster, has been given considerable ability to set its own energy policy.

There is considerable local energy planning in British Columbia as a result of provincial environmental legislation requiring carbon reduction plans. BC Hydro supports the reduction plans through conservation programs that fund community energy planning and community energy managers.[15] This has caused an increase in energy efficiency initiatives, including district energy projects that are exempt from BCUC oversight if they are municipally owned. It is not clear if the community energy plans are integrated with BC Hydro's larger provincial plan.

Local communities in Sweden have long held the primary responsibility for energy planning, and must prepare land-use plans for their own use that indicate suitable locations for energy development (with a focus on combined heat and power, district energy systems and wind power installations).

Integrated energy planning in New York State begins with the long-term planning reports submitted by local power grid operators. These are then integrated into the state wide plan of the New York Independent System Operator (NYISO), which is responsible for transmission and distribution. Unfortunately, until recently, integration has stopped there. In 2009, however, the Energy Planning Board, which is responsible for planning generation investment, was created with the mandate including the formation of two regional councils, one of them representing downstate properties including New York and Long Island. Given that New York City and Long

15 Energy in this context refers not only to electricity but also to thermal energy – the energy required to heat and cool buildings.

Island together represent roughly half of the entire load in the state, regional integration is essential to the success of any plan. The Planning Board is expected to produce a report in 2013, which must incorporate input from the regional councils, but no work or document of council meetings is publicly available at the time of publication.

There is a great deal of intra-regional and municipal integration in transportation planning in the Greater Toronto and Hamilton Area (GTHA) region in Ontario with Metrolinx. GTHA municipalities are legally required to create transportation plans that support local development, are consistent with the provincial government's goals and targets, and are integrated with Metrolinx's regional transportation plan. Such plans must be open to local consultation, and are submitted for approval to the provincial government. There are also protocols around information sharing between the municipal governments, Metrolinx and the provincial government.

Regional energy planning in Ontario is still in its infancy. The OPA does conduct ad hoc integrated planning at a regional scale, but only in areas that are experiencing grid congestion or require additional work. The OEB requires that network operators submit regional plans, but may soon increase its requirements. Following a Working Group report, the OEB has proposed a more structured process, with compulsory five-year plans and mandatory stakeholder consultations. It will also introduce an information sharing system between the distributors and the transmitters. When preparing applications to the OEB, the distributors will have to show that their proposals fit within the regional plan. The regional plans for the OEB will be done in cooperation with the OPA, although both agencies will continue to work on separate regional plans.

In May 2013, the Ontario government announced that small- and medium-sized communities would receive funding for the development of municipal energy plans that will identify possible conservation measures and the best energy infrastructure options for the community.

5 The planning process has to include a clear economic analysis.

Economic analyses are included in the overall planning framework of every jurisdiction examined. However, some are more detailed than others. The Department of Energy and Climate Change in the United Kingdom prepares some of the most detailed analyses, developing economic impact statements for different options and scenarios, and posting them on the web for use during the consultation phase. As the impact statements assess different scenarios, the public and policy makers can see the potential effects of different options, adding clarity to the decision-making process. In Australia, the State Council on Energy and Resources (SCER), a joint state-federal energy policy body, also releases impact statements of proposed policies,

> **"The UK government created an agency to represent consumers' interests in the economic regulation of designated industries."**

generally looking at the effects of different policy options. SCER also publishes reports by independent experts evaluating the options.

Ontario's Metrolinx has developed a defined framework for evaluating different transportation projects, using technical evidence to decide which projects meet Metrolinx's goals and targets. The results of these analyses form part of the investment strategy that is submitted to the province for approval.

In Ontario, the original IPSP submitted to the OEB contained a thorough economic analysis of its plan. However, the evidence did not examine in detail the costs and benefits of alternative scenarios. Additionally, there are no public documents providing an economic analysis of the Minister's directives that have formed Ontario's energy plan for the last eight years.

6 The planning process has to be transparent and accessible to all stakeholders and the public.

In the jurisdictions examined, policies and plans have been developed by the government in ways that give individuals and stakeholders opportunities for input.

In the UK for instance, there is a defined consultation period for all new policies, allowing residents and concerned stakeholders to contribute written comments. The government responds after the consultation to all the concerns, and summarizes the reasons for its final decision. In addition, the government posts all the impact statements evaluating the economic impact of different options as well as their possible impact on other government programs on its website.

The UK government also created an agency to represent consumers' interests in the economic regulation of designated industries. These include energy, energy efficiency, water and postal services. Consumer Futures represents consumers at regulatory hearings and is funded through a combination of government grants and a levy on companies operating in the regulated sectors.

The Standing Committee on Energy and Resources in Australia allows written stakeholder submissions on proposed new policies. In both of these jurisdictions, the consultations include a discussion of impact statements that evaluate the economic impact of the new policies. Australia is currently

examining the possibility of establishing a national consumer advocacy body for energy.

BC Hydro has a robust consultation process, including community meetings and stakeholder engagement, to discuss its new integrated plan.

The governing legislation in Ontario's transportation sector provides a comprehensive description of public access and stakeholder engagement for all levels of authority. Specifically, the legislation requires the Minister of Transportation to consult with any person or bodies that may have an interest in the policy. These can include federal ministers, crown agencies and the public, including First Nations communities. Metrolinx itself must consult with relevant government and Crown bodies, First Nations, municipalities and planning authorities. And municipalities must hold at least one public meeting and consult with relevant government or Crown agencies when developing their transportation master plans.

In Ontario, provincial legislation instructs the OPA to consult with relevant stakeholders in the preparation of its integrated power plan, but not necessarily directly with the public. As it stands today, there is no transparent consultation process tied to on ministerial directives.

With regard to construction of new generation, in all the jurisdictions studied affected community members are provided opportunities to be part of the public consultation process, but the number and the potential impact of the participants and the consultation varied greatly. Community consultation is at its highest in Sweden, where local authorities have effective veto over any wind power project.

In most jurisdictions, such as New York State, the UK and New South Wales, a central planning authority evaluates the projects. In England and Wales, this planning authority has extensive independence. It decides on projects over 50 MW, even though the minister makes the final decision. Projects under 50 MW go through the local planning authority.

The independent planning commission in New South Wales is extremely powerful. Its members, who make the final decisions, are nominated for three-year terms and are difficult for the government to remove. For large projects in New South Wales, a regional planning commission is formed, with representatives from local authorities and the independent planning commission. In 2013, the state government announced the revision of its planning process and plans to legislate a

"Community consultation is at its highest in Sweden, where local authorities have effective veto over any wind power project."

Community Participation Charter that clearly states the roles and power of communities.

A recently formed New York State Board on Electric Generation Siting and the Environment, a separate body from the New York Energy Planning Board, will provide a similar independent planning analysis of new generation proposals.

The existence of a central decision-making authority does not necessarily rule out public consultations and negotiations with the local government. The advantage of a central planning authority is that all the documentation can be made available in one place, making it easier for people to become informed and involved.

The governing legislation for Metrolinx provides a comprehensive description of its requirements for public and stakeholder engagement. The regional transportation plan was developed through intensive public consultation and collaboration with key stakeholders, municipal leaders and professionals. Metrolinx must also ensure that the public has a chance to review the transportation plan before consultations.

In Ontario, the 2009 Green Energy and Green Economy Act amended a number of acts, including the Planning Act, 2004, and exempted renewable energy projects from the application of local official plans and zoning by-laws. The objective was to remove municipalities' ability to use their land-use powers to block the development of

"The advantage of a central planning authority is that all the documentation can be made available in one place, making it easier for people to become informed and involved."

renewable energy projects. While developers still have to hold public consultations and show that public opinion has been taken into account, the entire planning process is not as formalized as in other jurisdictions. Many stakeholders object to the process, and the Ontario government has asked the OPA and IESO to review the framework for public consultation and input.

The Ontario government also announced changes to the planning system for large renewable energy projects (500 kW or greater). Under the new rules, developers and planners will have to work with affected municipalities to identify appropriate locations and site requirements for any project. While developers will have to show local support for any project, municipalities will not have veto powers over the development project. As of May 2013, there were no further details available on how the process would work.

7 The planning process needs to be informative.

In making overall energy policies, consultation is often a one-way street; jurisdictions do not always communicate their analysis of what they heard in the consultations. The UK and Australia produce the best reviews of consultations, posting on their websites the policy options being considered, the associated impact statements, the written consultations and their responses, as well as reports by external experts, wrapping it all up with the rationales for their final choice.

In New York State, the authorities make all consultation responses public, but do not clearly show how, or if, the consultations actually changed the development of policy.

Both BC Hydro and the OPA post consultation documents on their websites, along with all the written responses. However, neither have produced documents that respond to the consultation responses received and show how or if the consultations has affected policy development or planning.

When planning new facilities, the planning authorities in the UK, BC and Australia make their analyses and the reasons for decisions available. In the UK and Australia, all the planning documents and the consultation responses are made available on a central website. As the planning process for new sites is decentralized in Sweden, local authorities there have differing ways of informing members of the public.

In Ontario, the government lists all projects that have applied for assessment, and their status, but the reasons for government decisions on project applications are not available on the website.

8 The planning process has to be iterative and flexible.

In every jurisdiction studied, the plans are updated at regularly stated intervals. Government or authority plans usually have to be updated every other year, or at longer set intervals. If produced by a separate authority, the government may order the development of a new plan ahead of its regular schedule. The UK government presents an annual summary of the energy situation to Parliament, which can enable the early identification of problems. The Australian federal government has proposed to review energy policy every four years (by issuing a new policy paper) and to review energy security every two years.

Metrolinx is required to provide an updated transportation plan every ten years.

Current legislation in Ontario requires that the OPA update its IPSP every three years, but this has not been done and no plan has been approved by the regulator. The government, though, is currently reviewing its own Long-Term Energy Plan, which was released in 2010.

9 The plan must be developed by experts.

In New York, representatives from all the authorities and agencies in the sector are members of the Energy Planning Board. The board though has been criticized for not including regional representatives. In the UK, BC and Sweden, some form of technical advisory committees exist, usually formed with a mixture of third-party and government experts who comment or work on the various plans. When Australia was writing a new policy paper on energy, they had a reference group of 24 members that included representatives from numerous energy firms as well as seven independent members. The federal-state Standing Council on Energy and Resources regularly uses outside experts to write reports on various topics.

In Ontario, integrated plans were developed by Metrolinx for transportation and the OPA for electricity. Both agencies are staffed and supported by industry, technical, economic and communications experts. It is not clear if the ministerial directives are developed by experts.

10 The results of the plan should be measured and publicly reported.

The success of a plan is measured and reported on in two different ways in each jurisdiction studied. First, a robust set of publicly available energy statistics reveal progress or concerns in the sector. Second, the planning authority is required to specifically report on the success of the plan at regular intervals.

"In both BC and Ontario there is no central statistics authority, and federal data is sparse."

The body responsible for collecting comprehensive statistics and information on the energy sector varies with each jurisdiction. In the UK and Sweden, the EU has mandated that there be a statistical authority for energy. There is also an information sharing protocol between the EU statistical agency and national authorities. The UK government produces an annual Digest of UK Energy Statistics, usually with quarterly updates, examining the coal, petroleum, gas, electricity, renewables and combined heat and power sectors for the past five years, with key data going back to 1970. The government also publishes a wealth of other data, including information on fuel poverty, domestic and industrial energy prices and public attitudes to energy use.

The Swedish Energy Agency produces an annual report that examines all energy use in that country. The federal Department of Resources and Tourism in Australia publishes an annual review of energy use that covers all sectors, as well as shorter

summary documents. In New York State, the New York State Energy Research and Development Authority (NYSERDA) publishes statistics on energy use, including prices. The federal Energy Information Agency also has comprehensive information on energy use across the whole country and even internationally.

In both BC and Ontario there is no central statistics authority, and federal data is sparse. While BC Hydro publishes statistics on its system, the province-wide data is not always clear. The OPA publishes information on its contracts, and the IESO reports on grid consumption and demand, but once again, comprehensive province-wide data is either sparse or unavailable.

There is direct parliamentary accountability for energy in the UK and Australia. In the UK, the government has to present an annual report to Parliament showing the progress it has made in meeting its energy goals. It reports to the European Union as well on the progress made in meeting EU targets. For the UK's greenhouse gas reduction targets, an independent agency, the Committee on Climate Change, presents an annual report to Parliament on the progress in meeting those targets, and provides recommendations to increase the probability of meeting the targets. Although the reports are not necessarily debated, they are statutory requirements and inform the public and the politicians. In Australia, the minister has to respond in Parliament to any reports by the independent Climate Change Authority.

In British Columbia, BC Hydro must report to the Minister on how it will meet the government's objectives in its Integrated Resource Plan. In addition, all utilities, when filing their annual Long-Term Resource Plan to the BCUC, must indicate how they will contribute to meeting the government's energy objectives.

In Ontario, there is no formal reporting process for energy development. The Environmental Commissioner of Ontario presents annual reports to the legislature on Ontario's performance in meeting its carbon-reduction targets, a report that relates to energy development. Metrolinx, on the other hand, must produce regular progress reports that will show how it will meet its targets and its performance.

Summary of Analysis

No jurisdiction has the perfect amount of good governance, transparency, clarity, accountability and public consultation.

"As a result, energy plans in these other jurisdictions have a higher probability of gaining public support than in Ontario."

None therefore provides the perfect example of how to gain public support. However, it is clear that the planning processes of comparator jurisdictions are better than Ontario in supplying these elements in most cases. The lack of transparency and consultations regarding the ministerial directives is a primary example of this. As a result, energy plans in these other jurisdictions have a higher probability of gaining public support than in Ontario.

> **"The legislative framework laid out in 2004 remains an excellent foundation."**

Given society's dependence on electricity, gaining public support is an imperative that cannot be ignored. At the same time, communities and municipalities are increasingly coming to understand that sustainable energy at the local level will contribute to their economic, environmental and social well-being – and distributed renewable power, district energy and combined heat and power are becoming of greater interest. These elements clearly affect communities and have the potential of facilitating greater local social acceptance because they can contribute to local goals. It is time to rethink how to engage regional authorities, communities and the public in long-term energy discussions.

While Ontario has trailed behind other jurisdictions, it does have the agencies and much of the legislation necessary to gain public support in the electricity sector. The legislative framework laid out in 2004 remains an excellent foundation. The recommendations in this report build on these elements, and identify the best practices that can deliver the transparency, clarity and public accountability and engagement that is required.

SECTION 4:

Policy Recommendations

This section offers the authors' recommendations for improving the energy planning system in Ontario.[16] This paper has defined planning in a broad sense, including everything from the energy policies and objectives formed at the ministerial level, to local planning guidelines and processes for new generation projects. The recommendations come from a comparison of the Ontario planning system with the principles and processes of other jurisdictions.

Implementing the recommendations below will have the benefit of increasing public support for energy plans; however, implementing these recommendations has the potential to also foster more global benefits, such as greater economic efficiency and greater investor confidence. The recommendations that follow are an evolution of the legislative framework that currently exists. Recognizing that dramatic changes can lead to uncertainty, or even be counterproductive, the authors believe their recommendations are feasible and strike a balance between the difficulty of implementing the recommendations and the benefits they will deliver.

The lack of public support in energy planning has been a long-standing issue in Ontario. Fortunately, the Ontario government has recently indicated the need to reform the process, so there now is an opportunity to implement change – change that encourages public engagement in the planning process.

For planning to receive greater public support, there needs to be an effective governance structure, accountability, transparency and integration with local and regional concerns and needs. This includes clear roles for the various actors, and most importantly, a well-defined role for political decision makers. One of the key concerns is that public consultations are inadequate in both type and quantity at all levels of policy making

16 Note that this report does not specifically address the merger of the OPA and IESO as proposed in the government's Bill 75. Regardless of which government agency has the planning authority, the planning principles and recommendations are the same, and the need for public support is still imperative.

> **"There now is an opportunity to implement change – change that encourages public engagement in the planning process."**

and planning – from the ministerial and the provincial, to the regional and the local. The power of the Minister to issue directives without any consultation or accountability needs to be restrained. In addition, regions and communities to need to play a larger role in the planning process to enhance their ability to shape their own energy futures. As with other forms of public infrastructure that underpin social wellbeing, it is imperative that the public are brought into the process so that energy plans can gain legitimacy and public support.

A balanced and thoughtful approach is needed in considering how people are brought into the consultation as there is a need to balance the necessity for local involvement with the accountability for decisions and their outcomes, namely reliable electricity supply and the cost of obtaining it. Local authorities and residents need to consider what options are acceptable to assure themselves of system reliability – it is not sufficient to reject all options. The responsibility of choice implies that viable alternatives also need to be presented. To do this meaningfully, it will become important for regions and communities to consider their local energy requirements, to have access to the information needed to understand the options and finally, to plan accordingly, as they do with other critical municipal infrastructure. This will require protocols for information sharing and mechanisms for integrated policy making and approvals.

The authors recommend that all of these recommendations be implemented over time in order to gain the full extent of the benefit created by each of them.

Public Engagement

Public engagement can be seen as an integral part of increasing public support for all policy changes. There are some specific recommendations that will help bring more public participation to the electricity planning process.

RECOMMENDATIONS:

1 Legislate a community participation charter.

The government should legislate a community participation charter and set out the process for community and public engagement as well as the extent and bounds of authority of the various actors involved in energy planning. The charter should define the process and the rights and responsibilities of communities regarding energy planning

processes in Ontario. The charter might define specific rights for Aboriginal communities. The creation of a charter would ensure that many participants are aware of their right to participate and how they can go about making a meaningful contribution. The charter could also define the OEB's review criteria, and "high quality public consultation" as discussed in Recommendation 5. The charter could be part of the legislated framework described in Recommendation 9 or part of a Provincial Policy Statement.

