

Greenhouse Gas Regulation 101

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Introduction

It seems that every day there is another media story about greenhouse gases ("GHGs") and climate change. Both the federal and Alberta governments have talked about having "a plan" to reduce GHG emissions, but it is increasingly difficult to keep all the plans and targets straight. Also, how do these plans compare with Kyoto? This article provides a quick overview of Alberta's and Canada's GHG plans and explains how they compare with each other and with Canada's international commitments under the Kyoto Protocol.

Alberta's plan

On April 20, 2007, the Alberta government passed the *Climate Change and Emissions Management Amendment Act* ("CCEMA Act") and its accompanying *Specified Gas Emitters Regulation* (the "*Emitters Regulation*").¹ Together, the *CCEMA Act* and *Emitters Regulation* require facilities that emit more than 100,000 tonnes of GHGs a year to reduce their emissions intensity by 12 percent starting July 1, 2007.² The *Emitters Regulation* sets out the options for companies to reduce emissions intensity. These options include:

- (1) making operating improvements (increasing efficiency);
- (2) buying Alberta-based offsets (offsets are actions or projects which take place outside the domain of GHG regulated activities e.g., "carbon sink" activities such as planting trees, injecting carbon dioxide into depleted reservoirs, changing soil management practices such as "no till" agriculture. Regulated GHG emitters can use offsets towards meeting their GHG targets.);
- (3) buying emission performance credits (in other words, emission performance credits are "bonus points" which a regulated GHG emitter earns when its emissions intensity decreases beyond that year's target intensity. Regulated emitters can buy and sell credits on the carbon market.); and
- (4) paying \$15/tonne for every tonne that emitters exceed their limit into the Alberta technology fund to invest in GHG-reducing technologies.³

Key points about the Alberta plan are:

- **12 percent "emissions intensity" targets** – Reductions are based on "emissions intensity," not absolute reductions in GHGs. Emissions intensity is a measure of the quantity of GHGs released by a facility per unit of production. In other words, it is a way of measuring GHG emissions against the gross domestic

product or GDP of a country or province. Under this type of target, individual emission limits per unit of production (e.g. barrel of oil) must be lowered, but if production increases, the overall amount of GHG emissions can grow. Facilities bound by the target must reduce their emissions intensity by 12 percent from 2003 levels for the period July 1, 2007 to December 31, 2007. In each subsequent year, further reductions of two percent will be required.

- **Targets only apply to the largest industrial facilities** – The 12 percent target only applies to facilities that emit more than 100,000 tonnes of GHGs a year; these are sometimes called “large final emitters,” which refers to large industrial facilities such as oil sands mines and coal-fired power plants. This target will apply to about 100 Alberta facilities that comprise approximately 70 percent of Alberta's industrial emissions.⁴ Currently, there are no emissions targets for facilities that emit less than 100,000 tonnes of GHGs a year. For example, oil and gas flares at individual well sites or pipelines are not subject to a GHG reduction target.
- **12 percent target only applies to “established” facilities** – Established facilities are those that are more than eight years old (operating pre-2000). These facilities must immediately take steps to reduce emissions intensity by 12 percent beginning July 1, 2007.
- **Three year grace period for new facilities** – New facilities are those operating since 2000. New facilities are subject to emission intensity reductions starting in year four of operation based on a “sliding scale” of a two percent intensity target increase per year. For example, if an facility begins operating in 2008, it will get a three year grace period in order to establish its emissions baseline before it is subject to any targets; then, starting in year four of operation, it will have a two percent intensity target; in year five, a four percent target; in year six, a six percent target, and so on until it reaches a 12 percent target in year nine of operation.
- **“Industrial process emissions” are exempt from reduction** – Industrial process emissions refer to those emissions that are tied to chemical reactions and cannot be reduced by current technology. These emissions have a zero percent reduction target. They are not subject to the 12 percent emissions intensity target.

Alberta's current plan sets a target of a 50 percent reduction in emissions intensity by 2020. In a growing economy, emissions intensity targets can be met even while emissions increase substantially. Studies have shown that Alberta's 50 percent intensity target could be met even while absolute emissions in the province rise to 60 percent to 80 percent above 1990 levels.⁵

In contrast, the targets set under the Kyoto Protocol require an absolute reduction of GHGs by six percent below 1990 levels by 2012. Some of the main differences between the Alberta plan and Kyoto are:

- the Alberta plan has a baseline year of 2003, whereas Kyoto has a baseline year of 1990;

- the Alberta plan is based on emissions intensity, whereas Kyoto targets are based on absolute reductions in GHGs;
- the Alberta plan has a longer timeline, stretching until 2020, whereas Kyoto targets only reach until 2012 (until further targets are negotiated and accepted by the parties to the Kyoto Protocol); and
- the Alberta plan limits emitters to buying off-sets produced inside Alberta, whereas Kyoto envisions emission off-sets and carbon trading occurring at the international level.

