



Standing Committee on
Resources and Environment

Report respecting presentations by

Sierra Club of Canada
Canadian Wind Energy Association
Greengate Power Corporation
Alberta Geothermal Energy Association
Alberta Federation of Rural Electrification Associations
Independent Power Producers Society of Alberta
Capital Power Corporation
Enmax Corporation

November 2009



COMMITTEES
OF THE LEGISLATIVE ASSEMBLY

Contents

Members of the Standing Committee on Resources and Environment	3
1.0 Introduction	4
2.0 Summary of Public Meeting Presentations	4
<u>2.1 Sierra Club of Canada</u>	4
<u>2.2 Canadian Wind Energy Association</u>	5
<u>2.3 Greengate Power Corporation</u>	5
<u>2.4 Alberta Geothermal Energy Association</u>	6
<u>2.5 Alberta Federation of Rural Electrification Associations</u>	6
<u>2.6 Independent Power Producers Society of Alberta</u>	7
<u>2.7 Capital Power Corporation</u>	8
<u>2.8 Enmax Corporation</u>	8
Appendix A: List of Presenters	10

**MEMBERS OF THE
STANDING COMMITTEE ON RESOURCES AND ENVIRONMENT**

27th Legislature, Second Session

Ray Prins, MLA
Chair
Lacombe-Ponoka (PC)

Laurie Blakeman, MLA
Deputy Chair
Edmonton-Centre (AL)

Evan Berger, MLA
Livingstone-Macleod (PC)

Broyce Jacobs, MLA
Cardston-Taber-Warner (PC)

Guy Boutilier, MLA
Fort McMurray-Wood Buffalo (IND)

Brian Mason, MLA
Edmonton-Highlands-Norwood (NDP)

Jonathan Denis, MLA
Calgary-Egmont (PC)

Diana McQueen, MLA
Drayton Valley-Calmar (PC)

Wayne Drysdale, MLA
Grande Prairie-Wapiti (PC)

Frank Oberle, MLA
Peace River (PC)

Kent Hehr, MLA
Calgary-Buffalo (AL)

Substitutions Pursuant to Standing Order 56(2.1-2.4)

Cal Dallas, MLA
Red Deer-South (PC)^{*}

Dave Taylor, MLA
Calgary-Currie (AL)[†]

Greg Weadick, MLA
Lethbridge-West (PC)[‡]

^{*} Substitution for Diana McQueen, MLA, on November 4, 2009.

[†] Substitution for Kent Hehr, MLA, on November 2 and November 4, 2009.

[‡] Substitution for Evan Berger, MLA, on November 2, 2009.

1.0 Introduction

The Standing Committee on Resources and Environment (the “Committee”) held public meetings with the Sierra Club, the Canadian Wind Energy Association, Greengate Power Corporation, and the Alberta Geothermal Energy Association on November 2, 2009, and with the Alberta Federation of Rural Electrification Associations, the Independent Power Producers Society of Alberta, the Capital Power Corporation and the Enmax Corporation on November 4, 2009, pursuant to Standing Order 52.08(1). This Standing Order provides:

52.08(1) A Policy Field Committee may hold public meetings on any matter within its mandate.

At the conclusion of the November 4, 2009, public meeting, the Standing Committee on Resources and Environment resolved to prepare a report summarizing the presentations heard by the Committee on November 2 and November 4, 2009, for distribution to the relevant Government of Alberta Ministers.

The resolution was pursuant to the following Standing Order:

52.08(3) A Policy Field Committee may report to a Minister or responsible public official on issues arising from a public meeting.

2.0 Summary of Public Meeting Presentations*

2.1 Sierra Club of Canada

At the Committee meeting of November 2, 2009, the chief presenter from the Sierra Club of Canada, a grassroots environmental organization, indicated that he was appearing before the Committee on behalf of the Sierra Club of Canada but also on behalf of the Athabasca Bioregional Society, the northern and southern Alberta chapters of Canadian Parks and Wilderness Society, Defenders of Wildlife Canada, the Federation of Alberta Naturalists, the Jasper Environmental Association, and UTSB (Under The Sleeping Buffalo) Research.