2 Create a public energy consumer advocate.

Although the OEB funds participation in hearings for all qualifying parties, there remains a gap in the representation of a significant proportion of energy users: the "average" residential and small business consumer. Therefore, the government should create a public energy consumer advocate responsible for representing the public interest at the OEB and elsewhere. This advocate would not replace all interveners; rather, it would ensure that existing gaps in representation are better filled. In addition to providing better representation of the general public, another benefit of the consumer advocate model is the continuity and clear representation it can provide over time compared to other interveners who may not be able to participate consistently in hearings. The consumer advocate may choose to consult the public in order to ensure that it effectively represents their concerns and interests at particular hearings. The public energy consumer advocate should be a fully independent body, although it could reside within the OEB if the independence of both bodies could be assured.

Good Governance

Good governance of the electricity sector is necessary for citizens to feel confident that energy plans will be prudent and effective for Ontario.

RECOMMENDATIONS:

3 Define the role of ministers and elected officials and limit the use of ministerial directives

The role of elected officials should be limited to formulating energy policy objectives or targets in legislation and articulating the statutory governance framework for energy planning. There needs to be a greater clarity

"Although the OEB funds participation in hearings for all qualifying parties, there remains a gap in the representation of a significant proportion of energy users: the "average" residential and small business consumer."

"Reinstitute the Integrated Power System Planning (IPSP) process as soon as possible, ideally with a review by the Ontario Energy Board."

and transparency in how and why energy policy decisions are made by politicians. The power to issue a ministerial directive without comprehensive and open public consultation and subsequent parliamentary approval should be restricted to unusual or infrequent cases. Ministerial directives should not be used to change a plan that has been approved or is under review.

4 Require a provincial energy plan be prepared by an independent expert agency.

Reinstitute the Integrated Power System Planning (IPSP) process as soon as possible, ideally with a review by the Ontario Energy Board.

The starting point of this plan should be to examine the current market conditions and power supply mix, with the new plan identifying and evaluating the impacts of current and forecasted trends in electricity technology and use. It should identify energy efficiency strategies, and projected needs for transmission, generation and distribution.

Over time, as regional and community plans are developed, there should be an iterative process to include these plans within the IPSP. To the extent that a regional plan identifies constraints requiring electricity infrastructure, it should also identify options to eliminate those constraints – including energy efficiency measures and various siting location options. Each scenario should document the estimated total cost of implementing various solutions.

The plan should be developed by the OPA according to the targets and objectives legislated by government and in accordance with the planning principles. The approval by the OEB would provide extra assurance that transparency and public scrutiny are achieved. This is particularly useful when combined with the implementation of Recommendation 2. Before undertaking the initial review process, the OEB should work with stakeholders to develop an efficient and streamlined approvals process for the IPSP.

5 Enhance the OEB's review criteria.

All plans reviewed by the OEB (whether local, regional or the IPSP) should be evaluated according to the following criteria:

- Does the plan adhere to provincial policy objectives and targets as set out in legislation?

- Is the plan economically prudent and cost-effective?
- Does the plan demonstrate that its development project includes a high-quality stakeholder engagement process, including public, community, municipal, regional participants and representatives from other relevant planning bodies (such as environment, transportation)?
- Is the plan consistent with plans approved by the OEB at other planning levels (local, regional and provincial)?
- Is the plan clear on how it was developed, and what concerns were raised at the consultations and how these concerns were addressed?

The OEB should identify and implement measures to streamline the hearing process for the IPSP and future regional and local plans. Timely approvals ensure that approved plans remain relevant to changing conditions.

6 Give the OEB the ability and resources to review and approve the Ontario Power Authority's (OPA) procurement plans and leave-to-construct applications for new generation, as it does for transmission and distribution; or alternatively, create an independent generation siting board.

The purpose of this recommendation is to create an independent and consolidated final review of a project, including the examination of the environmental assessment and the possible alternatives to the proposed solution, such as demand reduction. This could be done in a joint Environmental Assessment hearing. The OEB would require the appropriate resources to effectively fulfill this mandate to review and approve generation projects. Alternatively, an independent siting board could be created for the sole purpose of reviewing and and approving applications for the siting of large generation projects.

Integration

Integrating local and regional plans, goals and concerns into provincial planning will assist in gaining acceptance of the plan from Ontarians.

RECOMMENDATIONS:

7 Require that regional energy plans be approved by the OEB.

The OEB already requires that operators of distribution and transmission networks have regional plans. In addition, the OPA is working on creating its own integrated regional resource plans. These two plans should be integrated into one formalized process, and produced regularly. The regional plans must incorporate local and municipal energy plans. The OEB should then review and approve the regional plans according to the criteria outlined in Recommendation 5.

8 Require municipalities to include energy planning in their infrastructure plans and create a framework for their integration.

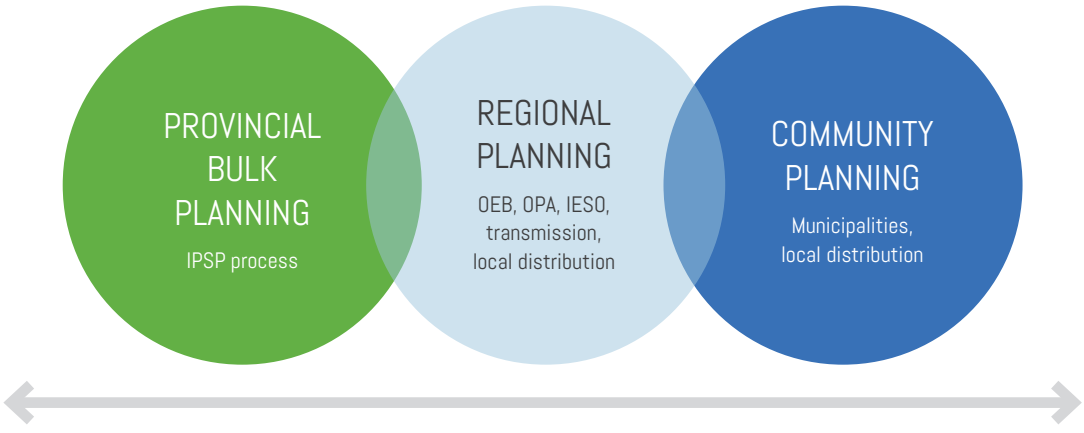
The legislated governance framework must require local authorities to develop local, long-term energy plans that are consistent with the IPSP and regional energy plans. These plans should include an analysis of future local energy requirements and options for renewable power and community energy facilities[17] (and corresponding land-use zoning) as well as conservation and demand-reduction strategies. These local plans should be integrated with other local infrastructure development plans, as in the Metrolinx model.

17 Energy in this context refers not only to electricity but also to thermal energy – the energy required to heat and cool buildings.

9 Require integration between levels of planning.

The Ministry of Energy should define a governance framework that ensures the provincial, regional and local energy plans are fully integrated with one another, similar to what's found in the Metrolinx model. The Ontario Provincial Policy Statement (PPS) could serve as a model for defining the roles of the province and local authorities in integrated planning. With stronger energy considerations in the PPS, it can be used to guide energy development in a way that will integrate transportation, infrastructure, water and sanitation in local, regional and provincial energy plans. By including energy in the PPS, it would obligate municipalities, on their own, or together with regional authorities and designated agencies, such as local distribution companies, to develop plans that are consistent with the provincial government's policy guidelines, the IPSP and existing regional plans.

An Integrative Planning Process



A governance framework should allow for the integration of all levels of planning, thereby ensuring that energy planning meets provincial, regional and community needs.

Transparency and Accountability

If the planning process is transparent and accountable, people will be more likely to support the plan and accept planning decisions.

10 Improve statistical availability, analysis and reporting.

Compared to other jurisdictions it is very difficult to find detailed energy statistics on Ontario. Comprehensive and accessible statistics are necessary for participants and consumers to judge how the government's plan is progressing and what needs to be done to meet society's objectives. There should be a statistical authority for energy in Ontario (just as there is in Sweden and the UK). It would be responsible for collecting information from various agencies and bodies and assembling it in an open format. One standard in energy modelling should be used by all participants to make it clear how projections were made. There should also be regular consultations with stakeholders on what types of statistics are necessary, and how the sector should be measured.

From these new numbers, the OPA should submit an annual report to the legislature and the OEB on the progress made in meeting the objectives set out in the most recent IPSP approved by the OEB. This report would also be publically available.

"Comprehensive and accessible statistics are necessary for participants and consumers to judge how the government's plan is progressing and what needs to be done to meet society's objectives."

11 Consider imposing a moratorium on further electricity generation procurement pending the preparation of the next IPSP.

This will allow all interested parties to understand the current outlook for electricity supply and demand, and the areas requiring immediate attention.

12 Require policy changes and directives to be submitted to the legislature.

To increase transparency, and introduce accountability into the policy-making process, the government should be required to submit all policy changes and directives to the legislature. At the moment, none of the regulations or directives require legislative approval, and once passed, there is no review of legislation.

APPENDIX A:

Bill 75 and Energy Planning

Memorandum from Robert B. Warren
May 28, 2013

WeirFoulds LLP

I. INTRODUCTION AND OVERVIEW

This memo analyses the provisions of Bill 75 which deal with energy plans. In particular, it is an analysis of the discretion which Bill 75 grants to the Minister to develop and issue those plans, and of any limits on the Minister's discretion imposed by the need to refer all or a portion of the plans to the Ontario Energy Board ("OEB").

Included in the analysis is a discussion of the OEB's power to affect the contents of energy plans. Finally, it contains an analysis of the extent to which, if at all, the OEB may involve the public in its consideration of energy plans.

For the reasons set out below, I conclude that the Minister's power to develop and issue energy plans is largely unrestricted. The role of the OEB in reviewing energy plans is very limited. Bill 75 makes no provision for public involvement in the OEB's consideration of energy plans. Any public involvement would be at the discretion of the Minister.

I will begin with a review of the existing provisions of the Electricity Act (the "Act") for the development and issuance of energy plans. I will then consider the changes to those provisions effected by Bill 75. I conclude with an analysis of the respective roles proposed by Bill 75 for the Minister, the OEB, and the public in the development and issuance of energy plans.

II. THE EXISTING PROVISIONS FOR THE DEVELOPMENT OF ENERGY PLANS.

Section 25.30 of the Act provides that the Ontario Power Authority ("OPA") "shall develop and submit to the OEB an integrated power system plan" ("IPSP"). Subsection 25.30(2) gives the Minister the power to issue directives setting out the goals to be achieved during the period to be covered by the IPSP. The OPA is required to follow those directives.

Subsection 25.30(4) requires the OEB to review an IPSP to "ensure it complies with any directions issued by the Minister and is economically prudent and cost effective". After its review, the OEB may approve the plan or refer it back to the OPA "for further consideration and re-submission to the OEB".

A determination of whether an IPSP complies with any directions issued by the Minister is largely an administrative act, not involving the exercise of any discretion as to whether the directives are reasonable. A consideration of whether the IPSP is economically prudent and cost effective, and whether the IPSP should be changed or approved, involves the exercise of discretion. While the OEB is limited to considering whether the IPSP is "economically prudent and cost effective", those terms are not defined. While the OEB does not have the power to deny approval of an IPSP because it disagrees with a directive issued by the Minister, the scope of the terms "economically prudent and cost effective" is such that the OEB has a reasonably broad discretion in deciding whether to approve a plan, or to recommend changes to it.

As a practical matter, then, while the act gives the Minister broad power to control the content of the IPSP, it is the OEB that must approve it.

III. BILL 75

Bill 75 proposes to repeal section 25.30 of the Act and substitute for it a new section 25.30. The references to section 25.30 in the following sections are to the proposed new section.

The successor to the OPA, the Ontario Electricity System Operator ("OESO"), no longer develops an energy plan. While the Minister may consult with the OESO in the development of an energy plan, subsection 25.30(1) provides that it is the Minister who has the authority to develop and issue an energy plan. In doing so, the Minister has the discretion to consult with whomever he or she wishes.

Subsection 25.30(2) provides that the Minister "shall consult" with the OEB, not on the contents of an energy plan generally, but "on the impact of the implementation of the energy plan on a consumer's electricity bill and on methods of managing the impact". Bill 75 contains no definition of the word "consult". While the term "consult" has been given a precise meaning by the Supreme Court of Canada, in cases dealing with the Crown's obligation to consult with First Nations, the term has no particular meaning in this context. What the duty to consult would consist of would depend on a number of factors. It would require more than a phone call. The legislature would be presumed to have intended that the consultation be meaningful and substantive. It would likely require that the OEB be given sufficient information about the impact on the electricity bill to allow it to provide meaningful input. However, the duty to consult would not necessarily require that the OEB hold a hearing or otherwise seek input from third parties. It is also important to emphasize that the consultation is limited to two issues, namely the impact on a consumer's electricity bill and on methods of managing that impact.

More importantly, the duty to consult does not give the OEB any authority to approve or amend the plan, and the duty to consult does not require the Minister to do anything with what the OEB says about the plan.

Section 25.30(5) requires the Minister to refer an energy plan to the OEB for the OEB's "review of the estimated capital costs in the plan". That subsection contains no indication of the criteria that the OEB is to apply in conducting that review. It contains no indication as to what the OEB is to do following its review. The subsection does not give the OEB the power to deny approval of the plan or to recommend changes in the plan. Finally, the subsection contains no indication, directly or by necessary implication, of any process the OEB is to follow in conducting its review. There is not even an indication of what the OEB is to do following its review.

While the first part of subsection 25.30(5) requires the Minister to refer energy plans to the OEB to review the estimated capital costs of the plan, the second part gives the Minister the discretion to require the OEB to review any other part of the energy plan. However, the Minister may only do so as part of a referral to the OEB to review the estimated capital costs of the plan.

Subsection 25.30(6) provides that the Minister may give the OEB "such directions and impose such conditions" on a referral to the OEB "as the Minister considers appropriate". That power is sufficiently broad that the Minister might, for example, require the OEB to hold a hearing. In addition, the Minister might specify the criteria that the OEB was to apply in carrying out its review of the estimated capital costs of the plan, or any other part of the energy plan referred to the OEB. Finally, the Minister might indicate what the OEB was to do following its review.

What subsection 25.30(6) does not allow the Minister to do is give the OEB the authority to approve the plan, or amend it. That power resides solely with the Minister. Were the Minister to attempt, in making a referral to the OEB, to give the OEB the power to approve or amend the plan, the Minister would be attempting to amend the legislation. The Minister cannot do that.

IV. ANALYSIS

While section 25.30 contains mandatory language requiring the Minister to refer an energy plan to the OEB, it is for a limited purpose and does not allow the OEB to amend or reject the plan. The reality is that the provisions of Bill 75 are drafted in such a way as to repose essentially unfettered power in the Minister to develop and issue energy plans.

Typical limitations on a minister's discretion to develop and issue an energy plan might consist of one or more of the following:

Words which would require the Minister to refer a plan to the OEB for the OEB's approval;

Words which would require the Minister to refer a plan to the OEB and then to implement any changes in the plan recommended by the OEB.

Section 25.30 does contain requirements that the Minister do certain things. The Minister must consult with the OEB about the impact of the implementation of the energy plan on a consumer's electricity bill and on methods of managing the impact. But the section does not require the Minister to amend the plan or otherwise do anything that the OEB may recommend as a result of that consultation.

The Minister must refer the plan to the OEB for a review of the plan's estimated capital cost. But the Bill does not specify the criterion by which such costs are to be assessed. More importantly, Bill 75 is silent on what the OEB can do about the capital costs. Finally, there is no requirement that the Minister alter the plan based on what the OEB says about the capital costs.

The Minister's power to give directions and impose conditions on a referral to the OEB gives the Minister the power to materially circumscribe how the OEB conducts its review and what the OEB can do as a result of its review.

As noted above, the Minister, in providing directions and imposing conditions, cannot grant the OEB the authority to either amend the plan, approve the plan, or deny approval. Those powers are reserved exclusively to the Minister. Were the Minister to try to give the OEB any or all of those powers, the Minister would be attempting to amend the legislation, something which the Minister cannot do.

Finally, the discretion granted to the Minister to give the OEB directions and impose conditions on a referral to the OEB is sufficiently broad to allow the Minister to direct the OEB to hold public hearings. In theory, the OEB could hold public hearings in the absence of directions from the Minister to do so. However it is my view that public hearings will only be held if the Minister so directs. Given that Bill 75 gives the Minister the authority to give directions and impose conditions on a referral to the OEB, it would be surprising if the Minister were not to exercise that authority.

APPENDIX B:

Jurisdictional Review: British Columbia

This review is organized around the ten planning principles found in the body of this report. This overview is a summary of notable factors and best practices (or lack thereof) which might be relevant to the discussion. It is not an in-depth analysis.

Overview

The predominant agent in British Columbia's electricity sector is BC Hydro, a vertically integrated, provincially owned company. BC Hydro is defined as an agent of the government in legislation, has the Ministry of Finance as its fiscal agent, and is required by legislation to meet government objectives.[18] BC Hydro is responsible for over 90% of total power generation in the province (either through its own facilities or through power purchase agreements), acts as the system operator since it re-incorporated the BC Transmission Corporation in 2010, and is the distributor and supplier for 94% of the province. The second largest public utility is Fortis BC. The regulator for all public utilities, including BC Hydro, is the British Columbia Utilities Commission (BCUC). In 2008 the BC government also introduced the first carbon tax in Canada, which started at $10 a tonne, and increased to $30 a tonne in 2012.