Canada's plan

The latest incarnation of the federal climate change plan was released on April 26, 2007, entitled *Turning the Corner: An Action Plan to Reduce Greenhouse Gases and Air Pollution*. Under this plan, the federal government has committed to reducing Canada's total GHG emissions by 20 percent by 2020 and by 60 to 70 percent by 2050. There are a suite of options that companies can use to meet their reduction targets, including:

- (1) making operating improvements (increasing efficiency);
- (2) buying Canadian-based offsets (offsets are emission reductions that take place outside the domain of regulated activities);
- (3) buying carbon credits on the market from other regulated emitters that have reduced their emissions by more than they had to;
- (4) paying \$15/tonne for every tonne that emitters exceed their limit into the federal technology fund;
- (5) participating in Kyoto's Clean Development Mechanism;⁶ and
- (6) taking credits for early action.⁷

Key points about the federal plan are:

- **18 percent "emissions intensity" targets** – Similar to Alberta's plan, the reductions will be based on emissions intensity rather than absolute GHG reductions. The federal emissions intensity targets are based on a six percent improvement per year from 2006 levels between 2007 and 2010, reaching an 18 percent reduction in 2010 when regulations are put into place. In each subsequent year, further reductions of two percent will be required, resulting in an emissions intensity reduction of 26 percent by 2015.
- **Targets only apply to the major industrial sectors** – This is akin to the large final emitters. The 18 percent target applies to sectors such as electricity produced by combustion, oil and gas, forest products, smelting and refining, iron and steel foundries, cement plants, lime plants, chemical plants, and some mining sectors. Unlike the Alberta system where the targets are set per facility, in the federal plan the targets are set by sector. It is not yet clear how sector targets will be translated into company or facility based targets.⁸

- **18 percent target only applies to “established” facilities** – Similar to Alberta’s plan, established facilities are those that are more than eight years old (operating pre-2000). These facilities should begin taking steps to reduce emissions intensity by six percent per year beginning in 2007. However, they will not be subject to regulation until the 18 percent intensity target is imposed in 2010;
- **Three year grace period for new facilities** – New facilities are those operating since 2004. Similar to Alberta, new facilities are subject to emissions intensity reductions starting in year four of operation based on a “sliding scale” of a two percent intensity target increase per year.
- **“Fixed process emissions” are exempt from reduction** – Again, similar to Alberta’s plan, “fixed process emissions” (which are called industrial process emissions” in Alberta) are not subject to the 18 percent intensity reduction target.

As mentioned above, Canada’s targets under the Kyoto Protocol require an absolute reduction of GHGs by six percent below 1990 levels by 2012. Some of the main differences between the federal plan and Kyoto are:

- the federal plan has a baseline year of 2006, whereas Kyoto has a baseline year of 1990;
- the federal plan (like Alberta) is based on emissions intensity, whereas Kyoto targets are based on absolute GHG reductions;
- the federal plan is based on a long-term timeline, stretching until 2050, whereas Kyoto targets currently only reach until 2012; and
- the federal plan is largely centered on national off-sets and a domestic carbon trading regime (for now), whereas Kyoto envisions an international carbon trading regime.

Under the federal plan, Canada’s GHG emissions will be approximately 39 percent higher than our Kyoto target in the period to which the target applies (see Table 1). Canada is not expected to meet its Kyoto targets until about 2025.⁹

Table 1. The federal government’s national GHG emission targets relative to the 1990 level and Canada’s Kyoto target.¹⁰

Year	GHG emissions relative to 2006 levels	GHG emissions relative to 1990 levels	Relative to Kyoto Target (6% below 1990 levels)
2010-2012	~3% above	~31% above	~39% above
2020	20% below	~2% above	~8% above

2050	~60-70% below	~49-62% below	—
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Although the Alberta and federal plans share many similarities, they too have some major differences. Some of the main differences between the Alberta and federal plans are:

- the Alberta plan has a baseline year of 2003, whereas the federal plan has a baseline year of 2006;
- Alberta targets take effect for established facilities on July 1, 2007, whereas the federal targets will be not take effect until sometime in 2010;
- Alberta targets are set per facility, whereas the federal targets are set per sector. Under the federal plan, it is not yet clear if all emitters within a sector will have the same 18 percent targets (e.g., coal fired power plants may have a higher reduction target than gas-fired power plants because coal fired plants produce more GHGs);
- Alberta emitters are limited to buying Alberta based off-sets, whereas the federal plan allows for Canada wide off-sets;
- Alberta aims to reduce its emissions intensity by 50 percent by 2020, whereas the federal government is committed to reducing Canada’s total GHG emissions by 20 percent by 2020; and
- both Alberta and the federal government have technology funds and it is not clear how these funds will be harmonized.

Conclusion

Currently, there are three different plans (provincial, federal and international), each with different baseline years, different GHG targets, and differing mechanisms for achieving those targets. It is expected that the Alberta targets will be “harmonized” or made equivalent to targets under the federal plan when federal regulations are put into place in 2010. However, this may not be an easy task. For example, established facilities in Alberta will reach an 18 percent intensity reduction target by 2010 (in line with the federal target), but this will be based on a baseline year of 2003 emission levels rather than the federal baseline year of 2006. Does this mean that Alberta facilities will then have an adjusted target to comply with a 2006 baseline year?