The Sierra Club requested that the Committee report to the Minister of Sustainable Resource Development and the relevant Cabinet Policy Committee on “the urgent importance of:

- Legislating grizzly bears as threatened/endorsed under the *Alberta Wildlife Act*.
- Expediting the Endangered Species Conservation Committee’s review of an updated status report so that the listing under the *Wildlife Act* can be accomplished during the spring 2010 sitting of the Alberta Legislature, if not sooner.
- Effectively addressing grizzly bear recovery through a dedicated, multi-year budget for implementation of Alberta’s existing Grizzly Bear Recovery Plan and reinstating the recovery team for the purposes outlined in the Plan.”

A discussion of the status of the province’s grizzly bear population took place at the meeting, led by Dr. Steve Herrero, professor emeritus of environmental science at the University of Calgary. Dr. Herrero pointed out that the reproductive rate of grizzly bears is low compared to other mammals such as deer, elk, or moose and that the rate is lower for Alberta grizzly bears than for those in other western North American areas, such as Yellowstone National Park and the Flathead area of British Columbia. Dr. Herrero indicated that grizzly bear deaths are largely attributable to humans, explaining

* For a full account of the public meetings, see Alberta, Legislative Assembly, *Standing Committee on Resources and Environment* [Public Meeting], November 2, 2009, *Hansard* Transcript, pp. RE-169-RE-186, and Alberta, Legislative Assembly, *Standing Committee on Resources and Environment* [Public Meeting], November 4, 2009, *Hansard* Transcript, pp. RE-187-RE-205.

that interactions with humans are often detrimental to the bears. Furthermore, the range of grizzly bears in Alberta has diminished such that they are “pushed up against the [eastern] boundary of the Canadian Rockies in the places that are rough and rugged ... Without action those populations will continue to be restricted to a very, very narrow band of habitat on which it’s rather difficult to support bears.” The overall population of Alberta grizzly bears is fewer than 1,000, which is the population level at which the grizzly bears are considered threatened by the International Union for the Conservation of Nature (IUCN). This, according to Dr. Herrero, justifies action by the Government of Alberta.

2.2 Canadian Wind Energy Association

The Canadian Wind Energy Association (CanWEA) is a not-for-profit trade association that advocates on behalf of its members for “sustainable and responsible wind generation.”

At the Committee meeting of November 2, 2009, the presenter for CanWEA indicated that wind power generation is a significant industry, experiencing considerable economic growth. Wind power provides a large percentage of the electricity needs of certain European countries, such as Denmark. It creates investment opportunities and employs people. It is a free fuel source, it is consistent, and from an environmental point of view, wind power does not create waste or use water and makes a “very small footprint on the landscape.” Furthermore, wind power employs “off-the-shelf” technology; that is, technology which is currently available.

The presenter pointed out that Alberta was until recently the leader in wind power generation in Canada. Currently, there are 520 megawatts of installed capacity in Alberta, focused in the southern portion of the province, but development is reaching central and northern areas. The presenter remarked that wind power generation contributes to the electricity needs of the province and also provides taxation revenue for municipalities and revenue for landowners. The presenter stated that there are 12,000 megawatts of wind power generation capacity in the queue, which is indicative of private industry’s interest in wind power development in Alberta. The solutions suggested by CanWEA to allow these projects to go ahead are:

1. Streamlining of regulatory processes (by the Department of Energy and the Alberta Utilities Commission).
2. Ensure carbon markets fully value wind energy projects.
3. Proactively and collaboratively engage in the transmission discussion in Alberta (interconnect and bulk).
4. Increase awareness and understanding of the wind industry.

2.3 Greengate Power Corporation

The Greengate Power Corporation is a private wind energy developer based in Calgary. The corporation develops land so as to ready it for the construction and financing of a wind power project. It has 1,550 megawatts of wind power projects currently under development in Alberta, and there would be \$4 billion in investment if the entire “portfolio” of Greengate Power Corporation were to be built. The Halkirk I Wind Project, in central Alberta, will bring 150 megawatts of power to the grid and represents \$350 million in investments.

At the Committee meeting of November 2, 2009, the presenter representing the Greengate Power Corporation remarked that Alberta has the opportunity to become the wind power leader in North America because the province has a world-class wind resource; it is the only deregulated electricity market in Canada; and Alberta generally has an open-for-business attitude, from landowners to the finance community, which encourages investment in the resource.