18 Government of British Columbia, *Hydro and Power Authority Act, Section 3*. At http://www.bclaws.ca/EPLibraries/bclaws_new/document/ID/freeside/00_96212_01.

1 The planning process is based on public policy objectives which have been broadly debated and democratically accepted.

In 2007 the BC government introduced the Greenhouse Gas Reduction Targets Act, committing the province to reduce greenhouse gas emissions by 80% from 2007 levels by 2050, with an interim target of a 33% reduction by 2020.[19] In the 2010 Clean Energy Act the government also listed its high-level energy objectives, namely:

- To generate at least 93% of all electricity in BC through clean or renewable sources;[20]
- To make the province self-sufficient in electricity production;
- To meet at least 66% of any increase in demand through conservation and efficiency by 2020;
- To use renewable power to help achieve provincial greenhouse gas reduction targets;
- To become a net exporter of clean energy;

19 Government of British Columbia, *Greenhouse Gas Reduction Targets Act, 2007*. At http://www.bclaws.ca/EPLibraries/bclaws_new/document/ID/freeside/00_07042_01.

20 This requirement does not apply to the electricity load for any LNG plant operation (if built). See: Government of British Columbia, *British Columbia's Energy Objectives Regulation (BC Reg. 234/2012)*. At http://www.bclaws.ca/EPLibraries/bclaws_new/document/ID/freeside/234_2012; and http://www2.news.gov.bc.ca/news_releases_2009-2013/2012ENER0089-001078.htm.

- To encourage economic development;
- To foster the development of First Nations and rural communities through the use and development of clean or renewable resources;
- For BC Hydro to keep rates among the most competitive in North America.[21]

As part of the act, BC Hydro is to prepare an Integrated Resource Plan (IRP) that must show how it will respond to and achieve the government's targets in the next 20 years. BC Hydro is still in the process of completing its first IRP as of May 2013 and it is expected to submit it to the government in 2013.

While BC Hydro is the only utility that is statutorily required to respond to the government's objectives in the IRP, all the other utilities are required to show in their Long-Term Resource and Conservation Plans – 20-year plans they must submit to the BCUC – how they will contribute to meeting the government's energy objectives. The Long-Term Resource Plans are to include information on the demand-side reduction measures the utility will undertake, an estimate of future demand, and details of future construction that will be required to meet that demand. The BCUC evaluates and accepts these plans based on whether they meet the government's energy objectives and if they are cost effective. Local municipally-owned plants, such as district heating systems, are not regulated by the BCUC in respect to the services they provide within the municipal boundaries.[22]

2 There should be a clear distinction between the roles of the policy maker, the planner, and the reviewer/regulator. Each entity must have a clear and accessible process for public engagement.

Under the Clean Energy Act, BC Hydro must submit to the minister an IRP every five years, or as decided by the government, showing how it will respond to the government's energy objectives in the act in the coming 20 years. The government reviews the plan and decides if it should be approved.[23] BC Hydro was to complete the first IRP in the fall of 2011, but the submission was delayed until August 2013 so that the plan could incorporate new direction from the government, particularly about planning for the electricity requirement of potential LNG plants.[24]

3 The planning process needs to be contextual and comprehensive.

BC Hydro has already produced a draft IRP and has held consultations with the public, stakeholders, and First Nations groups, and it is examining the economic costs and the impact of various technologies and projects

21 Government of British Columbia, *Clean Energy Act, 2010, Section 2*. At http://www.bclaws.ca/EPLibraries/bclaws_new/document/ID/freeside/00_10022_01.

22 See definition of "public utility" in Government of British Columbia, *Utilities Commission Act, 1996*. At http://www.bclaws.ca/EPLibraries/bclaws_new/document/ID/freeside/00_96473_01#section1; Email exchange with Janet Fraser, Chief Regulatory Officer, BC Hydro, May 13, 2013.

23 Government of British Columbia, *Clean Energy Act, 2010*. At http://www.bclaws.ca/EPLibraries/bclaws_new/document/ID/freeside/00_10022_01

24 British Columbia Ministry of Energy, "BC Hydro's 20-year power plan due date to be extended," November 2, 2012. At http://www2.news.gov.bc.ca/news_releases_2009-2013/2012EMNG0038-001706.htm.

on the electricity system in the report. Other utilities are included in the discussion.[25]

4 The planning process has to be integrative.

As BC Hydro, the dominant generator, system operator and retailer, is writing the IRP, the planning process will be integrative. Local communities, environmental groups, regional distributors and utilities are contributing to the plan.

All local governments have a legal requirement to include a greenhouse gas emissions target in their municipal plans that guide growth and zoning. BC Hydro also has a target of reducing new demand through conservation stipulated in the Clean Energy Act. From this combination, BC Hydro has formed the Sustainable Communities group within the Power Smart demand-side management program. The Sustainable Communities group partially funds mid- to long-term demand reduction measures, such as community energy managers and the development of community energy and emissions reduction plans. BC Hydro has also partially funded studies and capital costs of district heating systems. In addition to the legal requirement, local authorities can receive a rebate on part of their carbon tax payment if they have a community emissions reduction plan.[26]

5 The planning process has to include a clear economic analysis.

In the Long-Term Resource Plans, a utility may also submit a capital expenditure schedule to the BCUC, who then evaluates it on the criteria that the plan aligns with BC's energy objectives and is cost effective (although under law only BC Hydro is required to respond to the Clean Energy Act's objectives, all utilities must show that the objectives are considered). In order to construct a new power plant, public utilities, including BC Hydro, need to obtain a certificate of public convenience and necessity from the BCUC, except where exempted by the BC government. In the application for that certificate, the BCUC reviews such criteria as the perceived need for the construction based on, among other things, the utility's Long-Term Resource Plan, how the construction aligns with the government's energy objectives, the cost effectiveness of alternative measures to meet the needs, such as demand reduction measures, and the social and environmental impact of the project.[27]

When any utility, such as BC Hydro or Fortis BC, signs a new energy supply contract, that utility must submit the contract to the BCUC for approval. The BCUC will examine the economics of the contract, whether it is applicable to BC's energy objectives, and whether it meets the utilities Long-Term

25 BC Hydro, "Integrated Resource Plan." At https://www.bchydro.com/energy-in-bc/meeting_demand_growth/irp.html.
26 Interview with Dale Littlejohn, Executive Director, British Columbia Community Energy Association, May 15, 2013.

27 British Columbia Utilities Commission (BCUC), *2010 Certificate of Public Convenience and Necessity Application Guidelines*. At http://www.bcuc.com/Documents/Guidelines/2010/DOC_25326_G-50-10_2010-CPCN-Application-Guidelines.pdf.

Resource Plan. This includes looking into other possible solutions, such as demand reduction. The government is able to waive this requirement and order the awarding of the contract without BCUC oversight, such as it did for the renewable power Standing Offer program.[28]

6 The planning process has to be transparent and accessible to all stakeholders and the public.

BC Hydro has posted summaries of consultations, reports from experts and all other documents involved in the development of the IRP online.

Regarding the construction of new infrastructure or the refurbishment of an existing facility, public consultations with all interested or potentially affected parties are generally required in order to receive a certificate of public convenience and necessity from the BCUC, particularly if first nations groups are involved. The utility sends all the details and summaries of all the consultations to the BCUC when it applies for the certificate. Upon evaluation of the application, the BCUC has the discretion to hold its own oral or written hearings as it deems necessary.[29] As an agent of the Crown, BC Hydro has a duty to consult with the First Nations. It is up to the BCUC to assess the adequacy of the consultations with First Nations, up to the point of the certificate decision, based on the project's impacts and the strength of claim.

The BCUC's decisions can be appealed to the BC Court of Appeal on a very limited basis (errors of law and lack of jurisdiction). Appeals cannot be requested on the basis of a disagreement with how the BCUC weighed the facts. If it is believed that the commission "made a significant error," the BCUC can be asked to reconsider its decision. The commission can request evidence from the parties to decide if the appeal should proceed. If a party is dissatisfied with the commission's procedure, a complaint can be made to the provincial Ombudsman. However, only procedural issues are reviewed by the Ombudsman.[30] The provincial government can issue directives to the BCUC giving directions for the commission to use when evaluating projects, and the government can also exempt specific projects from BCUC oversight.

In the Clean Energy Act 2010, several specific projects were exempted from requiring either a certificate of public convenience and necessity or BCUC's approval of the energy supply contract. These projects were for clean and renewable energy production (which include biomass, biogas, geothermal, solar, wind, ocean and run-of-the-river hydropower) and include large hydropower projects, a transmission network upgrade, a call for bids to supply clean power to BC

28 Government of British Columbia, *Hydro and Power Authority Act*. At http://www.bclaws.ca/EPLibraries/bclaws_new/document/ID/freeside/00_96212_01.

29 BCUC, *2010 Certificate of Public Convenience and Necessity Application Guidelines*. At http://www.bcuc.com/Documents/Guidelines/2010/DOC_25326_G-50-10_2010-CPCN-Application-Guidelines.pdf.

30 BCUC, *Reconsideration and Appeals: A Participants' Guide to the BC Utilities Commission, 2002*, http://www.bcuc.com/Documents/Guidelines/Participant_Guide.pdf; Email exchange with Janet Fraser, Chief Regulatory Officer, BC Hydro, May 13, 2013.

Hydro, and the Standing Offer or Feed-in Tariff programs (a Feed-in Tariff system has not been implemented) which set guaranteed rates for small-scale renewable power.[31]

7 The planning process needs to be informative.

The utility generally posts all the non-confidential material required by BCUC on its website, including written responses from stakeholders and the public. Hearings are public and all submissions have to be made publically available except where confidentiality is necessary (such as for commercially sensitive information). Interveners can usually be granted access to confidential information if they sign a confidentiality agreement.

8 The planning process has to be iterative and flexible.

Once BC Hydro submits the first IRP, revised plans will be required every five years, or as requested by the government. The BCUC determines the frequency with which utilities must submit Long-Term Resource Plans (which must include expenditure schedules if appropriate); therefore, plans can quickly be revised in light of changing conditions.

9 The plan must be developed by experts.

There is a Technical Advisory Group that is advising on the IRP, which includes representatives from industry, environmental groups, labour organizations, the regulator and the government.

10 The results of the plan should be measured and publicly reported.

BC Hydro is to indicate in its IRP how it will respond to the government's energy objectives.

There is a lack of publicly available information on the energy sector in BC. While BC Hydro publishes information on its system, there is no central body that collects and analyzes energy data on BC as a whole. BC Stats, the provincial statistics body, only has data on exports of electricity and some environmental indicators. This makes it difficult for participants to understand developments in the province.

This review is organized around the ten planning principles found in the body of this report. This overview is a summary of notable factors and best practices (or lack thereof) which might be relevant to the discussion. It is not an in-depth analysis.

31 Government of British Columbia, *Clean Energy Act 2010*. At http://www.bclaws.ca/EPLibraries/bclaws_new/document/ID/freeside/00_10022_01.

APPENDIX C:

Jurisdictional Review: New South Wales, Australia

Overview

In Australia, each state and territory is responsible for administering its electricity sector. In the past two decades, the most notable development in Australia's energy policy has been the commitment from the state and territory governments to pursue competitive reform and to liberalize their electricity markets. Starting in December 1998, five states (Queensland, Victoria, South Australia, and New South Wales, whose power market includes the Australian Capital Territory) began to implement the National Electricity Market (NEM), a regional electricity market with a single power exchange. Tasmania joined later, and West Australia and the Northern Territory are not connected to the NEM, mostly as a result of distance, although they have opened their markets as well.[32]

In using Australia as a comparator, the state-level analysis focuses on New South Wales, the most populous Australian state. In New South Wales, the transmission network operator is TransGrid, a state-owned company. The government also owns roughly 90% of the generation capacity in the state; however, it sold the electricity trading rights for about a third of this capacity to two private companies in 2011. As a result, control over dispatch of three-quarters of total capacity is now split between two public and the two private companies.[33] Generators sell power on the NEM power exchange where it is purchased by large consumers and retail suppliers. More than a dozen electricity retailers sell power to end users.[34]

1 The planning process is based on public policy objectives which have been broadly debated and democratically accepted.

The federal government, also known as the Commonwealth government, has implemented a Renewable Energy Target (a quota obligation) and expanded or updated it several times. The most recent target is to produce 20% of Australia's electricity from renewable sources by 2020, and this target is to be met through a quota for suppliers, with tradable renewable energy certificates used to verify compliance. In 2012, the federal government also introduced the Clean Energy Future Plan, with a target of reducing

32 Australia Energy Market Operator (AEMO), *An Introduction to Australia's National Electricity Market*, July 2010. At http://www.aemo.com.au/About-the-Industry/Energy-Markets/National-Electricity-Market.

33 Australia Energy Regulator (AER), *State of the Energy Market*, 2012, p. 40. At http://www.aer.gov.au/sites/default/files/State%20of%20the%20Energy%20market%202012%20-%20Complete%20report%20%28A4%29.pdf.

34 New South Wales Independent Pricing and Regulatory Tribunal (IPART), "Frequently Asked Questions." At http://www.ipart.nsw.gov.au/Home/About_Us/FAQs?dlv_faq%20list=(dd_industries=electricity).

greenhouse gas emissions by 5% from 2000 levels by 2020 (25% if other countries also sign up for binding targets). To meet that target, a carbon tax of AU$23 per tonne was introduced in 2012, and starting in 2015 the price will be set through carbon trading, which will be linked to the European Union's Emission Trading Scheme.

Policy objectives are also clearly stated in the National Electricity Objective, which is part of the National Electricity Law governing the NEM. The objectives are to promote efficient investment in, and efficient operation and use of, electricity services for the long-term interests of consumers with respect to price, quality, safety, reliability, and security of supply of electricity; and to ensure the reliability, safety and security of the national electricity system.[35]

2 There should be a clear distinction between the roles of the policy maker, the planner, and the reviewer/regulator. Each entity must have a clear and accessible process for public engagement.

In Australia, there exists a sharper distinction between roles than in other jurisdictions. For the NEM, there are distinct agencies to create energy policy and objectives, create the rules for the National Energy Market and to enforce market rules through regulation. For example, the Australia Energy Market Operator (AEMO) produces annual Statements of Opportunity for Electricity and Gas as well as numerous other reports related to supply and reliability, but the market is regulated by the Australian Energy Regulator (AER) and the rules and policies that the AER must enforce are developed by the Australian Energy Market Commission (AEMC), which holds the primary responsibility for developing energy markets.

The Department of Resources, Energy and Tourism (RET) is the federal body that develops energy policy. Most recently, it has produced both an Energy Security Assessment (2011) and an Energy White Paper (2012). The federal Department of Industry, Innovation, Climate Change, Science, Research and Tertiary Education deals with climate change and carbon pricing.

The federal government in 2012 also established the Climate Change Authority (CCA). The CCA is an independent agency that evaluates the renewable energy and climate change policies of the government, the majority of which are administered by the Clean Energy Regulator (discussed below). The CCA provides expert advice and recommendations to the Australian government, normally to the Climate Change Minister.

At the inter-governmental level, the Standing Council on Energy and Resources (SCER) replaced the former Ministerial Council on Energy and is the locus of much of Australia's energy policy making (energy is mostly administered at the state level in Australia).

35 Australia Energy Market Commission (AEMC), *Electricity Market*. At http://www.aemc.gov.au/Electricity/Electricity-Market.html.

SCER, a body of the Council of Australian Governments, comprises representatives from the federal government and every state and territory, and is responsible for developing policy that will address challenges to investment, promote market efficiency and ensure national consistency in regulatory standards.[36] Where decisions cannot be reached by consensus, the agreements are not binding on the dissenting state governments.

Turning to regulation, the Australian Energy Regulator (AER) is a federal independent entity with board members designated by the federal, state and territorial governments as well as by the Australian Competition and Consumer Commission. It is responsible for setting the prices that can be charged for transmission and distribution and regulates competition in the gas and wholesale electricity markets in the NEM. It also regulates retail electricity markets in regions where they exist. The AER does not operate the market. Its decisions are subject to review by federal courts.

The Australian Energy Market Commission (AEMC) creates and amends the operational and economic rules of the NEM (which are enforced by the AER) and is responsible for market development. It is a federal independent body that also provides planning and operational advice to planning officials.

The Australian Energy Market Operator (AEMO) is the market operator for the NEM, and since 2009 has also been responsible for the gas market. It dispatches generation capacity and operates the gas markets, and also does transmission planning and works on energy market development.[37]

The Clean Energy Regulator (CER) is another federal body, which administers numerous programs focused on renewable power and greenhouse gas emissions such as the Renewable Energy Target, the National Greenhouse and Energy Reporting scheme, the Carbon Pricing Mechanism, and the Carbon Farming Initiative. By law, the Clean Energy Regulator publishes an annual performance overview of each of these programs.[38] The CER is an independent agency that is part of the Australian Climate Change Portfolio.

At the state level, there are various agencies and departments that play an administrative role in energy. The New South Wales Ministry of Trade and Investment is responsible for energy in that state and administers the state Feed-in Tariff system for solar power and regulated consumer tariffs. The New South Wales Independent Pricing and Regulatory Tribunal acts as the main regulator for energy and other utilities. It makes determinations on the maximum prices that regulated retail energy suppliers can charge, while the AER sets the network prices. The tribunal

36 Council of Australia Government Standing Council on Energy and Resources, *Terms of Reference*, September 23, 2011. At http://www.ret.gov.au/resources/Documents/mcmpr/ToR-COAG23Sept2011.pdf.