At the international level, if Canada chooses to remain a party to the Kyoto Protocol and is not able to comply with its six per cent reduction targets from 1990 levels, then the enforcement branch of the Kyoto Protocol will be triggered. The Kyoto Protocol does not provide fines for non-compliance, but Canada can be penalized with heavier emissions-cutting requirements in the next phase of the treaty (2012-2018). Canada could also be excluded from selling credits in the international emissions trading system, and be required to put forward domestic policies to prove good faith compliance with its international commitments.

There may be other consequences as well. As noted in another article in this edition of *News Brief*, a lawsuit has already been launched against the Government of Canada for failing to meet its binding international commitments to reduce GHG emissions. However, the greatest consequence may be to Canada's international reputation if our country is branded as being non-compliant with Kyoto and a laggard with respect to GHG reductions.

¹ *Climate Change and Emissions Management Amendment Act*, S.A. 2007, c. 4. At the time of writing, the official version of *Specified Gas Emitters Regulation* was not yet published in the Alberta Gazette; a draft version is available online: Alberta Environment <http://www3.gov.ab.ca/env/air/pubs/Specified_Gas_Emitters_Regulation.pdf> .

² *Ibid.*

³ "Fund credits" may be purchased for \$15/tonne of carbon dioxide equivalent gas, the proceeds of which go to the GHG emissions reduction technology fund. If a facility misses the 12 percent target, it is required to pay into the fund at a rate of \$200/tonne.

⁴ Government of Alberta, News Release, "Industry has three options for meeting emission targets" (8 March 2007).

⁵ Matthew Bramley, *An Assessment of Alberta's Climate Change Action Plan* (Drayton Valley, The Pembina Institute, 2002) at 1.

⁶ The Clean Development Mechanism allows industrialized countries to invest in emission reducing projects in developing countries.

⁷ Companies that took verified action to reduce GHG emissions between 1992 and 2006 will be eligible to receive a one time credit that could be applied to meet their targets or could be traded. Credits for early action will represent a maximum of 15 megatons of carbon dioxide across industry.

⁸ Matthew Bramley, "Analysis of the Government of Canada's April 2007 Greenhouse Gas Policy Announcement (28 May 2007) at p. 11, online: The Pembina Institute <http://pubs.pembina.org/reports/Reg_framework_comments.pdf> .

⁹ *Ibid.* at 5.

¹⁰ *Ibid.* at 4.

Comments on the articles in this issue may be sent to the editor at elc@elc.ab.ca.

Approvals must support higher goals: EAB decision sends the right message regarding aquatic ecosystems protection

Siksika Nation Elders Committee and Siksika Nation v. Director, Southern Region, Regional Services, Alberta Environment, re: Town of Strathmore (18 April 2007), Appeal Nos. 05-053-054-R (Alberta EAB)

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The Alberta Environmental Appeals Board recently released its report and recommendations involving the issuance of an amended approval for the Town of Strathmore's wastewater treatment system and an associated pipeline and outfall.¹ The Siksika Nation Elders Committee and the Siksika Nation appealed the amended approval on the basis that Alberta Environment failed to properly consider potentially significant impacts on the environment, human health and recreational use of the Bow River.

The report and recommendations are noteworthy as the Board placed significant focus on cumulative environmental impacts and on provincial and federal laws and policies relevant to government decisions on approvals impacting water quality.²

An initial step to dealing with cumulative effects

The cumulative impacts of nutrient loading on the Bow River have resulted in the river being under stress and becoming more eutrophic in nature.³ The Alberta Water Quality Guideline for phosphorous, of 0.05 mg/L, is currently exceeded in many reaches of the Bow River. Alberta Environment had set the condition of maximum allowable releases of phosphorous in the wastewater from the Town of Strathmore at 1 mg/L⁴. This amount of phosphorous is a concentration in wastewater "that would normally be required for a community with a population greater than 20,000", whereas Strathmore's population is less.⁵

The Board concluded that the 1 mg/L concentration for effluent was not in line with Alberta Environment's own policies and that it was not a reasonable approach to dealing with an already highly impacted watershed. The Board concluded that "if the receiving water is already above the applicable instream guideline, the treated wastewater should meet that instream guideline at the end-of-pipe."⁶ In coming to this conclusion the Board cited the *Water Quality Based Effluent Limits Procedures Manual*:⁷

Occasionally, upstream substance concentration may be found to exceed instream guidelines due to natural, anthropogenic, or a combination of the two influences. In this case the concentration (and/or load) of the substances should be limited so that it will meet the instream guidelines at end-of-pipe.

The Board went on to note that the policy amounted to "an anti-degradation policy of keeping any wastewater addition below the instream guideline so that the wastewater will effectively dilute the receiving water for the parameter that has already been exceeded instream".⁸ In doing so, the Board found that there was inadequate

consideration of the cumulative effect of the Town's wastewater on the Bow River, rejecting the piecemeal approach proposed as justification for the approval.⁹

The Board rightly targeted the issue of allowing continued incremental overloading at the end-of-pipe by having standards in approvals that exceed guideline levels, as this simply continues to compromise the recipient waterbody. In finding that the approval was inconsistent with Alberta Environment policy and tying the end-of-pipe value to the guidelines, there is at least the initial opportunity to curb continued cumulative impacts. This approach should be broadly and systematically applied in reviews of approvals to begin to manage cumulative effects of nutrient levels in effluent.