The presenter emphasized the benefits of wind power development to Alberta, including the provision of additional tax revenue to rural municipalities, the creation of jobs, and the environmental benefits of contributing to the reduction of greenhouse gases.

The Greengate Power Corporation's presentation discussed the barriers to further development of wind energy projects. It highlighted the need for the province to incentivize the development of wind energy, as is done in other jurisdictions in North America and Europe, so that Alberta projects can be successful in securing capital in the global competition for investment funding. Furthermore, the regulatory process is cumbersome. It was noted that transmission is not an issue, although an improved transmission system would be of assistance and is important to the long-term vitality of Alberta's economy.

The presentation ended with proposed policies to be adopted in Alberta. The first was the proposal of a clean energy standard, which would set a target of 2,000 megawatts of new clean energy power by 2015. It was also suggested that the regulatory process be reviewed to identify parts of the process that may be streamlined in order to benefit wind energy developers.

2.4 Alberta Geothermal Energy Association

The Alberta Geothermal Energy Association was founded in 2007 as a non-profit association and includes engineering companies, installation contractors, drilling companies, and suppliers involved in the geothermal industry as well as persons who have a general interest in geothermal energy. The mission of the Association is to help Albertans to become independent of non-renewable energy sources by deploying earth energy and geothermal heat-pump technology throughout the province.

At the Committee meeting of November 2, 2009, the presenter representing the Alberta Geothermal Energy Association explained what geothermal energy is and how heat-pump technology functions to derive heat energy from the earth. He described the various systems put in place to heat and cool residential and commercial buildings or industrial processes and detailed the techniques and materials used to create these systems.

The Association representative then explained the economics of geothermal energy and, in particular, discussed market penetration, stating that 80,000 to 100,000 heat-pump units a year are installed in North America, while to date there are 20,000 installations in Canada and 2,000 installations in Alberta, with about 200 projects coming on stream in the province. The presenter added that the geothermal systems are versatile, in that they can be used in projects ranging from home heating to sewage effluent recovery projects.

The Association's presentation ended with the Alberta Geothermal Energy Association indicating that the Association, along with the Alberta Water Well Drilling Association, is in negotiations with the Ministry of Environment to receive a two-year grant of \$357,000 to develop a quality-assurance program for industry practitioners. The presenter explained the rationale for the program. Currently, the bore holes that practitioners drill are unregulated. This program would ensure the training for and certification and inspection of drillers and would develop a permitting scheme. In addition, a data-acquisition system would be developed so that information about drilled holes – what kind of pipe or fluid is used, where pipes are located, when holes were drilled, and who drilled them – would be readily available and so that remedial action may be taken, if necessary. Currently, no such program is in place. The presenter concluded by requesting that the Committee ask the Minister of Environment to approve the proposal.

2.5 Alberta Federation of Rural Electrification Associations

The Alberta Federation of Rural Electrification Associations (AFREA) serves all rural electrification association (REA) members, offering services that reflect the diversity and growth of REAs, providing leadership and representation on their behalf, creating strategic alliances to attain goals, and communicating effectively with member REAs and the wider electricity industry.

At the Committee meeting of November 4, 2009, AFREA representatives commented on the uniqueness of the Alberta electricity market, citing as aspects of this unique market the province's large load factor, its limited connectivity to other markets and price uncertainty, which results from, among other factors, the unpredictability of coal-fired electricity generation plant outages and the uncertain availability of wind.

AFREA remarked that the lack of retail choice is another characteristic of the Alberta electricity market and indicated that retail competition has been compromised by one dominant player, which has engaged in predatory pricing practices to gain competitive advantages. Moreover, in AFREA's opinion, Enmax intervened in the 240 kVa line proposed for southern Alberta and opposes Bill 50 in order to generate "market power."

AFREA stated that rural electrification associations (REAs) are at risk as a result of these practices. There is a risk that re-regulation may be needed to reverse the harmful effects of reduced competition in the electricity retail market.

AFREA recommended that the Government of Alberta address the underlying market problems and encourage small retailers to develop the market. The solution is to allow REAs to sell electricity outside of their boundaries; for the Ministry of Energy to encourage "self-retailing" as a viable option and to abandon its over-reliance on fixed-price contracts as the solution to consumer choice; to continue the regulated retail option after 2011; to reduce prudential requirements for all market participants to prepay and maintain on deposit with the Alberta Electric System Operator (AESO) a sum equal to one month's worth of power pool charges; and to reduce the size of the prudential for retailers at Service Alberta, making it commensurate with the size of the customer base.