37 AEMO, "About AEMO." At http://www.aemo.com.au/About-AEMO/History.

38 Australia Clean Energy Regulator, *Annual Report 2012*. At http://www.cleanenergyregulator.gov.au/About-us/Governance-accountability-and-reporting/annual-report/Pages/default.aspx.

also administers the state's Greenhouse Gas Reduction Scheme and its Energy Savings Scheme.[39]

3 The planning process needs to be contextual and comprehensive.

At the federal level, the Department of Resources, Energy and Tourism produced the 2011 Energy Security Assessment, which is not a policy document or projection, but rather an assessment of strengths and weaknesses in Australia's energy system. The assessment uses shock scenarios to analyze potential impacts on adequacy, reliability and competitiveness of resource supply.[40] The Department also released its 2012 Energy White Paper, which provides a strategic policy framework for Australia's energy challenges. It offers analysis based on 30-year projections for various supply and demand scenarios. In its analysis of renewable energy options, it offers cost projections for different technologies. It also highlights the impact of timing on the resolution of major policy challenges.[41] Moving forward, the RET expects to produce an energy security assessment every two years and an energy white paper every four years.

The AEMO every year publishes an Electricity Statement of Opportunities (ESOO) that provides an assessment of supply adequacy in the National Electricity Market over the next 10 years, highlighting opportunities for generation and demand-side investment. If the energy situation changes in the interim, the AEMO publishes updates, as it did in 2013.[42] The AER also publishes an annual report on the state of the energy market.[43]

4 The planning process has to be integrative.

Authority on energy policy matters is more centralized in Australia than in other federal jurisdictions. Much of the policy is determined by the Standing Council on Energy and Resources, which includes representatives from the federal government as well as the states and territories. SCER serves as a vital linchpin connecting federal energy policy with the interests of individual states. At the state level, transmission and distribution assets were highly consolidated before deregulation and the number of utilities remains low in the deregulated market, allowing for a functional degree of coordination between national and local concerns.

Regarding integration across types of planning, SCER's terms of reference name seven priority issues, the second being "issues impacting on investment in resources exploration and development, including land access, community, infrastructure, and labour."[44] To this end, SCER has a Land Access Working Group, which in December

39 IPART, "What We Do." At http://www.ipart.nsw.gov.au/Home/About_Us/What_We_Do.
40 Australia Department of Resources, Energy and Tourism, *National Energy Security Assessment 2011*. At http://www.ret.gov.au/energy/Documents/Energy-Security/nesa/National-Energy-Security-Assessment-2011.pdf.
41 Australia Department of Resources, Energy and Tourism, *Energy White Paper 2012*. At http://www.ret.gov.au/energy/Documents/ewp/2012/Energy_%20White_Paper_2012.pdf.
42 AEMO, *Electricity Statement of Opportunities*. At http://www.aemo.com.au/Electricity/Planning/Electricity-Statement-of-Opportunities.
43 See http://www.aer.gov.au/state-of-the-energy-market-reports.
44 Australia Standing Council on Energy and Resources (SCER), "Priority Issues of National Significance." At http://www.scer.gov.au/about-us/priority-issues-of-national-significance/.

2012 submitted its draft Multiple Land Use Framework to SCER for endorsement.[45]

Despite the high level of centralized market planning, individual states retain the authority to decide whether to privatize their generation and transmission assets. In other words, participation in the electricity and gas markets is voluntary. Markets in the states that have joined the NEM are administered by the Australian Energy Regulator while markets in other areas are governed by state governments.[46] A federal organization, Infrastructure Australia, works to coordinate nationally important infrastructure development, including energy.[47]

Regarding siting of individual generation stations, planning permission is granted at the state level. For example, in New South Wales, Australia's most populous state, siting is normally determined by an independent Planning Assessment Commission, while capital investment projects of more than $30 million (or $10 million located in an area of environmental significance) are evaluated by a joint regional planning board made of state- and local-appointed members.[48]

Concerning integration between types of planning, the Energy White Paper of the Commonwealth Department of Resources, Energy and Tourism highlights all areas where energy planning needs to integrate with other key planning projects, particularly water and ecological conservation, carbon reduction efforts and transportation planning.

5 The planning process has to include a clear economic analysis.

The majority of the provision of electricity and gas in Australia is done through markets, and therefore it is for individual market actors to assess the economic logic of potential capital investment choices. To provide useful, timely information to private actors, the AEMO produces a host of annual reports on the NEM containing economic data and forecasts for various markets. These include the National Electricity Forecasting Report, the Electricity Statement of Opportunities, the Gas Statement of Opportunities and the National Transmission Network Development Plan. The AER also publishes an annual State of the Energy Market Report, which contains projections of demand, supply and price, but does not include analysis of potential infrastructure needs.

The 2012 Energy White Paper produced by the Commonwealth Department of Resources, Energy and Tourism outlines required capital investments in the next 20 years, but it does not include analysis on which costs it expects to be paid by private investors and which will be incurred by Australian governments, and how the investments will affect consumer tariffs.

SCER provides substantial analytical clarity over different policy options. In the process of

45 SCER, "Multiple Land-Use Framework." At http://www.scer.gov.au/workstreams/land-access/mluf/.
46 AER, "About Us." At http://www.aer.gov.au/about-us.
47 See Infrastructure Australia website at http://www.infrastructureaustralia.gov.au/energy/.
48 Government of New South Wales, *State Environmental Planning Policy (State and Regional Development) 2011*. At http://www.legislation.nsw.gov.au/sessionalview/sessional/epi/2011-511.pdf.

developing its regulatory impact statements, SCER highlights various options for achieving a given policy objective in draft reports and then requests public comment on the reports before making a final document.

6 The planning process has to be transparent and accessible to all stakeholders and the public.

In New South Wales, the Planning Assessment Commission posts a plethora of information online regarding directions from the Minister, notices of public hearings, submissions and determinations.[49] The same is true of regional planning projects.[50] The commission, though independent, can be directed by the Minister of Planning and Infrastructure to hold a public hearing into any development or planning matter or the commission can decide to hold its own consultations. If requested by the Minister, the commission will provide a report with recommendations to the Minister after the hearing.[51] The commission is also required to hold a public meeting (not a hearing) if it receives 25 submissions objecting to an application.[52]

At the national level, SCER produces communiqués of its meetings that highlight the main issues discussed, recommendations and actions in progress. It also maintains informative pages for specific policy projects, current and past, that include links to key documents, an explanation of process and timelines and an explanation of what opportunities exist, if any, for public participation.

In the process of drafting its Energy White Paper, the RET invited select representatives from industry associations, unions, as well as NGOs and civic bodies to several consultation sessions and also formed a Reference Group to inform the draft. RET then issued a call for public comments on the draft paper and the comments were posted online. The white paper itself pointed readers to numerous information sets and highlights the names of key data collection agencies as well as key market actors and regulators.[53] It also referred to public submissions that it had received for a previous document that provided much of the framework for the white paper.[54]

SCER has recognized the need for better national advocacy for all energy consumers, particularly household and small business consumers. To that end, SCER's Energy Market Reform Working Group has released a proposal for a National Energy Consumer Advocacy Body.

The proposal was submitted to SCER for approval in April 2013.[55]

49 New South Wales Planning Assessment Commission, "About Us." At http://www.pac.nsw.gov.au/AboutUs/tabid/55/Default.aspx.
50 New South Wales Planning and Infrastructure, "Major Projects." At http://majorprojects.planning.nsw.gov.au/index.pl?action=view_job&job_id=5762.
51 New South Wales Planning Assessment Commission, "About Us." At http://www.pac.nsw.gov.au/AboutUs/tabid/55/Default.aspx.
52 Ibid.

53 Australia Department of Resources, Energy and Tourism, "Submissions of the Draft Energy White Paper." At http://www.ret.gov.au/energy/facts/white_paper/draft-ewp-2011/submissions/Pages/submissions.aspx.
54 Australia Department of Resources, Energy and Tourism, "Consultation for the Draft Energy White Paper." At http://www.ret.gov.au/energy/facts/white_paper/draft-ewp-2011/sub_process/Pages/default.aspx.
55 John Tamblyn and John Ryan, *Proposal for a National Energy Consumer Advocacy Body*, April 30, 2013. At http://www.scer.gov.au/files/2013/05/NECAB-Proposal-Final-Report-May-2013.pdf.

7 The planning process needs to be informative.

At the local level, the New South Wales Planning Assessment Commission's determination documents are examples of informative policy making. The determinations include a comprehensive treatment of factors and a discussion of how different stakeholder submissions influenced the final determinations, providing a clear understanding of how each determination was reached.

SCER, particularly on work related to its energy market reform work stream, provides easy access to drafts of policy documents as well as copies of all public submissions related to a draft or policy area, though the direct link between submissions and decisions is less clearly articulated than the New South Wales Planning Assessment Commission example.

Last, the RET's Energy White Paper provides comprehensive analysis, including an explanation of the scope and process of the work contained in it. The RET website for the draft white paper holds records of the public submissions related to the report, but the report itself does not indicate how public input was incorporated into the final policy document.

8 The planning process has to be iterative and flexible.

The federal government has proposed to review energy policy every four years (by issuing a white paper) and to review energy security every two years. To that end, the RET produced a review of energy security in 2011, updating its 2009 review.[56] The bi-annual energy security papers also serve as inputs for the broader energy white paper. The most recent energy white paper was issued in 2012. Prior to that, the white papers had been written on an ad hoc basis and the previous white paper had been published in 2004.[57] The 2012 report acknowledged that the ad hoc approach can fail to address pressing policy problems in a timely way, therefore the most recent paper states that the white paper review will be scheduled regularly every four years beginning in 2016.[58]

A second vital source of iterative planning information in the NEM is the AEMO. It produces several key infrastructure planning documents annually including: the National Electricity Forecasting Report (with a ten-year outlook); both the Electricity- and Gas Statements of Opportunities (with ten-year outlooks); the Power System Adequacy report (with a two-year outlook); and the National Transmission Network Development Plan, which provides a 20- to 25-year outlook. Additionally, the AEMC publishes an annual report on retail electricity price trends with a two-year forecast for a "representative set of residential customers in each state and territory."[59]

56 Australian Associated Press, "Energy White Paper Unveiled", The Age, December 13, 2011. At http://news.theage.com.au/breaking-news-national/energy-white-paper-unveiled-20111213-1os1x.html.
57 Australia Department of Resources, Energy and Tourism, *Energy White Paper 2012*, p. 8. At http://www.ret.gov.au/energy/Documents/ewp/2012/Energy_%20White_Paper_2012.pdf.
58 Australia Department of Resources, Energy and Tourism, *Energy White Paper 2012*. At http://www.ret.gov.au/energy/Documents/ewp/2012/Energy_%20White_Paper_2012.pdf.
59 AEMC, *Retail Electricity Price Movements*. At http://www.aemc.gov.au/.

9 The plan must be developed by experts.

The 2012 Energy White Paper developed by the RET took guidance from a reference group of 24 members that included representatives from numerous energy firms as well as seven independent members.[60] The paper's policy recommendations are the product of expert analysis.

SCER is an intergovernmental body chaired by the federal government and comprises the relevant ministers of energy from each state and territory. These elected officials have varying degrees of expertise on energy matters, but SCER has divided its work into several specific "work streams" and it commissions consultants and outside experts to provide reports and advice to the council to inform its decisions.

10 The results of the plan should be measured and publicly reported.

The RET's Energy White Paper policy analysis is divided by category (e.g. energy security or clean energy) and each section is summarized with an explicit discussion of "measuring policy success."[61] Though these points are not generally quantitative, they serve as touchstones for measuring the success of future energy policy implementation programs.

Concerning renewables, the government has set out very specific and measurable targets for its renewable energy generation programs. The Renewable Energy Target aims to have 20% of all electricity produced by renewable sources by 2020 and it mandates a specific annual number of megawatt hours for each year until 2030.[62] The independent Climate Change Authority also prepares annual reports on the progress made towards meeting Australia's climate change targets, a report that includes information on the government's renewable energy targets. The authority is also currently in the process of producing a report on the Renewable Energy Target for Australia's Parliament and released a draft and a call for public comments. The minister is required to respond in Parliament within six months to all reports that the Climate Change Authority publishes. The CCA will also respond to requests for reviews from the Parliament or the government, and again the minister must respond in Parliament to the CCA reviews stemming from these requests.[63]

Regarding generally available sources for energy statistics and information, the Australian government has a Bureau of Resources and Economics, an independent economic analysis and statistics body that resides within the RET. The bureau produces numerous statistical data reports including

60 Australia Department of Resources, Energy and Tourism, *Energy White Paper Reference Group*. At http://www.ret.gov.au/energy/Documents/ewp/consultation-and-submissions/EWP-RG_MemberListJuly2011.pdf.
61 Australia Department of Resources, Energy and Tourism, *Energy White Paper 2012*. At http://www.ret.gov.au/energy/Documents/ewp/2012/Energy_%20White_Paper_2012.pdf.
62 Australia Department of Industry, Innovation, Climate Change Science, Research and Tertiary Education, "Enhanced Renewable Energy Target." At http://www.climatechange.gov.au/government/initiatives/renewable-target/fs-enhanced-ret.aspx.
63 See the Australia Climate Change Authority website at http://climatechangeauthority.gov.au/.

supplementary documents to the RET's white paper.[64]

By law, the Clean Energy Regulator publishes an annual performance overview of each of the programs that it administers.[65]

64 Australia Bureau of Resources and Energy Economics, *Energy in Australia*. At http://www.bree.gov.au/publications/energy-in-aust.html.
65 Australia Clean Energy Regulator, *Annual Report 2012*. At http://www.cleanenergyregulator.gov.au/About-us/Governance-accountability-and-reporting/annual-report/Pages/default.aspx.

APPENDIX D:

Jurisdictional Review: New York State

This review is organized around the ten planning principles found in the body of this report. This overview is a summary of notable factors and best practices (or lack thereof) which might be relevant to the discussion. It is not an in-depth analysis.

Overview

New York State began operating its first deregulated electricity markets in 1996. The New York Independent System Operator (NYISO) manages the wholesale market, which includes spot and day-ahead markets. Roughly 50% of wholesale electricity is purchased under bilateral contracts, while another 48% is sold in the day-ahead market and the remaining 2% on the spot market.[66] The New York State Public Service Commission (PSC) acts as the economic regulator, hearing rate cases and holding technical hearings, while the New York Power Authority (NYPA) is a legacy producer and transmission owner that is still state-owned and can be directed by the PSC to pursue public policy goals. Additionally, the New York State Energy Research and Development Authority (NYSERDA) is a public agency that oversees many of the state's renewable and efficiency programs.

In the future, much of the state-wide energy planning will be done by the New York State Energy Planning Board, which was created by law in 2009 and is charged with producing a State Energy Plan focused on reliably meeting future demand in light of economic, environmental and social objectives.[67] The Energy Planning Board's first plan is expected in 2013 and is to be implemented by the state's public energy agencies, such as the NYPA, NYSERDA and the PSC. In the interim, New York State Governor Andrew Cuomo established an ad hoc Energy Highway Task Force to manage a request for information (RFI) regarding potential infrastructure and generation projects.[68] The task force issued its RFI in April 2012 and produced a "Blueprint" in October 2012 outlining 13 recommended actions based on 130 ideas received from 85 individual parties. The task force delegated responsibilities to pursue the recommendations to the appropriate public agencies and, after producing a final update in April 2013, officially disbanded.

66 New York Independent System Operator (NYISO), "Understanding the Market." At http://www.nyiso.com/public/about_nyiso/understanding_the_markets/energy_market/index.jsp.

67 New York State, "New York State Energy Plan Process." At http://www.nysenergyplan.com/process.html.

68 Andrew Cuomo, *Building a New New York*, January 4, 2012, p. 12. At http://www.governor.ny.gov/assets/documents/Building-a-New-New-York-Book.pdf.

1 The planning process is based on public policy objectives which have been broadly debated and democratically accepted.

The New York electricity system is primarily market driven (though the PSC is able to direct investor-owned utilities if a regulatory backstop is required). As such, there are limits to the ability of the state government and its agencies to drive the implementation of policy objectives, but the objectives of each agency are clearly defined in the laws that govern them. For example, the objectives of the new Energy Planning Board are mandated by Article 6 of the New York Energy Law, which established the board in 2009. The law mandates that the forthcoming statewide energy plan (expected in 2013) shall forecast demand and corresponding supply requirements for a ten-year period; assess the costs, risks, and benefits of alternatives to traditional supply sources; assess current energy policies and programs; include an environmental justice analysis; assess greenhouse gas reduction strategies; and analyze health and welfare impacts.[69]

Public policy objectives are also clearly mandated in Article 10 of the New York Public Service Law that created the new New York State Board on Electric Generation Siting and the Environment (known as the Siting Board). The Siting Board consists of state representatives from the PSC, NYSERDA and the departments of health, environment and development. It was created to expedite approvals by administering a one-stop siting application process for new construction or refurbishment of regeneration facilities. The Siting Board's determinations are made according to the evaluation criteria defined in Article 10: namely, that the prospective project is a beneficial addition to the state grid in comparison to viable alternatives; that the project is in the public interest; and that the environmental impacts are identified and minimized.[70]

Finally, the Governor's 2012 Energy Highway Blueprint, though the product of a one-time planning exercise, stated its objectives clearly: to reduce transmission congestion; ensure reliability in the face of uncertainty; encourage utility-scale renewable generation; and increase generation efficiency. It is now up to the public agencies to implement the recommendations in order to achieve the objectives.