Admittedly, any approved effluent amount will add to the cumulative loading but if this reasoning is applied on a basin level the end-of-pipe impacts should be minimized. For this reason, it would be instructive to review all approvals on a watershed basis to discern whether approval conditions are contributing to exceedances of instream guidelines. These approvals could then be systematically amended (upon renewal) to have end-of-pipe conditions reflect the instream guideline levels. This would be an initial step to deal with cumulative impacts in relation to water quality and is an essential step to fulfill the pollution prevention mandate of the *Environmental Protection and Enhancement Act*.¹⁰ A shift of focus could then take place to determine the most effective way to manage nutrient loading from the various anthropogenic non-point sources.

Individual approval holders who have increasingly stringent conditions in their approvals may cry foul, feeling that they are bearing the burden of minimizing nutrient loading of the river, but in the absence of a legislative tool to address broad numbers of approvals at once it appears that a revision of approval conditions must be administered one approval at a time.¹¹ Ideally, collaboratively reached solutions for sector-based reductions could be put in place to reduce nutrient loading at end of pipe. These approaches would nevertheless need to be backstopped by approval conditions, something which does not appear to be possible in a timely manner under current legislation.¹²

Legal and policy compliance

The Board also looked at whether there was assessment of compliance with the federal *Fisheries Act*. Specifically, the Board noted that the amended approval contained conditions regarding ammonia but no accompanying conditions regarding the pH of the wastewater. The Board noted that previously measured pH levels in the wastewater would make ammonia harmful to fish.¹³ Similarly, dissolved oxygen and phosphorous levels in the secondary channel had the potential to be in violation of the *Fisheries Act*. The Board notes "in the end, no measures were implemented to prevent the treated wastewater from being found to be deleterious".¹⁴

The Department of Fisheries and Oceans had issued a letter of advice in relation to potential harmful alteration, disruption or destruction of fish habitat but expressed that the letter of advice did not reflect whether the effluent would violate the deleterious substance provisions of the *Fisheries Act*.

It appears that Alberta Environment and the consultants who worked on assessing impacts of the wastewater inadequately dealt with the issue of whether the effluent

would be deleterious, thereby frustrating aquatic protection.¹⁵ Alberta Environment did not pursue whether the discharge would be deleterious nor did it ensure that conditions of the amended approval were sufficient to avoid a discharge that was "likely to contravene the federal *Fisheries Act*".¹⁶

The Board approach to the *Fisheries Act* issue is noteworthy in at least two respects. First, the Board appears to view the *Fisheries Act* prohibitions as representative of an approach to ensure protection of the aquatic environment. As such, the determination of whether effluent or wastewater is deleterious to fish is seen as something that Alberta Environment must consider in fulfilling its environmental mandate. Second, the Board's approach holds Alberta Environment accountable for decisions about authorizations that may result in activities that violate federal environmental protection laws. Often provincial regulators ignore the potential licencing of federal offences, relying on the fact that the proponents of an activity must comply with all laws and regulations notwithstanding the provincial authorization. This position in turn assumes significant monitoring and enforcement from federal bodies that may not be in place.¹⁷ Further, this approach by provincial regulators promotes a misguided view of entitlement by a proponent to undertake an activity, where the proponent assumes that one regulator's approval of a release implies compliance under other legislation.

Alberta Environment's position

The Director took the position that the approval should be upheld, stating that "basin wide issues are not solely to be resolved in the context of one approval amendment" and that the approval would defer to the basin management planning.¹⁸ The Director also submitted that the "the supporting information in the application met current Alberta Environment standards and guidelines."¹⁹ This reflects a consistent approach to processing approvals but fails to adequately consider environmental objectives. It also indicates a hesitance on behalf of the department to proactively address cumulative impacts on an approval basis. The Director apparently wished to defer some decisions to watershed planning mechanisms. The process and implementation issues associated with this planning make timely action to address current water quality impacts virtually impossible. Alberta Environment must start addressing these issues now.

Board recommendations

The Board recommendations included an effective reversal of the Director's decision, with a staged method of managing wastewater until a comprehensive solution can be implemented when the new approval is sought in March 2008.²⁰ These recommendations included:

- a move to have authorizations in place to use the wastewater in irrigation to deal with lagoons that were near capacity;
- to conduct a dye study;
- to have an operational plan in place until a new approval can be issued in March 2008;
- where there are no viable alternatives to a Bow River discharge, a full risk assessment on downstream users must be conducted; and

- limiting discharges to one time in peak spring flows in 2007.

The Minister of Environment subsequently adopted the EAB's recommendations and issued an Order to implement those recommendations.²¹

Conclusion

It was significant that the Board referenced, analyzed and approached the position of the Director in light of several government policies. The Board noted that the outcomes of *Water for Life* should guide how Alberta Environment approaches approvals.

In the words of the Board:²²

The Water for Life Strategy recognizes the need to deal with cumulative effects on the rivers and other water sources in Alberta. It is important that steps are taken now to prevent further deterioration of our river systems, as it is difficult and requires time to reverse the adverse impacts of the excessive nutrient loading.