2.6 Independent Power Producers Society of Alberta

The Independent Power Producers Society of Alberta (IPPSA), which was founded in 1993, is a forum for dialogue among Alberta's power producers and a proponent of competition in Alberta's electricity market.

At the Committee meeting of November 4, 2009, IPPSA representatives presented an overview of Alberta's deregulated electricity market. IPPSA indicated that Alberta consumers have benefited from the transition to a competitive electricity market, demonstrating that competition has allowed supply to meet demand in Alberta (which has had the fastest growing demand in Canada). Furthermore, a competitive market, according to the IPSSA, has functioned to keep wholesale prices in check and has meant that consumers no longer assume the risk of inefficient investment in electricity generation.

IPPSA elaborated on the issue of increased electricity power generation, indicating that because of the emergence of a deregulated market, Alberta's electricity generation supply has met and even exceeded market demand in a period (1994-2008) during which actual demand turned out to be far greater than the initial forecast demand. IPPSA commented that it is unclear whether supply would have met demand in a regulated market primarily due to the time required for new generation applications to go through the regulatory approval process. Deregulation has allowed for rapid investment in new generation because a restructured market, unlike the regulated market, does not require the regulator to determine whether power plants are needed. In an open market investors determine whether power plants are required and assume the risks associated with the building power generation capacity.

IPPSA discussed other benefits of deregulation. IPPSA commented on how the open market has led to consumer choice. In an open market industrial facilities can exercise the option of building cogeneration facilities on-site to provide for the electricity needs of industrial processes. In addition, a number of new players in electricity generation have emerged, resulting in increased competition, which, in turn, has contributed to the downward pressure on the spot market price for electricity. Furthermore, according to IPPSA, the deregulated market has contributed to the modernization of

electricity generation. Investors build the most efficient plants possible because they are assuming the financial risks associated with the building and operation of those plants. IPPSA explained further that market forces, specifically consumer choice, have contributed to the advent of considerable amounts of wind- and gas-generated electricity. This has resulted in an overall reduction in emissions intensity in electricity generation. Lastly, IPPSA pointed out that the open market has allowed a return of \$2.75 billion in residual value to Alberta consumers, helping to reduce electricity prices.

2.7 Capital Power Corporation

The Capital Power Corporation is an Alberta-based electricity generation corporation that operates 31 power plants, with approximately 3,300 megawatts of power-generation capacity, in three provinces and eight American states. It generates electricity using a variety of energy sources, with about 20 per cent of its source energy coming from renewable or recycled sources.

At the Committee meeting of November 4, 2009, the representative from the Capital Power Corporation emphasized the merits of stable government policy direction, which would assist electricity corporations such as Capital Power in making long-term investments in power generation in the province. Specifically, the presenter pointed out that a stable transmission policy is needed not only to facilitate investment in power generation capacity but also to sustain a competitive market by avoiding a “traditional local monopoly situation.” A level playing field must be established whereby the Government of Alberta avoids subsidizing individual power plants. Should policy not focus on the development of electricity transmission, then the electricity market would be fragmented into non-competitive zones. By contrast, policy focusing on electricity transmission would avoid the increased costs and risks associated with local power generation; allow the most economical and energy-efficient power plants to be built; optimize the use of natural resources, ensuring Albertans would have access to the least-cost electricity alternative; and enhance opportunities for greater use of diverse fuel sources, including “greener” options. Ultimately, according to Capital Power, subsidizing local power generation would inhibit investment in new electricity generation, shifting the risks associated with developing new power generation from the investor to the consumer. In contrast, a focus on a robust, reliable transmission system would mean the appropriate allocation of capital investment in new electricity generation and support and promote a competitive and greener electricity market.

In addition, the presenter representing Capital Power also commented on interties, which, he indicated, should be considered as plants on standby because they allow the province to access other sources of electricity during “upset conditions.” The presenter added that Alberta is a net importer of electricity in part because the transmission lines in the province are so congested that Alberta-generated electricity cannot be moved around the province and electricity must be imported instead. The presenter also remarked that it is not true that improvements to the transmission system are desired so that electricity may be exported. Rather, transmission lines connecting Alberta to other jurisdictions are built to serve the public interest by making the system more reliable.