2 There should be a clear distinction between the roles of the policy maker, the planner, and the reviewer/regulator. Each entity must have a clear and accessible process for public engagement.

69 New York State, *New York Energy Law, Article 6*. At http://public.leginfo.state.ny.us/LAWSSEAF.cgi?QUERYTYPE=LAWS+&QUERYDATA=$$ENG6-104$$@TXENG06-104+&LIST=LAW+&BROWSER=EXPLORER+&TOKEN=57833938+&TARGET=VIEW.

70 New York State, *New York Public Service Law, Article 10, (160-173) Siting of Major Electric Generating Facilities*. At http://www3.dps.ny.gov/W/PSCWeb.nsf/96f0fec0b45a3c6485257688006a701a/d12e078bf7a746ff85257a70004ef402/$FILE/Article10LawText%20.pdf.; Cullen and Dykman LLP, "New NYS Article 10 Powerplant Siting Statute", September 2011. At http://www.cullenanddykman.com/news-advisories-25.html/.

In New York State, there are formal and informal mechanisms to implement energy policy decisions. The PSC, an independent economic regulator, sets policy through its rate cases and other technical hearings. The PSC is independent; however, it routinely incorporates priorities indicated by the Governor and the state government into its own policy agenda as it is mandated to serve the interests of the public. If necessary, the PSC has the authority to order the investor-owned utilities to build transmission or generation infrastructure, thereby providing a regulatory backstop to the energy sector and giving the government the ability to react in times of emergency.

The NYPA, NYSERDA and the NYISO are all independent bodies whose roles in the electricity market are defined by legislation; that is, they can only be directed by the PSC. However, typically, these agencies align their operations with public policy priorities. For example, the ad hoc Energy Highway Task Force, commissioned by the Governor, produced the Energy Highway Blueprint in 2012. Though the task force had no statutory authority to direct public energy agencies to implement the blueprint's recommendations, the task force itself was composed of the CEO of the NYPA, the Department of Environmental Conservation Commissioner, the CEO of the Empire State Development Corporation, the chairman of the PSC and the CEO of NYSERDA. Thus, the independent agencies used the blueprint as a guiding document for future planning even though there was no specific statutory mandate to pursue the Task Force's recommendations.

3 The planning process needs to be contextual and comprehensive.

The Energy Highway Blueprint, the NYISO's Comprehensive Reliability Plan and the Energy Planning Board's forthcoming energy plan all comprehensively assess the current state of all the major components of the electricity system as well as current and forecasted market conditions and expected changes. Concerning supply, there is minimal consideration of specific options because preferred generation type is determined by private market actors, though the PSC does direct the public agencies, particularly NYSERDA, which administers renewable power generation programs. For example, in 2004, the PSC ordered NYSERDA to begin soliciting renewable generation from interested parties as part of an overall renewable energy target that the PSC had established through broad stakeholder consultation. The order established a target for 25% of energy used by consumers by the end of 2013 compared to 19.3% in 2004. This target was expanded in 2010 to target 30% renewable generation by 2015.[71]

71 New York State Energy Research and Development Authority (NYSERDA), *The New York State Renewable Portfolio Standard Performance Report: Through December 31, 2012*, p. 5. At http://www.nyserda.ny.gov/Energy-Data-and-Prices-Planning-and-Policy/Program-Planning/Renewable-Portfolio-Standard/Main-Tier/Documents.aspx.

4 The planning process has to be integrative.

New York's various formal planning mechanisms boast an impressive level of coordination across legislative and regulatory bodies pertaining to energy and other areas such as transportation and infrastructure. For example, by law, the Energy Planning Board includes representatives from NYSERDA, the NYISO, Departments of State, Health, Labor, Transportation and Environmental Conservation as well as appointments by the Governor, Assembly and Senate.

While planning is integrative across types, some argue that previous planning frameworks have not sufficiently addressed the challenges of integrated planning for regions with substantially different energy needs. For example, New York City and Long Island together represent roughly half of all load on the state's system.[72] New York City pursues some of its own energy planning initiatives, yet it has no formal role in state-level planning processes despite the fact that upstate transmission and generation conditions have a large impact on the reliability and cost of energy in New York City. For the most part, the city's formal influence is limited to its participation as an intervener in PSC hearings and, informally, it seeks to involve state-level representatives in its planning initiatives through invitation.

However, this lack of regional representation promises to change with the new plan produced by the Energy Planning Board. The laws governing the board state that it shall create two regional councils (upstate and downstate) that are to "transmit to the board a report containing any recommendations specific to its region on a schedule determined by the board to be appropriate for consideration of such report in the development of the draft energy plan."[73]

5 The planning process has to include a clear economic analysis.

By law, the Energy Planning Board will be required to identify and assess the "costs, risks, benefits, uncertainties and market potential" of a host of energy supply source alternatives.[74] At this time, it is unclear how the analysis will be communicated in its first State Energy Plan, which is expected sometime in 2013.

The PSC has expertise as an economic regulator and holds hearings where it considers costs and benefits (economic and other), particularly in rate cases. It hears arguments from any party wishing to act as an intervener, its deliberations are open and it issues a final written order containing a comprehensive analysis that includes relevant economic analyses.

72 New York State Energy Planning Board, *Electricity Assessment: Resources and Markets New York State Energy Plan 2009*, December 2009. At http://www.nysenergyplan.com/final/Electricity_Assessment_Resource_and_Markets.pdf.

73 New York State, *New York Energy Law, Article 6*. At http://public.leginfo.state.ny.us/LAWSSEAF.cgi?QUERYTYPE=LAWS+&QUERYDATA=$$ENG6-104$$@TXENG06-104+&LIST=LAW+&BROWSER=EXPLORER+&TOKEN=57833938+&TARGET=VIEW.

74 Ibid.

For new generation projects, the new New York State Board on Electric Generation Siting and the Environment, known as the Siting Board, assesses applications for specific sites. The board has seven members coming from various state departments and agencies. By law, the board will be required to issue opinions "stating its reasons for the action taken,"[75] and its decisions must evaluate the public interest, but because the board has not yet issued its first decision, it remains to be seen how explicitly it will articulate the economic arguments for and against a siting proposal.

Finally, in the recent state policy document, the Energy Highway Blueprint, the Energy Highway Task Force indicated that it expects positive short-, medium- and long-term economic and environmental benefits from its recommendations, including lower energy costs for consumers. However, the blueprint offers no quantitative analysis of these benefits or expected rate increases or savings to ratepayers. Instead, the document contains "estimated investment potential" because it expects the market to address most of the need. It does not articulate potential costs to the government or ratepayers stemming from actions and regulatory changes to incent private investment.

75 *New York State, New York Public Service Law, Article 10, (160-173) Siting of Major Electric Generating Facilities*. At http://www3.dps.ny.gov/W/PSCWeb.nsf/96f0fec0b45a3c6485257688006a701a/d12e078bf7a746ff-85257a70004ef402/$FILE/Article10LawText%20.pdf.

6 The planning process has to be transparent and accessible to all stakeholders and the public.

Most of New York's energy planning initiatives have exercised a reasonable degree of transparency, though perhaps less accessibility. The names and ideas of all stakeholder participants who provided input into the 2012 Energy Highway Blueprint are contained within the document itself and on the website, where public comments are also published. The blueprint also contains a section explaining the process by which feedback was solicited and next steps. The Energy Highway Task Force did not hold public meetings, though its request for information and subsequent conference were open to all participants and it accepted comments from the public online and published them on its website.

The PSC allows any party to act as an intervener and it solicits public comment on various proceedings via its website. It also makes available on its website all documents pertaining to rate cases and other hearings.

The new Siting Board is also required to do the same with the siting applications that are currently in process and, like the PSC, the Siting Board allows any party to act as an intervener and apply for funding to do so. Furthermore, the Department of Public Service, which houses the Siting Board, has established a Public Information Coordinator to ensure "full and adequate" participation by the public.

The Energy Planning Board accepted comments concerning its 2011 scope and regulations documents via its website and it continues to maintain an online form for input into the forthcoming 2013 plan and promises that all comments will be posted to the website. It also intends to seek public input throughout the process via public hearings, though these have yet to be announced.

7 The planning process needs to be informative.

The PSC provides summaries of all stakeholder input in its decision documents, which include comprehensive explanations of the factors, both economic and social, that relate to its final judgment. The Energy Planning Board also publishes all stakeholder comments on its website, though it has not articulated exactly how it will incorporate this input into its policy-making process.

The Governor's Highway Energy Blueprint acknowledged and published the names and ideas of all stakeholder parties in the Blueprint itself where possible or otherwise online, though it did not clearly articulate how it weighed various suggestions in formulating its recommendations.

8 The planning process has to be iterative and flexible.

By law, the new Energy Planning Board must produce a plan that forecasts for a minimum of ten years, and a new plan will be produced every four years thereafter.

The Governor's Energy Highway Blueprint represented a one-time policy development exercise and the recommendations now rest with the public agencies to execute. The blueprint's recommendations are also expected to be included in the Energy Planning Board's forthcoming 2013 plan, though specifics on how they will be incorporated are not yet available.

Finally, the NYISO's Comprehensive Reliability Plan offers a ten-year system adequacy forecast and is updated every two years.

9 The plan must be developed by experts.

The Energy Planning Board is composed of senior staff from the NYISO, NYSERDA, the Department of State, Empire State Development and numerous other departments.

Likewise the new Siting Board is an amalgam of executives from various areas. The seven members are: the Chair of the Department of Public Service, who serves as the chair of the Siting Board; the Commissioner of the Department of Environmental Conservation; the Commissioner of the Department of Health; the Chair of NYSERDA; the Commissioner of Empire State Development; and two ad hoc public members, both from where the development is proposed. Four of the five permanent members of the Siting Board were also members of the governor's Energy Highway Task Force.

As for economic regulation, the PSC's rate cases are adjudicated by an administrative law judge. The legislature has no legal authority in these decisions.

10 The results of the plan should be measured and publicly reported.

Apart from the ad hoc 2012 Energy Highway Blueprint, the most recent energy plan was produced in 2009 by the Energy Planning Board before it had been established by statute (at that time, it existed under the same name through an executive order). The 2009 State Energy Plan contained many specific measurable outcomes. Examples include having 30% of electricity demand met by renewable generation by 2015 and reducing greenhouse gas emissions by 80% by 2050.[76] It remains to be seen what level of specificity the forthcoming 2013 plan contains, but the laws governing the board state that all agencies and parties contracted to do work for it will be required to produce annual progress reports and these shall be integrated into subsequent energy plans. Furthermore, a progress report is required every two years (in between the energy plans produced every four years).

As for the Energy Highway Blueprint, it also offered quantitative projections. The blueprint indicated that implementing its 13 recommendations would result in "approximately $5-7 billion in public and private investments over the next five to 10 years."[77] The Energy Highway Task Force produced a six-month update on progress with implementing the recommendations; however, future reporting will be up to the agencies that are implementing the recommendations and the report did not outline a formalized reporting requirement for these.

At the state level, comprehensive energy data for New York is published annually by NYSERDA. The most recent report was released in April 2012 and contained comprehensive data on consumption, prices, expenditures and energy sources over 15 years as well as comparisons to US averages.[78]

Nationally, the federal Energy Information Administration publishes both national and state-by-state energy statistics on prices, supply, distribution, consumption and the environment for petroleum, natural gas, coal and electricity.[79]

76 New York State Energy Planning Board, *2009 State Energy Plan – Draft*, August 2009. At http://www.e-renewables.com/documents/General/New%20York%20State%20Energy%20Plan%202009.pdf.

77 New York Energy Highway, *New York Energy Highway Blueprint*, 2013, p. 13. At http://www.nyenergyhighway.com/PDFs/BP2013/EHBPuploadpt2013/.

78 NYSERDA, "Statistics." At http://www.nyserda.ny.gov/BusinessAreas/Energy-Data-and-Prices-Planning-and-Policy/Energy-Prices-Data-and-Reports/Energy-Statistics-and-Weather-Data/Energy-Statistics.aspx.

79 For more information see the US Energy Information Agency's website at http://www.eia.gov/.

APPENDIX E:

Jurisdictional Review: Ontario Electricity

This review is organized around the ten planning principles found in the body of this report. This overview is a summary of notable factors and best practices (or lack thereof) which might be relevant to the discussion. It is not an in-depth analysis.

Overview

The electricity sector in Ontario is a hybrid system. Large hydro, nuclear and fossil assets continue to be owned and operated by the provincially owned Ontario Power Generation. New privately and publicly owned infrastructure (primarily natural gas and renewable generation, including hydropower) has been built under long-term financial contracts with the Ontario Power Authority, and a small amount of independent generation continues to operate under long-term financial contract with a financial agency of the Ontario government. Generators bid into an open wholesale market, and are dispatched and financially settled by the Independent Electricity System Operator (IESO).

Ontario's current hybrid system is the result of over a decade of public policy changes that have affected the sector. In May 2002 the provincial government under Premier Ernie Eves, after years of preparation and a number of delays, opened (liberalized) the electricity wholesale and retail markets with the intention of introducing more private investment. Ontario Hydro, the former provincially owned monopoly, was separated into Ontario Power Generation, holding the generation assets; Hydro One, the transmission network operator, holding 97% of the transmission assets; the Independent Electricity Market Operator (later renamed the Independent Electricity System Operator, IESO), the system and market operator; the Electrical Safety Authority, the inspection authority; and the Ontario Electricity Finance Corporation, the body which holds the long-term contracts with non-utility generators previously entered into by Ontario Hydro and which is also responsible for the "stranded debt" from past investments. In addition, municipal electricity commissions or departments were transformed into local distribution companies that operate within defined franchise areas. Hydro One was made the distribution network operator in areas where there is no other distribution company, such as in many rural and remote communities. The Ontario Energy Board's (OEB) mandate was expanded to include significant oversight of the distribution and transmission sectors.

However, in the year following the opening up of the electricity market, the retail price of electricity spiked, leading to a large number of complaints in the media and from consumers, and as a result Eves started to re-regulate the sector, freezing the retail rates of electricity and distribution and transmission rates.

In 2005, the Dalton McGuinty government established the Ontario Power Authority (OPA) to develop long-term electricity system plans and to be the financial counter-party to all power purchase agreements for generation and conservation and demand management (CDM) resources. The OPA is also the financial counter-party for renewable energy under the Feed-in Tariff program and for combined heat and power under the Standard Offer program.

1 The planning process is based on public policy objectives which have been broadly debated and democratically accepted.

The government set energy policy objectives in its 2010 Long-Term Energy Plan, a policy document which was not envisioned under legislation. In addition, the Minister of Energy has issued three supply mix directives to the OPA that gave prescriptive targets for generation and energy efficiency improvements that had to be met. Based on the Long-Term Energy Plan and the latest supply mix directive (February 2011), the government has the following goals for the next 20 years:

- A phase out of coal-fired power;
- For nuclear power to remain 50% of total generation, and to plan for the possible construction of new nuclear reactors;
- Conservation measures to reduce demand by 7,100 MW, from a 2005 baseline;
- A doubling of renewable power other than large hydropower (primarily through the Feed-in Tariff system) to 19,700 MW;
- A modernization of transmission lines and the introduction of smart grids;
- Consultations with First Nations;
- Keeping costs to consumers at a minimum.[80]

In May 2009, the government passed the Green Energy and Economy Act, which further accelerated the implementation of renewable energy and introduced the Feed-in Tariff program for renewable generation. The OPA is responsible for developing and operating the program based on the legislation and directives from the Minister of Energy.

2 There should be a clear distinction between the roles of the policy maker, the planner, and the reviewer/regulator. Each entity must have a clear and accessible process for public engagement.

80 Ontario Ministry of Energy, *Long-Term Energy Plan*, 2010. At http://www.energy.gov.on.ca/docs/en/MEI_LTEP_en.pdf; Ontario Ministry of Energy, *Supply Mix Directive*, February 17, 2011. At http://www.powerauthority.on.ca/sites/default/files/new_files/IPSP%20directive%2020110217.pdf.

Under the Electricity Restructuring Act of 2004, the Minister of Energy was to establish the long-term objectives of the energy system, and the OPA was to prepare a 20-year Integrated Power System Plan (IPSP), which was to indicate, among other things, the amount of electric power resources (generation and CDM resources) that needed to be developed and the transmission infrastructure needed to deliver generation to markets. In the IPSP the OPA was also to outline the process by which it would procure the resources indicated in the IPSP. The OEB was to evaluate the plan based on how well it meets the government's objectives and on its cost effectiveness. The OEB at the same time was to evaluate the OPA's procurement process for contracting power.

The OPA submitted the first IPSP to the OEB for review and approval in 2008. While the review of this plan was underway, a new supply mix directive halted the hearing in September 2008. The unexpected new directive specified (among other matters) that the OPA should "enhance… the amount and diversity of renewable energy sources," and examine pumped storage and the availability of distributed energy. The directive instructed the OPA to submit a revised IPSP to the OEB within six months. A revised IPSP was not submitted to the OEB.

In the revised supply mix directive of February 2011, the Minister instructed the OPA to develop a new IPSP. In 2011 the OPA started to develop a second plan based on the new directives and the Long-Term Energy Plan, but once again no new IPSP had been submitted to the OEB as of May 2013. Until the approval of an IPSP, ministerial directives to the OPA represent the decisions on contracts and other energy policy issues. Between March 2005 and January 2013, the Minister issued 63 directives to the OPA. The OEB does not review the ministerial directives. As a result, for the past few years the Minister of Energy has acted as policy maker, planner and reviewer with little oversight.