On the topic of cumulative impacts the Board noted "despite a general recognition by all the Parties that the Bow River is under stress from a range of human impacts, the most widely understood aspect, the excess nutrient loading on the Bow River, although acknowledged, was ultimately overlooked during the assessment of the pipeline project".²³ Further, the Board stated that phosphorous loading should have been considered earlier in the process, noting that the July 2005 assessment indicated that guideline levels would be exceeded in the Bow River and the project should have been reconsidered (and not tendered for pipeline construction).²⁴

The Environmental Law Centre lauds the Board's approach in this case. Its report and recommendations identify several key issues that must be considered as Alberta Environment proceeds with licences and approvals or amendments of these instruments. These key issues include:

- Approval conditions should incorporate proactive and preventative approaches to ensuring further degradation of waterways does not occur. Protective approval conditions are recognized as a timely and effective mechanism to address degraded systems and reflect a need for Alberta Environment to minimize reliance on planning processes that will not see substantive protection for waterways for some time to come (if at all);
- Addressing adverse effects and being protective in approval conditions must be the main message sent to project proponents to ensure that a true and thorough assessment of alternatives is made. This is particularly the case where ecosystems are being degraded and technological answers do not exist to minimize those impacts on the environment; and
- Excessive reliance by Alberta Environment on a proponent's consultant's work is problematic if the capacity does not exist within the department to fully review and assess the environmental assessment work, particularly where changes to the project occur. Adopting a proponent's position without significant and thorough review in relation to environmental impacts is not acceptable and will only foster

conflict and adversarial processes, providing the Board with more and more work in the future.

¹ *Siksika Nation Elders Committee and Siksika Nation v. Director, Southern Region, Regional Services, Alberta Environment, re: Town of Strathmore* (18 April 2007), Appeal Nos. 05-053-054-R (A.E.A.B.) [Erratum Pending]

² Also of significance the Board found that there was inadequate assessment of impacts on water quality (particularly considering the change of location of the outfall), and the actual nature of treatment downstream users had at their disposal. The Board also questioned certain assumptions made in the assessment conducted by the consultant, particularly in relation to mixing and dilution rates. This raises a broader issue of Alberta Environment having the capacity to review and analyze third party assessments prior to decision making taking place.

³ See Alberta Environment, *Alberta River Water Quality Index Trends, April 1995-March 2005*, online: <<http://environment.gov.ab.ca/info/library/7684.pdf>>

⁴ *Supra* note 1 at para. 345.

⁵ *Ibid.*

⁶ *Ibid.* para. 346.

⁷ *Ibid.* at para. 342.

⁸ *Ibid.* at para. 343.

⁹ The Director's Record cited the fact that the approval was in relation to a population that represented 1% of Calgary's and that it was like approving another Calgary subdivision. The Board aptly rejected this position citing the fact that this is more of an illustration of how Calgary must take steps to manage its nutrient loading of the Bow River (para. 336).

¹⁰ As represented in section 2(d) of the Purpose section of that Act.

¹¹ Currently the ability of the Director to amend an approval is limited under section 70(3) of the *Environmental Protection and Enhancement Act*, which requires that the Director show that the adverse effect was not reasonably foreseeable at the time of issuance of the original approval. This would require proof that the adverse effect was not reasonably foreseeable for each separate approval and makes sectoral approval amendments impossible.

¹² *Ibid.*

¹³ *Supra* note 1 at para. 267.

¹⁴ *Ibid.*

¹⁵ *Ibid.* at para. 288.

¹⁶ *Ibid.* at para. 293.

¹⁷ See Jason Unger, "DFO Sets New Policy Course for Fisheries Act Enforcement" *Environmental Law Centre News Brief*, 20:4 (2005), pp. 4-7.

¹⁸ *Supra* note 1 at paras. 631-632.

¹⁹ *Ibid.* at para. 629.

²⁰ *Ibid.* at para. 401.

²¹ *Ibid.* at page 277.

²² *Ibid.* at para. 418.

²³ *Ibid.* at para. 329.

²⁴ *Ibid.* at paras. 333-334.

Action Update: Nuclear Energy - Siting Concerns

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Introduction

This article is a follow-up to a previous *News Brief* article respecting the intentions of Energy Alberta Corporation (EAC) to apply for approval to build and operate Alberta's first nuclear-powered electricity generator.¹ That article discussed at a general level constitutional jurisdiction relating to nuclear energy regulation and provided an introduction and high level overview of the regulatory processes of the Canadian Nuclear Safety Commission (CNSC).

On August 25, 2007, EAC filed an application with the CNSC for a licence to prepare a site for a nuclear facility in the Peace River area. This article describes the factors to be considered by the CNSC when determining an application for a licence to prepare a site under the *Nuclear Safety Control Act (NSCA)*² and describes opportunities for stakeholder involvement in the CNSC licencing process. This article also provides CNSC contact information for those people interested in receiving a copy of the EAC application or other information as it becomes available. At the time of writing this article, the EAC application has not been released for public review; accordingly, this article is general in nature.

Licence to prepare a site

The licence to prepare a site is the first of five licenses that must be obtained by a proponent of a nuclear facility. Licences must also be obtained to construct, operate, decommission and abandon a nuclear facility.