2.8 Enmax Corporation

The Enmax Corporation is an energy distribution, supply, and service company, which is a wholly owned subsidiary of the City of Calgary. Enmax’s core operations include electricity generation, transmission, and distribution and the sale of electricity, natural gas, and renewable energy products to residential and commercial customers in Alberta.

At the Committee meeting of November 4, 2009, the representative from Enmax remarked on the importance of the competitive electricity marketplace that has been developed in Alberta. The presenter indicated that Enmax has embraced the competitive marketplace more than any other electricity retailer in Alberta by offering five-year contracts for retail customers and also by selling green power in the marketplace.

On the issue of policy with respect to electricity generation and transmission, the presenter indicated that good transmission policy should incentivize electricity generators to locate in optimal locations, meaning that costs are minimized. He added that this does not imply the subsidization of local plants. The presenter then explained that Enmax has built a number of power-generation facilities in southern Alberta that will alleviate pressure on the transmission system over time.

The representative from Enmax stated that transmission has become quite costly and that industrial and commercial users would have to assume the bulk of the costs associated with building new transmission in the province, which would result in a “material impact” on the Alberta economy. In addition, the presenter indicated that there should be a balance in building transmission and new power generation, instead of focusing policy and capital investment on building new transmission capacity. The transmission policy should allow for a blend of power generation and improved transmission.

In addition, the presenter remarked that there is currently an opportunity to slowly replace the existing capital stock of power generation plants and build new plants that are more efficient and cleaner. The new plants, many of which would be gas-fired generators, could be located close to where power is needed, for example in the Fort McMurray area. New gas-fired plants could also be built in the Edmonton area to replace the coal fleet, which is in need of replacement. Enmax believes that there is an opportunity to revitalize Alberta’s natural gas industry in the long-term future by building highly efficient gas-fired generation plants.

The presenter ended the presentation by stating that Enmax would like to see the competitive market continue without escalating transmission charges. Instead, distribution companies should think about controlling their costs over the long-term future.

Appendix A: Lists of Presenters

The Standing Committee on Resources and Environment invited the Sierra Club, Canadian Wind Energy Association, Greengate Power Corporation, and Alberta Geothermal Energy Association to present to the Committee at its November 2, 2009, meeting in response to the organizations' requests to appear before the Committee.

The following individuals participated in the public meeting:

Name	Title
Sierra Club of Canada	
Carl Morrison	Action Grizzly Bear Campaigner, Sierra Club of Canada
Steve Herrero	Professor Emeritus, Environmental Science, University of Calgary
Dianne Pachal	Alberta WILD Director, Sierra Club of Canada
Canadian Wind Energy Association	
David Huggill	Western Canada Policy Manager
Greengate Power Corporation	
Dan Balaban	President and Chief Executive Officer
Dan Tocher	Vice-President, Stakeholder Relations
Alberta Geothermal Energy Association	
Don MacIntyre	Chairman, Alberta Geothermal Energy Association
Leigh Bond	President, Threshold Energies Corporation
Dean Turgeon	Vital Engineering Corporation
Michael Roppelt	GSS Geothermal Limited

The Committee also invited the Alberta Federation of Rural Electrification Associations, Independent Power Producers Society of Alberta, Capital Power Corporation, and Enmax Corporation to present during a second public meeting, held on November 4, 2009.

The following individuals participated in the public meeting:

Name	Title
Alberta Federation of Rural Electrification Associations	
Glen Hennig	Member, Board of Directors
Merv Rockel	President
Al Nagel	Chief Executive Officer
Harvey Yoder	Member of the Board
Independent Power Producers Society of Alberta	
Evan Bahry	Executive Director
Sterling Koch	Chairman
Ken Kunz	Director
Capital Power Corporation	
Brian Vaasjo	President and Chief Executive Officer
Bryan DeNeve	Vice-President, Business Development Canada
Tim Boston	Vice-President, Government Relations and Public Policy Communications
Enmax Corporation	
Gary Holden	President and Chief Executive Officer
Ian Todd	Vice-President, Government and Media Relations