Under proposed new legislation in 2012, however, the roles of the organizations may change substantially, and the OEB's role as reviewer may be curtailed. Bill 75, which was in second reading at the time the legislature was prorogued, would, if passed, make amendments to the Electricity Act, the OEB Act and other acts. One of the primary purposes of Bill 75 was the amalgamation of the Independent Electricity System Operator and the OPA into one agency, the Ontario Electricity System Operator (OESO). However, the proposed planning changes under the bill are what is relevant here.

Unlike the current governance structure, Bill 75 gives the Minister of Energy specific and sole authority for developing and issuing the energy plan, removing that task from the OPA. The bill states that the Minister may consult with the OESO in the development of the energy plan, but the nature of that consultation is unclear. Therefore, unlike the current structure, the plans will not be developed by a third-party expert agency,

implementing the government's objectives, but by the Ministry of Energy.

In current legislation, the OEB must approve the IPSP. Under the changes proposed in Bill 75, the OEB no longer has the authority to approve or amend the plan. Instead the OEB is given two much weaker roles.

First, the Minister must consult with the OEB about the impact of the implementation of the energy plan on electricity bills and on methods of managing the impact. However, the Minister is not required to amend the plan nor is he or she required to take any action based on consultation with the OEB.

Second, and similarly, under the legislation drafted in Bill 75 the Minister must refer the plan to the OEB for a review of the estimated capital costs of the plan, but there is no requirement for the Minister to alter the plan based on the OEB's review.

In addition, the bill does not identify criteria for the OEB's review. Rather it gives the Minister the power to set the criteria for the OEB's review at the time of referral and the power to circumscribe how the OEB conducts the review. The bill also has no obligation to require public consultation, and such consultation would be at the discretion of the Minister.

In summary, the government would be the policy maker and the planner, and while the OEB would continue to review the plans, the manner in which the review would be conducted, or if the opinions of the OEB could change the proposed plan, would be decided by the Minister. Also, the only avenue for public consultation would be at the ministerial level, if the government decided to hold consultations, or if public hearings were held during the OEB's review.[81]

3 The planning process needs to be contextual and comprehensive.

In preparing the first and, as it turned out, only IPSP, the OPA examined current generation mix, 20-year projections of fuel supply and pricing, and 20-year projections of demand. Demand projections were based upon macroeconomic outlooks, the impact of CDM on consumption, and estimates of sectoral demand for electricity. The OPA utilized internal and external technical experts in generation, transmission and sustainability and obtained expert advice from operators of Ontario electricity infrastructure such as Hydro One and Ontario Power Generation. In addition, stakeholder consultation provided feedback from a variety of representatives from industry, technical experts, consumers, environmental groups and First Nations and Métis communities. This information is now significantly outdated and has not been updated.

In the latest supply mix directive, issued in 2011, the Minister instructed the OPA to use the "moderate" projection on future demand in

81 See Appendix A for a more detailed discussion of Bill 75.

a future IPSP (which has not been completed). In addition, the directive dictated the future supply mix in the province.

It is not clear what the planning process is for the ministerial directives. While there is a public consultation on the supply mix directives, it is not known how the consultation affected the development of the directive, and the responses received are not available on the ministry's website. It is also not apparent if different supply options were evaluated and consulted upon. It is not clear if the other ministerial directives have public consultations, or how they are prepared.

The IESO does prepare short-term (18-month) reports examining the ability of the electricity system in meeting demand, and identifying shorter-term system constraints or risks. The IESO also prepares reports on peak capacity for five years and capacity margins. Hydro One, the transmission network operator, prepares ten-year plans regarding infrastructure needs when it submits its rate requests to the OEB, and local distribution companies prepare capital expenditure plans for their submissions to the OEB. As there has not been a completed IPSP, it is not clear how these regional plans would integrate into the provincial plan.

4 The planning process has to be integrative.

In 2011 the OPA started working with some regional stakeholders to develop ad hoc integrated regional power plans in order to meet specific regional issues (such as local grid congestion). For these plans, the OPA partners with the local distribution companies, Hydro One, the IESO and local governments and consults with local First Nations and other affected parties. The plans are to have a 20-year outlook, and are expected to be updated every three years.[82]

The OEB is leading consultations with agencies, consumer groups, distributors and transmitters on regional infrastructure plans, and is requiring distribution companies to submit regional plans, led by transmission companies, when making submissions to the board. Based on the report of a working group on regional plans, the OEB has proposed a more structured process, with mandatory five-year plans and stakeholder consultations and formal information-sharing protocols between distributors and transmitters. When preparing applications to the OEB, distributors will have to show that their proposal fits within the regional plan. The regional plans for the OEB will be done in cooperation with the OPA, although both agencies will continue to work on separate regional plans.[83]

In 2005 the government issued a Provincial Policy Statement on planning, based on the 2004 Planning Act, that is to provide policy direction to local authorities on matters of provincial interest, but it does not deal with

82 Ontario Power Authority (OPA), *The OPA's Regional Planning Process*, February 2012. At http://www.powerauthority.on.ca/sites/default/files/news/Description-ofOPAsRegionalPlanningProcess.pdf.
83 For more information see Ontario Energy Board (OEB), "Regional Planning for Electricity Infrastructure (EB-2011-0043) (May 2013)." At http://www.ontarioenergyboard.ca/OEB/Industry/Regulatory%20Proceedings/Policy%20Initiatives%20and%20Consultations/Regional%20Planning.

energy in any significant way. The statement only says that local authorities should provide for the development of energy efficiency and renewable energy projects, but it does not require them or offer detailed guidelines.[84]

In May 2013, the Ontario government announced that small- and medium-sized communities will receive funding for the development of municipal energy plans that will identify possible conservation measures and the best energy infrastructure options.[85]

5 The planning process has to include a clear economic analysis.

Under legislation, the OEB is to review the IPSP to ensure that it meets the government's directives and that it is economically prudent and cost effective. Had the OEB completed its hearing, the economic analysis contained in the evidence submitted by the OPA would have been examined. However, the evidence did not contain detailed economic analyses of alternative scenarios.

The OEB did conduct an economic analysis of the IPSP submitted in 2008, examining the total investments required, and the resulting impact on electricity rates, but the OPA did not examine in detail the costs and benefits of alternative scenarios.

The OEB does not evaluate the contracts signed by the OPA or the directives by the minister. It is not clear if alternatives or scenarios are considered during the preparation of the ministerial directives or if the impacts of the directives are evaluated.

6 The planning process has to be transparent and accessible to all stakeholders and the public.

The government says that consultations were held during the formation of the Long-Term Energy Plan. There was also a consultation period held on the supply mix directives. However, neither written submissions nor summaries of the responses received during the consultations are available on the Ministry of Energy's website, and it is not clear how or if the responses affected government policy. Similarly it is not clear if there is a consultation process on the other ministerial directives to the OPA.

During the development of the IPSP, the OPA published all consultation responses and technical reports on its website. The OPA has held information sessions with stakeholders and with First Nations and Métis communities.[86] The OPA provides funding to eligible stakeholders (such as First Nations, Métis, some consumer representatives and community leaders of organizations that are affected or involved with areas that are affected by OPA decisions) so they can attend and participate in the consultations.[87]

84 Ontario Ministry of Municipal Affairs and Housing, *Provincial Policy Statement*, 2005. At http://www.mah.gov.on.ca/Page215.aspx.
85 Ontario Ministry of Energy, "Ontario Working With Communities to Secure Clean Energy Future," May 30, 2013. At http://news.ontario.ca/mei/en/2013/05/ontario-working-with-communities-to-secure-clean-energy-future.html.

86 OPA, "Integrated Power System Plan 2011." At http://www.powerauthority.on.ca/introduction-ipsp.
87 OPA, "IPSP Participant Funding Information." At http://www.powerauthority.on.ca/ipsp-participant-funding-information.

There are three different paths by which energy projects obtain permission for construction, depending on whether they are renewable, hydro, or non-renewable power projects.

Regarding renewable energy projects, the Green Energy and Green Economy Act, 2009, amended a number of acts, including the Planning Act. The amendments to the Planning Act provided that official plans and zoning by-laws no longer applied to renewable energy undertakings. This in effect made it impossible for municipalities to block renewable energy development. The developer instead submits an application for a Renewable Energy Approval (REA) to the Ministry of the Environment. The REA is an amalgamation of the standard planning approvals, and includes an environmental assessment and other planning assessments. The developer is required to hold discussions with the local municipality and with people affected by the project, and to ensure that all their concerns are met before submitting the REA.[88] REA appeals are made to the Environmental Review Tribunal, an external independent tribunal, and can only be made on the grounds that the project will cause serious harm to human health or that it will cause serious and irreversible harm to plant life, animal life or the natural environment.[89]

Hydropower projects are subject to the Waterpower Class Environmental Assessment process. This is also submitted to the Ministry of the Environment for approval.[90]

All non-renewable energy projects fall under the Environmental Assessment regime. The extent of the application depends on the type and size of projects, with larger projects requiring more extensive documentation. Public consultations are required and special consultations are required if the project will affect First Nations communities. The developer is also obligated to consult with other government agencies where applicable (such as for heritage preservation). The developer must prepare a report summarizing the consultations and the environmental assessment, make this report publically available, and then submit it to the Environmental Assessment Coordinator at the local Ministry of Environment office. After the Ministry of the Environment makes a decision, the public or any stakeholder has 30 days to appeal to the Director of the Environmental Assessment and Approvals Board. The next level of appeal would be to the Minister of the Environment. All government decisions can also be contested in court.[91]

The government recently announced changes to the planning system for large renewable

88 Ontario Ministry of Energy, *Renewable Energy Development: A Guide for Municipalities*. At http://www.energy.gov.on.ca/en/renewable-energy-facilitation-office/resources-and-contacts-2/renewable-energy-development-a-guide-for-municipalities/.
89 Ontario Environmental Review Tribunal, *A Guide to Appeals by Members of the Public Regarding Renewable Energy Approvals under section 142.1 of the Environmental Protection Act*. At http://www.ert.gov.on.ca/stellent/groups/public/@abcs/@www/@ert/documents/webasset/ec082683.pdf.

90 Ontario Ministry of Energy, *Renewable Energy Development: A Guide for Municipalities*. At http://www.energy.gov.on.ca/en/renewable-energy-facilitation-office/resources-and-contacts-2/renewable-energy-development-a-guide-for-municipalities/.
91 Ontario Ministry of the Environment, *Guide to Environmental Assessment Requirements for Electricity Projects*, Revised January 2011. At http://www.ene.gov.on.ca/stdprodconsume/groups/lr/@ene/@resources/documents/resource/std01_079064.pdf.

energy projects (500 kW or greater). Under the new rules, developers and planners will have to work with affected municipalities to identify appropriate locations and site requirements for any project. While developers will have to show local support for any project, municipalities will not have veto powers over development. As of May 2013, no details are available on how the process will work.[92]

The OEB evaluates new transmission and distribution and conducts an economic analysis and holds public consultation. After OEB approval, the developer then has to secure approval from other ministries, such as for an environmental assessment.

7 The planning process needs to be informative.

The OPA published all background information and technical information about the IPSP on its website, including responses from the consultation. There does not appear to be a document where the OPA addresses the issues raised in the consultation.

The Ministry of Energy publishes information on its website. While there has been public consultation on the supply mix directives, it is not clear how the responses received affected the development of the supply mix directives, and the responses received are not available on the ministry's website. It is also not apparent if different supply options were evaluated and consulted upon.

In terms of new generation projects, there is a list of all projects that have applied for an environmental assessment on the Ministry of Environment's website, and their status, but the reasons for decisions on project applications are not available on the website.

8 The planning process has to be iterative and flexible.

It was expected that the OPA's IPSP would be updated every three years or as requested by the government, but this has not been done and no plan has been approved by the regulator. The OEB would have the authority to approve any IPSP within specific guidelines (such as on cost effectiveness), or it could send the plan back to the OPA with recommendations on how to improve it.

9 The plan must be developed by experts.

The OPA is an expert agency staffed with acknowledged experts in related areas. In Bill 75 there is not a requirement for expert input, although the Minister may consult with the OPA. It is not clear what input experts provide on the ministerial directives.

10 The results of the plan should be measured and publicly reported.

The government has set clear targets that it wants the OPA to achieve. However, there

92 Ontario Ministry of Energy, "Ontario Working With Communities to Secure Clean Energy Future," May 30, 2013. At http://news.ontario.ca/mei/en/2013/05/ontario-working-with-communities-to-secure-clean-energy-future.html.

is a lack of high-quality information about the electricity sector in Ontario as there is no central body responsible for collecting and analyzing energy statistics. Data on other forms of energy and energy-use sectors does not exist in Ontario, thereby making integrated energy planning difficult at all levels.

Currently, there is no legislated requirement for the OPA to report on progress relative to its targets, though some information is available in various reports, such as the OPA's Annual Report, and the OPA's Annual Revenue Requirement filing to the Ontario Energy Board. Related information can also be found in the Environmental Commissioner of Ontario's annual report to the legislature on the province's progress in reducing greenhouse gas emissions and improving energy efficiency.[93]

93 Reports available at the Environmental Commissioner of Ontario website at http://www.eco.on.ca/index.php.

APPENDIX F:

Jurisdictional Review: Metrolinx

This review is organized around the ten planning principles found in the body of this report. This overview is a summary of notable factors and best practices (or lack thereof) which might be relevant to the discussion. It is not an in-depth analysis.

Overview

On April 24, 2006, the province of Ontario created the Greater Toronto Transportation Authority to address the need for a long-term sustainable regional transportation and transit plan for the Greater Toronto and Hamilton Area (GTHA).[94] In 2007 it was renamed Metrolinx.

Metrolinx is a Crown agency, reporting to the Minister of Transportation of Ontario. Metrolinx's mandate is to lead the coordination, planning, financing and developing of an integrated multi-modal transportation network for the GTHA. The corporation operates within the legislative framework of the Metrolinx Act, 2006.

In 2008, the corporation adopted a regional transportation plan (RTP) named The Big Move: Transforming Transportation in the Greater Toronto and Hamilton Area (GTHA), which sets out a 25-year vision for a regional transportation system.

In 2009, Metrolinx merged with GO Transit, the regional public transit service, as well as the Union Pearson Express in 2010 and PRESTO in 2011.

1 The planning process is based on public policy objectives which have been broadly debated and democratically accepted.

In 2005, the government approved the Places to Grow Act, 2005 to enable the coordination of planning in high-growth designated areas[95]. As part of the act, the government developed an integrated Growth Plan for the Greater Golden Horseshoe in June 2006 to address anticipated growth over a 25 year horizon. The goals of the growth plan are to foster vibrant communities, reduce urban sprawl, ensure affordable housing and reduce traffic gridlock. This broad-based plan contains a planning vision for the region, and under the Places to Grow Act, municipalities and other authorities must ensure that their policies conform to the plan.[96]

94 Government of Ontario, *Metrolinx Act, 2006*. At http://www.e-laws.gov.on.ca/html/statutes/english/elaws_statutes_06g16_e.htm. Originally created through the Greater Toronto Transportation Authority Act.

95 See Places to Grow website at https://www.placestogrow.ca/index.php

96 Ontario Ministry of Infrastructure, *Growth Plan for the Greater Golden Horseshoe, 2006*. At https://www.placestogrow.ca/index.php?option=com_content&task=view&id=9&Itemid=14.

Transportation infrastructure is one of the key areas addressed by the provincial growth plan. The Metrolinx Act mandates Metrolinx with three overarching policy objectives: to lead the coordination of a regional multi-modal transportation network in the GTHA that conforms to the plans prepared under the Places to Grow Act, procure local transit equipment and facilities on behalf of municipalities, and operate the regional transit system. More specifically, this legislation stipulates ten requirements that must be incorporated into the RTP. These requirements include: complying with provincial plans and policy, such as those found in the Provincial Policy Statement[97]; promoting integration of local transit systems with each other and with the regional system; reducing greenhouse gas emissions; promoting public transit; and easing congestion. Metrolinx's RTP seeks to meet these ten requirements.

2 There should be a clear distinction between the roles of the policy maker, the planner, and the reviewer/regulator. Each entity must have a clear and accessible process for public engagement.

The Ontario government is the policy maker through legislation and through the preparation of a number of policies that are relevant to Metrolinx and regional transportation planning, such as the following:

- Provincial Policy Statement (PPS);
- Growth Plan for the Greater Golden Horseshoe;
- Regional Transportation Plan (RTP) for the Greater Toronto and Hamilton Area;
- Greenbelt Plan;
- Niagara Escarpment Plan;
- Oak Ridges Moraine Conservation Plan; and
- Parkway Belt West Plan.[98]

The Minister of Transportation may issue policy statements that have been approved by the cabinet on matters relating to transportation planning in the regional transportation area.

Municipalities are required to prepare transportation plans and demonstrate that their municipal official plans are consistent with the PPS, which contains overall policy direction on matters of provincial interest related to land use planning and development as well as transportation and infrastructure. Municipal plans must also be consistent with other relevant provincial plans such as regional growth plans. In case of conflict with local by-laws or zoning, the PPS prevails. The Ministry of Municipal Affairs and the Ministry of Transportation both review and ensure that the municipalities' transit plans are consistent with provincial and regional plans.

97 Ontario Ministry of Municipal Affairs and Housing, *Provincial Policy Statement*, 2005. At http://www.mah.gov.on.ca/Page215.aspx.