The licence to prepare a site for a nuclear facility is site-focused rather than project focused. When determining an application for a licence to prepare a site, the CNSC must be satisfied that it is feasible to design, construct and operate the facility on the proposed site in a manner that will meet all health, safety, security and environmental protection requirements.

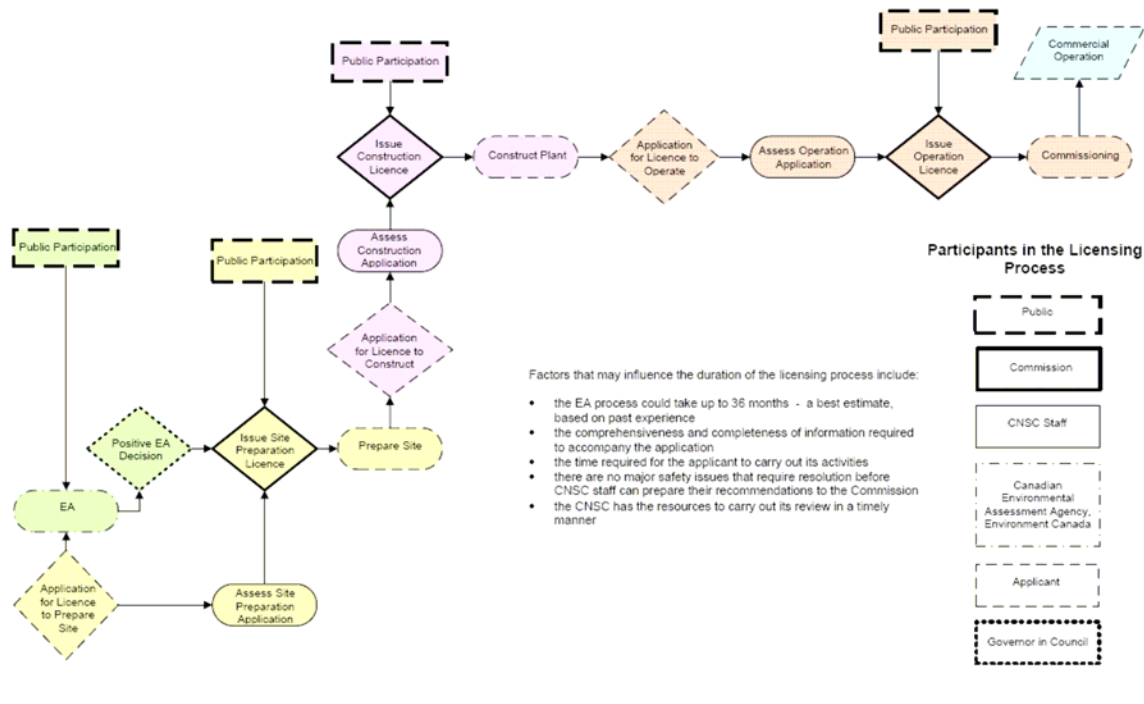
Factors that are considered by the CNSC when determining an application for a licence to prepare a site include:³

- the potential effects of external events (such as seismic events, tornadoes and floods) and human activity on the site;
- the characteristics of the site and its environment which could influence the transfer to persons and the environment of radioactive and hazardous material that may be released; and
- the population density, population distribution and other characteristics of the region, insofar as they may affect the implementation of emergency measures and the evaluation of the risks to individuals, the surrounding population and the environment.

CNSC licencing process

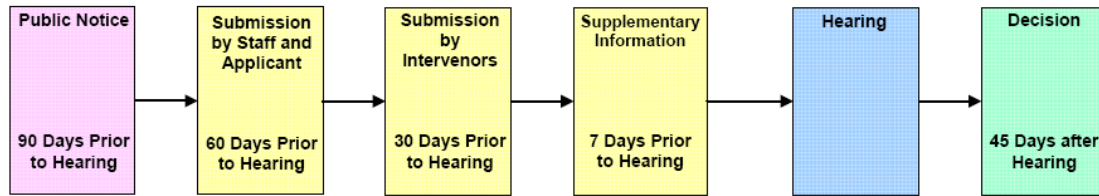
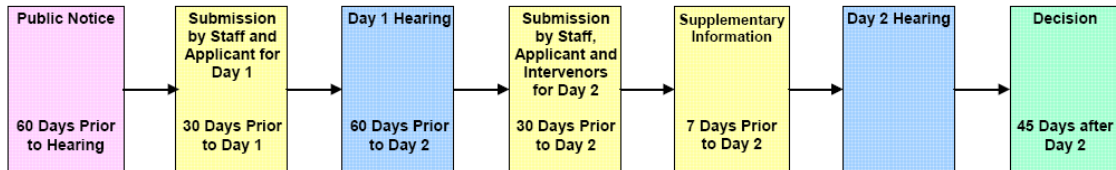
The following graphic sets out the licencing process and illustrates the siting, construction, and operating licences that must be obtained prior to commissioning the nuclear power plant.⁴

Figure 3: Licensing Process for a New Nuclear Power Plant in Canada



The graphic illustrates that, in addition to the opportunity for public participation in the review of the project under the *Canadian Environmental Assessment Act*, there is an opportunity to participate in each licencing step by the CNSC. The public participation process used by the CNSC is described in the CNSC Licencing Process Guide (the “CNSC Guide”) as well as in a number of documents that can be found on the CNSC website.