98 Ontario Ministry of Infrastructure, *Growth Plan for the Greater Golden Horseshoe*, 2006. At https://www.placestogrow.ca/index.php?option=com_content&task=view&id=9&Itemid=14.

Metrolinx is require to prepare a regional transportation plan that meets the provincial government's objectives and to coordinate with the municipalities in the GTHA to implement the plan. The Ministry of Transportation approves Metrolinx's plans. In addition to reviewing the plans for Metrolinx, the Minister of Transportation may issue directives to Metrolinx to amend any plans it has made.

3 The planning process needs to be contextual and comprehensive.

The foundation of The Big Move was an assessment of existing transit and transportation infrastructure and an analysis of expected future demand and changing transit and transportation uses and technologies. The plan considered all modes of transportation and explored options and alternatives in its consultation stages. In assessing different infrastructure project options, Metrolinx uses a "triple bottom line" evaluative framework that examines a prospective project's impact on quality of life, sustainability and economic prosperity.

4 The planning process has to be integrative.

The Big Move is approved by the Minister of Transportation to ensure it also meets provincial objectives and legislation.

The Big Move is integrative across transportation and transit types to the extent that it considers all modes of transportation as well as intelligent transportation systems and technologies.

The Big Move also strives to integrate local transportation networks with each other and also with regional- and provincial-level transportation plans. The province's Places to Grow Act specifies that communities must create transportation plans as part of their growth plans. All municipal official plans in Ontario are required to be consistent with the policies set out in the PPS to ensure that policies are applied as an essential part of the land-use planning decision-making process. Municipalities in the GTHA are required to prepare transportation master plans (TMPs) as part of their official plan development process that conform to the provincial transportation policy for the GTHA. Both the Ministry of Transportation and the Ministry of Municipal Affairs and Housing review municipal plans to ensure conformity with the PPS.

5 The planning process has to include a clear economic analysis.

Metrolinx uses a project prioritization framework for evaluating unfunded priority projects from The Big Move. The framework uses technical evidence for identifying projects with the highest benefits based on the Metrolinx triple bottom line (high quality of life, sustainability and economic prosperity). The framework also ensures that the project meets the overall goals and objectives of The Big Move. For each prospective project,

Metrolinx utilizes a benefits case analysis approach to evaluate alternative options and assess the return on investment of each.[99]

In addition to evaluating prospective projects, Metrolinx must also create an investment strategy to secure the funding required for the massive capital expansion outlined in The Big Move.[100] In May 2013, Metrolinx submitted its investment strategy, entitled *Investing in Our Region, Investing in Our Future*, to the Minister of Transportation. The strategy outlined recommended options for raising revenue required for the "next wave" of infrastructure development, and each recommendation includes an analysis of expected revenue, impacts on individuals, impacts on businesses, overall economic impact, and an assessment of environmental and transportation impacts.[101]

6 The planning process has to be transparent and accessible to all stakeholders and the public.

Legislation requires that the Minister of Municipal Affairs and Housing consult with all interested parties in the preparation of the PPS, such as government agencies, municipalities, the public, and First Nations. Likewise, Metrolinx is required to consult with relevant agencies, municipalities and the public. Local municipalities must hold at least one public meeting concerning their proposed transportation plans (a copy of which must be publicly available), in addition to consultations with relevant stakeholders. In the development of The Big Move, Metrolinx consulted with the public, local authorities and stakeholders. However, it is not clear in the RTP the issues and concerns were that had emerged from the public and stakeholder consultations.

Concerning accessibility of information, Metrolinx has established community representative offices across the region so that local residents can have easy access to information about proposed projects.[102]

Metrolinx has also held consultations on its investment strategy. A list of the consultations held and the responses received is available on its website, and a summary of the responses is also available on the website. Another element of the public consultation is the Residents' Reference Panel on Regional Transportation Investment, a 36-person panel that was randomly selected from representative households in the region.[103] A report by the panel is available on the Metrolinx website.[104]

99 See Metrolinx, "Benefits Case Analysis." At http://www.metrolinx.com/en/regionalplanning/projectevaluation/benefitscases/benefits_case_analyses.aspx.
100 See Metrolinx, "Investment Strategy." At http://www.metrolinx.com/en/regionalplanning/funding/investment_strategy.aspx.
101 Metrolinx, *Investing in Our Region, Investing in Our Future*, May 2013, pp. 61-78. At http://www.bigmove.ca/wp-content/uploads/2013/05/IS-Report-final.pdf.
102 Metrolinx, "Community Relations." At http://www.metrolinx.com/en/aboutus/inthecommunity/community_relations.aspx#viva.
103 Metrolinx, "Residents' Reference Panel on Regional Transportation Investment." At http://www.bigmove.ca/residentspanel.
104 See Residents' Reference Panel Final Report. At http://www.metrolinx.com/en/regionalplanning/funding/IS_Appendix_E_EN.pdf.

7 The planning process needs to be informative.

Metrolinx posts benefits case analyses of every proposed project on its website. The benefits case analysis includes an evaluation of each alternative option, which in turn helps to inform whether the project should move to the next stage of planning, design and engineering. For the planning of its investment strategy, Metrolinx has produced a summary of the public consultations, and there is also a report from the Residents' Reference Panel.

Metrolinx has also prepared an interactive website that allows users to simulate different scenarios for infrastructure development and corresponding funding requirements.[105]

8 The planning process has to be iterative and flexible.

By legislation, Metrolinx must, at least every ten years, complete a review of the RTP and make any necessary changes to ensure that it complies with provincial plans and policies.

At the October 29, 2012 meeting of the Metrolinx Board, staff were directed to update The Big Move, as it was necessary to update certain elements of the plan. The Metrolinx Board approved a list of recommended changes that revised some of the projects, primarily as a result of consultation with the municipalities.[106]

The next full legislated review of the plan will be completed in 2016, and stakeholder consultations are expected to begin in 2014.

9 The plan must be developed by experts.

Metrolinx relies on multi-disciplinary expertise from staff, external contracts and extensive consultation.

10 The results of the plan should be measured and publicly reported.

Metrolinx is currently working on The Big Move's first progress report, which will summarize the progress made since 2008. Metrolinx anticipates that the progress report will be complete in 2013. As mentioned above, under legislation, Metrolinx will undertake a full comprehensive review by 2016, in consultation with relevant stakeholders and the broader public, and subsequently update the RTP.

This review is organized around the ten planning principles found in the body of this report. This overview is a summary of notable factors and best practices (or lack thereof) which might be relevant to the discussion. It is not an in-depth analysis.

105 Available at Metrolinx at http://www.bigmove.ca/investing-in-our-future/learn-more/merlin.
106 Metrolinx, *Recommended Changes*, February 14, 2013. At http://www.metrolinx.com/en/docs/pdf/board_agenda/20130214/20130214_BoardMtg_The_Big_Move_Update_EN.pdf.

APPENDIX G:

Jurisdictional Review: Sweden

Overview

Sweden's electricity sector was de-regulated and opened to outside investment ("liberalized") in the 1990s and is heavily integrated with the other Nordic countries (Norway, Finland and Denmark) in the Nord Pool system, a single electricity market area with one power exchange and a single balancing area. In 2010, 85% of electricity consumption was traded on the power exchange.[107] The retail market is open to all entrants, but is still regulated nationally. The transmission system operator is Svenska Kraftnät, a state-owned company. In addition there are five privately owned regional distribution companies (their regions correspond to the monopoly regions under the previous regulated system), and there are 171 local distribution companies, some privately owned and some owned by the municipalities or regional (county) governments. Generation is privately owned, but the largest player in the sector is Vattenfall, a public limited liability company that has all its shares owned by the Swedish state. In 2011, 85% of generation came from hydro and nuclear power, with wind power generation rapidly increasing in recent years. Combined heat and power plants for district heating are common at the municipal level.[108]

1 The planning process should be based on public policy objectives which have been broadly debated and democratically accepted.

European Union (EU) policies and directives set high-level public policy in the energy sector. The two most important EU policies for this discussion are the legal requirement that Sweden sources 49% of its final energy consumption from renewable energy sources by 2020 (the 49% is Sweden's share of the EU-wide target of 20% of final energy consumption from renewables) and the required participation in the EU-wide carbon trading system known as the Emissions Trading System. The Swedish government also sets high-level policies in three main areas: ecological sustainability, competitiveness and security of supply. To realize these goals and to reduce fossil fuel dependence the government has set the following targets for 2020:

- 50% of final energy consumption from renewable energy (this is higher than Sweden's EU target of 49% for 2020);

107 European Agency for the Cooperation of Energy Regulators (ACER), *ACER Market Monitoring Report 2012*. At http://www.acer.europa.eu/Official_documents/Acts_of_the_Agency/Publication/ACER%20Market%20Monitoring%20Report%202012.pdf.

108 Swedish Energy Markets Inspectorate, *The Swedish Electricity and Natural Gas Markets 2011*, 2012. At http://www.ei.se/Documents/Publikationer/rapporter_och_pm/Rapporter%202012/Swedish_Electricity_and_Gas_Markets_2011_EIR_2012_11.pdf.

- 10% use of renewable energy in the transport sector, mostly through biofuels;
- 20% more efficient energy use;
- 40% reduction in greenhouse gas emissions.[109]

Following a referendum in 1980, Sweden set a goal of a phasing out its nuclear power plants. Since then, however, only two of the original 12 reactors have been closed.

The Swedish government primarily uses fiscal measures to achieve its targets.[110] This includes a carbon tax, a tax on nuclear power production and a high electricity tax on consumers, and there are tax incentives for the use of low-carbon sources such as biomass and biofuels. To promote renewable power, Sweden has a quota and a green certificate scheme in which the government sets a level of renewable generation that must be delivered (in 2013 it is 13.5% and excludes most large hydropower), and suppliers must prove their compliance by presenting sufficient certificates to the Swedish Energy Agency,

the government agency in charge of enforcing government policies in energy.

The Swedish government also intervened in 2003 as the shrinking capacity margin between supply and demand in the power system was seen as a potential risk. The government mandated Svenska Kraftnät to negotiate contracts with generators to increase capacity and/or with large consumers to reduce demand. The government sees these contracts as a disruption to the functioning of the electricity market and hence it is an interim solution. The mandate will expire in 2020 when the "normal" market-mechanisms are expected to work well enough.[111]

2 There should be a clear distinction between the roles of the policy maker, the planner, and the reviewer/regulator. Each entity must have a clear and accessible process for public engagement.

There are many different organizations involved in the Swedish electricity sector. The Ministry of Energy sets the high-level policies, and the government must report annually to the EU on its progress in meeting the EU targets. The Swedish Energy Agency (*Statens energimyndighetis*) is the government agency that is tasked with fulfilling the government's policies, works with industry, collects statistical information, invests in research and development, and enforces the quota system for renewable generation. The Swedish Energy Agency prepares a summary of its activities every year. The Swedish Energy Markets Inspectorate (*Energimarknadsinspektionen*) is the economic regulator and is responsible for regulating network (i.e. transmission and distribution) operators and approving network

109 *Government Offices of Sweden, A Sustainable Energy and Climate Policy for the Environment, Competitiveness and Long-Term Stability*, 2009. At http://www.government.se/content/1/c6/12/00/88/d353dca5.pdf.
110 Interview with Peter Fritz, Sweco (Swedish consultancy), April 10, 2013.

111 Swedish Energy Markets Inspectorate, *The Swedish Electricity and Natural Gas Markets 2011*, 2012. At http://www.ei.se/Documents/Publikationer/rapporter_och_pm/Rapporter%202012/Swedish_Electricity_and_Gas_Markets_2011_EIR_2012_11.pdf.

tariff rates. The Swedish Consumer Agency (*Konsumentverket*) regulates suppliers to ensure that competition is maintained.[112]

3 The planning process needs to be contextual and comprehensive.

The Swedish Energy Agency annually produces long-term energy projections (up to 20 years) examining supply, demand and changes in fuel consumption. Information from other ministries and organizations are compiled to produce its projections.[113]

The Swedish electricity system is, on the whole, not comprehensively planned. One of the reasons for this is that in Nordic countries there has always been a tradition of open dialogue among stakeholders to solve problems. This leads to collaboration, committees, meetings and close relations with other countries. While not formalized, this collaborative tradition allows for comprehensive planning.[114]

4 The planning process has to be integrative.

In 2013 Svenska Kraftnät for the first time produced a ten-year system plan and statement. The reason it had never done so before was that the power system in Sweden was so stable with its reliance on nuclear and hydropower that it was not necessary. The rapid introduction of wind power on the system has necessitated a new open and transparent system plan.[115]

The regional distribution networks are known to be quick to react to changes in their network area, and to communicate that to Svenska Kraftnät to ensure that the network can accommodate new capacity. As Svenska Kraftnät is a government body, it is required to respond to the government's targets – especially regarding renewable energy deployment – and plan accordingly. Also, as part of the Nord Pool single market area, developments in other countries affect Sweden as well.

Energy planning at the local scale is decentralized and local and regional governments have a large degree of autonomy. Local governments, and some regional (county) governments, prepare their own spatial plans, which include examining energy use and zoning areas for development, particularly for the use of district heating and combined heat and power systems and renewable energy. While the national government sets national goals, is responsible to the EU for meeting those goals, and since 2011 has required municipalities to consider climate change when formulating their development plans, in the end the final responsibility for local planning rests with the municipalities. There are even cases of some

112 Swedish Energy Markets Inspectorate, *Descriptions of the Actors on the Electricity and Natural Gas Markets*, 2012. At http://ei.se/Documents/Publikationer/rapporter_och_pm/Rapporter%202012/Descriptions_of_the_actors_on_the_electricity_EIPM_2012_07.pdf.
113 Swedish Energy Agency, *The Swedish Energy Agency's Methodology for Long-Term Energy Projection*, August 2005. At http://www.energimyndigheten.se/en/.
114 Interview with Len Borjeson, Sweco, April 10, 2013.
115 Interview with Peter Fritz, Sweco, April 10, 2013; the TSO's plan to 2025 is available in Swedish at http://www.svk.se/Press/Nyheter/Nyheter-pressmeddelanden/Nyheter/Perspektivplan-2025-fastslagen/.

municipalities acting in direct contravention to national government objectives.[116]

Under the liberalized market system, developers decide on appropriate locations for any new power plant, and there is a national environmental assessment process. The process of obtaining planning permission depends on the type of project.[117] Renewable energy projects (except hydropower and offshore wind) are approved at either the municipal or regional level, depending on the size of the project, with smaller projects requiring approval only at the municipal level. There is a special consideration for wind power and municipalities can veto development of any wind power project, and there is no course to appeal their decision. Hydropower and offshore wind power projects are determined by the county Land and Environment Court, with an appeal possible to the national level of the court. Transmission and distribution projects receive planning consent from the Swedish Electricity Markets Inspectorate, and their decision can be appealed to the government. The government has prohibited all hydropower development on four rivers that have not been developed yet.[118]

116 Christian Dymén and Richard Langlais, "Adapting to Climate Change in Swedish Planning Practice," *Journal of Planning Education and Research*, Vol. 33, No. 1, 2012, pp. 108-119.
117 Given the nature of the Swedish system, which is half nuclear and half hydropower, almost all new applications are for renewable energy plants. There is only one gas-fired power plant in the country and none under construction.
118 Interview with Alexandra Tidlund, Planning Division, Sweco, May 30, 2013; Government Offices of Sweden, *A Sustainable Energy and Climate Policy for the Environment, Competitiveness and Long-Term Stability*, 2009. At http://www.government.se/content/1/c6/12/00/88/d353dca5.pdf.

5 The planning process has to include a clear economic analysis.

The Swedish Energy Agency evaluates the costs to consumers of energy policies and incentive systems, but it does not produce scenarios of different policy options. The Swedish Energy Markets Inspectorate reviews the budgets of all network operators, including examining capital expenditures, when evaluating future grid tariffs.[119]

6 The planning process has to be transparent and accessible to all stakeholders and the public.

The planning system in Sweden is very informal, always changing, and consultation with stakeholders is important.

At the national level, there is a long history in Sweden of committees of inquiry, which are formed by parliament and comprise politicians, bureaucratic staff, technical experts, stakeholders and NGOs, that deliberate over elements of government policy so as to arrive at a consensus position.

These committees also publish reports on what was agreed, and these reports are made public.[120]

All local governments must prepare spatial land use plans that include identifying suitable sites for renewable energy

119 See Swedish Energy Markets Inspectorate reports at http://ei.se/sv/Publikationer/Arsrapporter/.
120 Katrin Uba, "Who Formulates Renewable-Energy Policy? A Swedish Example," *Energy Policy*, Vol. 38, 2010, pp. 6674-6683.

development. Local governments hold public consultations about their overall spatial plans, but there are differences in how open and comprehensive the spatial plans are between different local governments.[121]

During planning assessment, either at the municipal or the regional level, public consultations with individuals and organizations that will be affected by any plan or development are obligatory. The developer is required to show how local concerns are to be considered. The amount of consultation and how comprehensively the plan is scrutinized are determined by each local government.[122]

7 The planning process needs to be informative.

While committee of inquiry and government reports are made public, it is not clear what information the central government and local governments provide on the reasons for their decisions, and practices vary among regional and local governments.

8 The planning process has to be iterative and flexible.

Swedish energy policy tends to be very informal, and hence can be flexible, especially with the committees for inquiry. However, there does not seem to be any set formal mechanisms for review.

9 The plan must be developed by experts.

Ten-year system plans are developed by Svenska Kraftnät, and the Swedish Energy Agency has experts on the staff. There is also extensive cooperation with other agencies in the Nordic region and with technical universities.