The hearing process is governed by the CNSC’s *Rules of Procedure*⁵ (the “CNSC Rules”), which are available on the CNSC website. The Rules set out two different hearing processes that may apply to each licence required; the relevant process is determined by the anticipated length of the hearing. The following graphical representation of hearing process timelines is found in the CNSC Guide.

One-Day Hearing (~ 5 Months)**Two-Day Hearing (~ 6 Months)**

A hearing may be held on one or more days in one or more places. Discussions with CNSC staff indicate that at least one of the hearing days is typically in the area of the proposed nuclear facility. The CNSC is required to issue a notice of hearing to parties and to the public at least 60 days before the start of the hearing. Notice to the public may be in any manner that the CNSC considers will most likely result in the notice coming to the attention of persons interested in the matter being considered. The CNSC Guide indicates that, typically, public hearings for licensing applications for nuclear power plants take place over two hearing days in a ninety-day period.

A person seeking to intervene at a public hearing must file a request with the CNSC Secretariat under section 19 of the *CNSC Rules*. It is always important to be aware of and adhere to deadlines because failure to do so may jeopardize one's ability to process participate. For one-day hearings, a request to intervene must be filed by the date specified in the notice of hearing. For two-day hearings, the request to intervene must be filed at least 30 days before the second hearing day. Where a hearing is held over two days, any intervenors' written submissions and oral presentations shall be considered on the second hearing day.

A request to intervene must contain, among other things, a description of how the requester meets at least one of the conditions for intervening: the requester must be (a) a person who has an interest in the matter being heard; or (b) a person who has expertise in the matter or information that may be useful to the CNSC in coming to a decision. A request to intervene must also include a statement indicating whether the requester wishes to intervene by way of written submissions only or by way of written and oral submissions and must include a copy of documentary information and submissions.

At the hearing, the CNSC has discretion to permit participants to present information and submissions orally or in writing and may permit participants to question one another and any witnesses. Participants do not necessarily have an opportunity to directly cross-examine each other or witnesses; rather, questions are posed to other participants through the Board. Typically, intervenors are given 10 minutes each for their oral

presentations. Intervenor funding is not available to assist intervenors with expenses related to attendance at hearings.

The CNSC Guide indicates that following Hearing Day 2, the Commission members will deliberate and render a Record of Proceedings, including Reasons for Decision. Typically, the Record of Proceedings and Reasons for Decision are published within six weeks after the close of the hearing.

EAC application information

As noted, this article was written after the EAC application was filed with the CNSC but prior to its public release. The application and certain other related materials filed with or generated by the CNSC are generally considered to be public documents, subject to certain exceptions outlined in the CNSC Rules.⁶ However, an applicant is not required to make the application or other materials publicly available. The CNSC does not post the application or related materials on its website, nor does it have a publicly accessible on-line document repository for application information. However, copies of the EAC application may be obtained by making an e-mail request to Mr. Aurèle Gervais of the CNSC. Full contact information for Mr. Gervais is as follows:

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Government of Canada | Gouvernement du Canada

¹ Dean Watt, "Nuclear Power for the Oil Sands: A Regulatory Framework", *Environmental Law Centre News Brief* 22:1 (2007) 1.

² S.C. 1997, c. 9.

³ Canadian Nuclear Safety Commission, *Licensing Process for New Nuclear Power Plants in Canada*, February 2006, INFO-0756 (Ottawa: Canadian Nuclear Safety Commission).

⁴ *Ibid.*

⁵ *Canadian Nuclear Safety Commission Rules of Procedure*, S.O.R./2000-211, s. 16.

⁶ *Ibid.*, s. 15(2).

Lawsuit Launched Against Canada For Breaching Kyoto

By Jodie Hierlmeier
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On May 28, 2007, Friends of the Earth Canada launched a landmark lawsuit against the Government of Canada for abandoning its international commitments under the Kyoto Protocol.¹ Filed in the Federal Court by Sierra Legal Defence Fund, the lawsuit alleges that the federal government is violating Canadian law by failing to meet its binding international commitments to reduce greenhouse gas ("GHG") emissions.

The lawsuit is an application for judicial review and alleges that the failure of the Minister of Environment and the Minister of Health to effectively regulate GHGs is likely to violate the United Nations Framework Convention on Climate Change and its Kyoto Protocol. This would place the Ministers in breach of section 166 of the *Canadian Environmental Protection Act, 1999* ("CEPA"), a provision which states that Canada must abide by its international agreements in preventing air pollution.² Section 166 requires the Minister of Environment to act against "air pollution that violates, or is likely to violate, an international agreement binding on Canada in relation to the prevention, control, or correction of pollution."

The lawsuit is not a civil action and no damages will be awarded. The remedies sought include an order declaring that the actions or inactions of the Government of Canada regarding GHG emissions are insufficient to meet section 166 of CEPA, and an order of *mandamus* requiring the Minister of Environment to comply with section 166 of CEPA. Basically, the lawsuit is seeking to obtain regulations that will put an absolute cap on GHG emissions at a level and within a time frame that meets Canada's Kyoto obligations.