10 The results of the plan should be measured and publicly reported.

The government must update the EU annually on its progress in attaining the EU's targets. Under EU agreements, there is a data sharing protocol with Eurostat, the European statistics agency.

The Swedish Energy Agency produces an annual publication on energy in Sweden, providing important statistical information (a summary is available in English).[123] The agency also provides other statistical information, such as on renewable energy quota compliance.

This review is organized around the ten planning principles found in the body of this report. This overview is a summary of notable factors and best practices (or lack thereof) which might be relevant to the discussion. It is not an in-depth analysis.

121 Jamil Khan, "Wind Power Planning in Three Swedish Municipalities," *Journal of Environmental Planning and Management*, Vol. 46, No. 4, July 2003, pp. 563-581.
122 Ibid.

123 Swedish Energy Agency, *Energy in Sweden*, 2012. At http://www.energimyndigheten.se/en/.

APPENDIX H:

Jurisdictional Review: United Kingdom

Overview

This discussion concerns only Great Britain (England, Scotland and Wales) as Northern Ireland, while part of the UK, has a different planning regime and market structure. Great Britain's power market was fully liberalized between 1990 and 1998. Under the current market structure, most generation is sold through bilateral contracts between private generators and private suppliers. In 2011, only 15% of demand was traded on power exchanges. The system operator for all of Great Britain is the National Grid Co., a fully private, listed company. The National Grid owns the transmission assets in England and Wales, while Scottish Power owns the transmission assets in Scotland. The National Grid only purchases power for balancing requirements and ancillary services.[124]

1 The planning process is based on public policy objectives which have been broadly debated and democratically accepted.

European Union (EU) policies and directives set high-level public policy in the energy sector. The two most important EU policies for this discussion are the legal requirement that the UK source 15% of its final energy consumption from renewable energy sources by 2020 (the 15% is the UK's share of the EU-wide target of 20% of final energy consumption from renewables) and the required participation in the EU-wide carbon trading system known as the Emissions Trading System. The UK government does have some flexibility in how they apply the EU policies. For example the government has introduced a carbon floor price to ensure that the market signals are there despite the low carbon price in the EU, and the government has set overall carbon reduction targets higher than those required by the EU targets. The devolved administrations of Scotland, Wales and Northern Ireland have also set their own renewable energy targets.[125]

The government currently promotes renewable energy technology deployment through a Feed-in Tariff system and a quota regime. While the overall system was established in legislation, the government sets the prices for the Feed-in Tariff and the rules for the quota system every year through

124 European Agency for the Cooperation of Energy Regulators, *Annual Report on the Results of Monitoring the Internal Electricity and Natural Gas Markets in 2011*, 2012. At http://www.acer.europa.eu/Official_documents/Acts_of_the_Agency/Publication/ACER%20Market%20Monitoring%20Report%202012.pdf.

125 UK Government, "Reducing the UK's Greenhouse Gas Emissions by 80% by 2050." At https://www.gov.uk/government/policies/reducing-the-uk-s-greenhouse-gas-emissions-by-80-by-2050/supporting-pages/carbon-budgets.

a statutory order that the minister is required to lay before Parliament. Parliament does not have to vote on the order, although they can pass a resolution to annul the order within 40 days if they disagree with elements of the order, but they cannot modify it. In some cases, Parliament is required to approve the first instance of an order that applies to a new incentive system, but not for subsequent orders.[126]

The government recently introduced an Electricity Market Reform legislative package that has the following goals: reduce carbon emissions, increase the use of low-carbon technologies (including nuclear), provide energy security and reduce the cost of energy for consumers. As part of this reform package, the government will publish a Strategy and Policy Statement on energy (including electricity, heat and transportation), in partnership with the Office of Gas and Electricity Markets (Ofgem), the energy regulator, which will clearly set the government's priorities in the energy sector and indicate responsibilities of the different industry players. The government will be obligated to submit a new statement to Parliament every five years, although it can be done earlier if the government decides.[127]

2 There should be a clear distinction between the roles of the policy maker, the planner, and the reviewer/regulator. Each entity must have a clear and accessible process for public engagement.

The government is the overall policy maker incorporating EU targets. The Committee on Climate Change, a government-appointed advisory committee, presents an annual report to Parliament on the UK's progress in meeting its carbon reduction commitments.[128] Ofgem ensures that electricity generators adhere to the government's policies and targets.

Infrastructure is privately funded and neither the government nor the regulator have any control over investment decisions and the locations, except for the potential location of new nuclear power plants, which is decided upon by the government.

3 The planning process needs to be contextual and comprehensive.

National Grid, the transmission system operator for Great Britain, publishes annual Ten Year Statements (up until 2012 they published seven-year forecasts). The Ten Year Statements project future demand and capacity on the grid, highlighting areas that may need work or reinforcement. The Ten Year Statements build on the UK Future Energy Scenarios, annual reports produced by the National Grid in collaboration with industry.

126 See UK Parliament, "Instruments Subject to Negative Resolution Process." At http://www.publications.parliament.uk/pa/cm/cmsilist/section-c.htm; http://www.parliament.uk/business/bills-and-legislation/secondary-legislation/statutory-instruments/; Email exchange with William Lacy, Department of Energy and Climate Change, May 16, 2013.
127 UK Government, *Energy Bill 2013*. At http://services.parliament.uk/bills/2012-13/energy.html.

128 See UK Committee on Climate Change website at http://www.theccc.org.uk/. The Committee on Climate Change is composed of experts in the field, mostly academics, which are appointed by the government for a set term.

However, the Ten Year Statement is not a plan, but more of a projection of the future based on current trends and policies, and the statement is not reviewed by the government or the regulator.[129]

Every year the government presents an Annual Energy Statement, a government-produced report that summarizes other reports produced by or for the government or other agencies, before Parliament. The report also includes a section on the effect of policies on energy bills.

4 The planning process has to be integrative.

With the exception of nuclear power facilities, the siting of new power plants is proposed by private developers. Under the Planning Act 2008 the central government's Department of Energy and Climate Change (DECC) is responsible for approving "nationally significant" energy projects in England and Wales. This is defined as projects greater than 50 MW in overall capacity for a generating station (projects 50 MW or larger are generally connected to the transmission network), and over 132 kV for an overhead line.

In England and Wales, the overall planning frameworks are provided under National Policy Statements that are defined for every sector (such as energy, transport, water and wastewater) and debated and passed in Parliament. The National Policy Statement for energy details the government's overall goals in energy development, which are to be considered when new projects are up for planning approval. The National Policy Statement only offers guidance and does not indicate possible locations of plants, apart from identifying suitable locations for new nuclear power plants. Once a developer applies for planning permission for a new generation development, the Planning Inspectorate, a government agency, holds public consultations and reviews all the documents provided by the developer, including an environmental assessment based on EU regulations, as it would for any large infrastructure development project. The developer pays all the costs. The Planning Inspectorate then informs the Secretary of State of Energy who makes the final decision. This decision can be overturned under a binding judicial review.

Projects under 50 MW, which are generally connected to the distribution grid, are approved by the local municipality under the Town and Country Planning Act 1990. Again, a judicial review can be made of any final decision.[130]

In Scotland, a similar process is followed, but instead of the Secretary of State for Energy giving the final approval the Scottish Executive is responsible for approving projects above 50 MW. The Scottish Executive has

129 National Grid, "Ten Year Statements." At http://www.nationalgrid.com/uk/electricity/ten-year-statement/.

130 UK Department of Energy and Climate Change (DECC), "Consents and Planning Applications for National Energy Infrastructure Projects." At https://www.gov.uk/consents-and-planning-applications-for-national-energy-infrastructure-projects.

its own National Planning Framework, which is a spatial development plan for all large infrastructure projects in Scotland, including energy, and it has its own Planning Inspectorate.[131] In Scotland, therefore, energy planning is integrated with other infrastructure planning.

5 The planning process has to include a clear economic analysis.

The government regularly produces impact assessments of new energy policies that examine the economic costs of different policy scenarios, such as for the recent Electricity Market Reforms legislative package. The government generally presents different options for policy changes, and the impact statements evaluate each option.[132]

As the risk for the development of new power plants rests with the developers, there is no economic analysis of new developments. Ofgem approves grid operator's network charges and includes an economic analysis of their funding requirements for new construction.

6 The planning process has to be transparent and accessible to all stakeholders and the public.

Public consultations are held on all major energy policy changes. A major policy change will be announced and then the government will introduce a white paper and a consultation document listing different options (highlighting their preferred choice). Impact assessments of the different options are generally introduced at the same time. Outside stakeholders are invited to submit responses to the government, with non-confidential submissions available online, and in some cases stakeholder meetings are also held. Following the consultation period, the government produces a summary of responses, explaining why the final choice was made.[133]

The UK government also created an agency to represent consumers in markets subject to economic regulation (such as energy, energy efficiency improvements, water supply and postal services) known as Consumer Futures, which is funded through a levy on companies operating in these regulated industries, with some government grants. Consumer Futures also participates at regulatory hearings.[134]

For infrastructure planning, all the documents for projects over 50 MW in England and Wales are available online at the National Infrastructure Planning Portal which is run by the Planning Inspectorate. This includes all submissions by the developer and during the consultation, as well as the Planning Inspectorate's recommendation to the Secretary of State.[135] For projects under 50 MW, all the documents would be available at the local planning authority.

131 See Scottish Executive, "National Planning Policy." At http://www.scotland.gov.uk/Topics/Built-Environment/planning/National-Planning-Policy/npf.
132 For example see the impact assessments for the new Energy Bill at https://www.gov.uk/government/publications/energy-bill-impact-assessments.
133 See DECC, *Consultation Response: Reforming our Electricity Market*. At https://www.gov.uk/government/consultations/reforming-our-electricity-market.
134 See Consumer Futures' website at http://www.consumerfutures.org.uk/.
135 See UK National Infrastructure Planning Portal at http://infrastructure.planningportal.gov.uk/.

The planning process for the siting of new plants is very legalistic and is conducted in the same way as for any infrastructure project. Anyone with an interest is able to give evidence.

7 The planning process needs to be informative.

After any policy consultation ends, the government writes a summary of the responses to the consultation, detailing responses to the questions and explaining the government's reasons for choosing one option over another. All non-confidential submissions are posted online.

Ofgem, when hearing evidence about rate increases and competition in the market, summarises all the submissions and also posts all non-confidential submissions.

8 The planning process has to be iterative and flexible.

Under the new Energy Bill, the government is also to release a Strategy and Policy Statement on energy every five years that will provide guidelines and an overview of what the government's strategic direction is and what the responsibilities of the different organizations are. The government can revise its statement at any time if there are new developments in the sector.

9 The plan must be developed by experts.

During the formulation of energy policies, experts in the field are included. For example when working on the recent Energy Market Reform, the government created four expert panels, which included representatives from government, the regulator, and industry, to provide comments on different aspects of the government's proposals.[136] All energy matters also have to go through the Parliament's Standing Committee on Energy and Climate Change, an all-party standing committee, and the committee has the power to call expert witnesses.

10 The results of the plan should be measured and publicly reported.

The Department of Energy and Climate Change produces an annual Digest of UK Energy Statistics, generally with quarterly updates. The statistics examines the coal, petroleum, gas, electricity, renewables and combined heat and power sectors for the past five years, with key series providing data back to 1970. The Department of Energy also publishes a wealth of other data, including on fuel poverty, domestic and industrial energy prices, regional and local energy use, public attitudes to energy use, and energy efficiency improvements, among others.[137]

Every year the government is required to report to the EU on its progress in meeting its EU targets. Under EU agreements, there

136 See UK Department of Energy and Climate Change, *Maintaining UK Energy Security*. At https://www.gov.uk/government/policies/maintaining-uk-energy-security--2/supporting-pages/electricity-market-reform.
137 See statistics website at https://www.gov.uk/government/organisations/department-of-energy-climate-change/about/statistics.

is a data sharing protocol with Eurostat, the European statistics agency. The UK's independent Committee on Climate Change also presents an annual report to Parliament detailing the UK's progress in meeting its own carbon reduction commitments, and the government lays an Annual Energy Statement before Parliament as well.

APPENDIX I:

List of Mowat Interviewees

We are indebted to our interviewees for sharing generously of their time and insights.

Michael Angemeer
PRESIDENT AND CEO
Veridian Corporation

Len Börjeson
SWECO | SWEDEN

Jake Brooks
EXECUTIVE DIRECTOR
Association of Power Producers of Ontario

Paul Burke
VICE PRESIDENT | INTEGRATED REVENUE PLANNING
Ontario Power Generation

Jan Carr
BOARD MEMBER
Alberta Electric System Operator and Guelph Hydro Inc.

Perry Cecchini
MANAGER | RESOP/FIT CONTRACTS
Ontario Power Authority

Laura Formusa
FORMER PRESIDENT AND CEO
Hydro One

Janet Fraser
CHIEF REGULATORY OFFICER
BC Hydro

Peter Fritz
SWECO | SWEDEN

Jim Gallagher
EXECUTIVE DIRECTOR
New York Smart Grid Consortium

A.J. Goulding
PRINCIPAL
London Economics International LLC

Sandra Guido
SENIOR PROGRAM SUPPORT COORDINATOR
Ministry of the Environment of Ontario | Environmental Approvals Access and Service Integration

Katharine Hole
SENIOR CONSULTANT
London Economics International LLC

William Lacy
CORRESPONDENCE UNIT
Department of Energy and Climate Change | UK

Dale Littlejohn
EXECUTIVE DIRECTOR
BC Community Energy Association

Bridgett Nealy
PRESIDENT
Firefly Energy Consulting LLC

Jon Norman
VICE PRESIDENT | BUSINESS DEVELOPMENT - POWER & UTILITIES
Brookfield Asset Management

Mike Penstone
VICE PRESIDENT | MAJOR PROJECT COORDINATION & EXTERNAL RELATIONS
Hydro One

Alexandra Tidlund
SWECO | SWEDEN

Robert B. Warren
PARTNER
WeirFoulds LLP

Fiona Woolf
PARTNER
CMS Cameron McKenna LLP

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About the Authors

Richard Carlson

Richard Carlson is the Energy Policy Associate at the Mowat Centre. He joined the Mowat Centre after a number of years living overseas, with the last five spent working in the UK advising investors and governments on energy policy and environmental issues.

Richard has published on energy issues in Canada, Europe, Turkey and Central Asia, is co-editor of a book on social and political developments in post-independence Central Asia, and is on the editorial board of two journals. While living in the UK he received an MA in International Studies, with a focus on energy development in the Caspian Basin, from the School of Oriental and African Studies, University of London. Originally from the West Coast, he also lived and worked in Saudi Arabia and Turkey, and is the co-founder of a crowdfunding platform for improving energy access through off-grid energy projects.

Eric Martin

Eric Martin is a candidate for the Master of Public Policy at the University of Toronto's School of Public Policy and Governance. His current studies are focused on energy policy in Ontario and he plans to work in the Ontario energy sector upon completing his program in 2014.

Eric has also previously worked for a renewable energy company in Ontario for two years and as the program coordinator of the national English teacher's program for the Republic of Korea's Ministry of Education, Science and Technology in Seoul, South Korea. He holds a Bachelor of Arts degree in Political Science and Philosophy from the University of Waterloo.

Pamela Nowina

Pamela Nowina is the Executive Lead of the Mowat Energy hub. She has extensive corporate and public sector leadership experience in Ontario's electricity and natural gas industries.

Pam served on the Ontario Energy Board (OEB) from 2005 to 2010 as Vice-Chair. At the OEB, Pam adjudicated many of the OEB's most significant cases. She also had a key role in developing many of the Board's policies.

Pam has provided strategic consulting services to executives and boards as a partner in PricewaterhouseCooper's Energy Practice where she was responsible for the Energy Strategy Practices for Canada. She has also provided strategic consulting services through Elenchus Research Associates. Pam sits on a number of governance boards.

Pam has a Bachelor of Computer Science degree from the University of Windsor and an MBA from the University of Toronto's Rotman School of Management. She also holds the ICD.D (Rotman) and the A.C.C. (McMaster DeGroote) designations for corporate directors.

Mary Ellen Richardson

Mary Ellen Richardson's career in the oil, natural gas and electricity industries spans 30 years. Over the last 10 years, Mary Ellen has held executive positions with the Canadian District Energy Association, the Ontario Power Authority (OPA) and the Association of Major Power Consumers in Ontario (AMPCO).

Mary Ellen has served on the management board of the Ontario Centre of Excellence in Energy, as a board member for EcoCanada, on the province's 2003 Electricity Conservation and Supply Task Force, on the Executive of the Stakeholders' Alliance for Competition and Customer Choice, and as a member of Hydro One's Customer Advisory Board. Mary Ellen has completed the Institute of Corporate Directors program at the University of Toronto.

About the Mowat Centre

The Mowat Centre is an independent public policy research centre located at the School of Public Policy & Governance at the University of Toronto. The Mowat Centre is Ontario's non-partisan, evidence-based voice on public policy. It undertakes collaborative applied policy research, proposes innovative research-driven recommendations, and engages in public dialogue on Canada's most important national issues.

About Mowat Energy

The Mowat Energy hub conducts evidence-based policy research concerning the structural and systemic issues impacting the energy sector in Ontario and Canada.

The Mowat Centre

720 Spadina Avenue, Suite 218 Toronto, ON M5S 2T9
416.978.7858
www.mowatcentre.ca
info@mowatcentre.ca
@MowatCentre

MOWAT ENERGY

School of Public Policy & Governance
UNIVERSITY OF TORONTO