The lawsuit was filed in response to the federal government's latest climate change plan. On April 26, the federal government announced its "Turning the Corner" climate change plan which set GHG reduction targets from industry and other sources at 20 percent below 2006 levels by 2020.³ As a party to the Kyoto Protocol, Canada is legally bound to reduce its GHG emissions by six percent below 1990 levels by the end of 2012. The federal plan would leave Canada approximately 39 percent off target with Kyoto in 2012 and it would not achieve its Kyoto target until 2025, if at all.

This lawsuit is groundbreaking for at least two reasons. First, this appears to be the first time that a government has been sued based on its failure to meet its Kyoto obligations. Second, this marks the first lawsuit launched in Canada to enforce GHG reductions. Judicial reviews have been launched against governments in the United States and Australia for the failure to evaluate the impacts of their activities on global warming. For example, in the United States, suits have been started against the Environmental Protection Agency to require the agency to regulate GHGs from new motor vehicles.⁴ In Australia, environmentalists have won cases against the government to force restrictions on coal mines that emit GHGs.⁵ However, in Canada, this type of litigation has not been seen before and it may foreshadow further legal challenges to come as Canada and the international community continue to grapple with regulating their GHG emissions.

¹ *Friends of the Earth – Les Ami(e)s de la Terre and Her Majesty the Queen, the Minister of the Environment and the Minister of Health*, Fed. T.D., 28 May 2007 (Notice of Application).

² *Canadian Environmental Protection Act, 1999*, S.C. 1999, c. 33.

³ online: Government of Canada <<http://www.ecoaction.gc.ca/turning-virage/index-eng.cfm>>.

⁴ This suit was unsuccessful. The court held that it was within the Agency's discretion not to impose mandatory limits on GHGs from new motor vehicles; see *Commonwealth of Massachusetts et al. v. EPA*, 415 F.3d 50 (D.C. Cir. 2005).

⁵ See *Australian Conservation Foundation v. Minister for Planning*, [2004] VCAT 2029.

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Action Update: Land Use Framework

By Dean Watt
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Introduction

As reported in previous issues of *News Brief*, the government of Alberta has identified the need to design and implement a comprehensive land-use policy and has engaged Albertans in the development of the Land-Use Framework.

The Environmental Law Centre (ELC) has been an active participant in the development of the Land-Use Framework to this point. This article summarizes a longer submission by the ELC to the Alberta government in June 2007. That submission is based on the information and questions contained in the Land Use Framework Workbook and accompanying document entitled "Understanding Land Use in Alberta".¹

Vision for land use in Alberta

The ELC's vision for land use in Alberta is as follows:

Land use decisions are made in accordance with sound laws and policies that are protective of the environment and are implemented and effectively applied so to ensure the sustainability of Alberta's natural capital.

Breaking down the ELC's vision, sound laws and policies are those that are clear and enforceable and for which decision-makers are held accountable. Further, they allow for meaningful public engagement at all significant land-use decision-making steps. Currently, land-use planning laws and mechanisms do not reflect these principles.

Sound environmental laws also recognize the precautionary principle. In legal terms, the precautionary principle has been described as "where there are threats of serious or irreversible damage, lack of full scientific certainty shall not be used as a reason for postponing cost effective measures to prevent environmental degradation".² This principle must be kept in mind when determining appropriate limits and thresholds to address cumulative effects.

Identifying the problem

The first critical step to solving a problem is the clear identification of that problem. The ELC considers the chief mischief to be addressed the fact that the current legal, institutional and policy framework for land and resource management decisions cannot be used to set and realize landscape-scale objectives and to effectively address cumulative impacts of land-use decisions. Under the current suite of laws, regulations and policies, land-use and resource management decisions are made by many different decision-makers in isolation from each other and without consideration of broader cumulative impacts on the environment.

Integration of planning and decision-making processes

Land-use decisions in Alberta are made by different branches and levels of government, frequently with respect to the same parcel of land. Each of these decision-makers has

its own mandate and is subject to its own political pressures. This leads to the potential for incremental decision-making that considers the impacts of a particular land use in isolation from impacts of other uses on the environment in that region. To address this issue, land use decision-making and land use planning must be consistent with the principles of integrated landscape management; planning must be integrated across sectors, across different levels of decision-making and across geography and time.

Land-use planning decisions are made in sectoral isolation. When land-use decisions are made sector by sector, such as is the case when mineral rights are issued by Alberta Energy or timber rights are issued by Alberta Sustainable Resource Development, each of those land use decisions has an impact that extends beyond the land in question; the cumulative effects are externalized from the specific decision maker in each case. Establishing landscape-scale objectives that govern and place enforceable limits on individual land use decisions within a region ensure that those decisions are consistent with broader objectives and values.

Land-use planning must also be integrated between different levels of decision-makers and processes. When local or regional land-use decisions impact provincial or national interests, such as maintaining biodiversity, or pursuing over-arching economic or social priorities, higher-level policy direction should be incorporated into the planning process.³ Municipalities cannot develop this higher-level policy individually. Broad, landscape-scale objectives should be established by the province to place meaningful limits on the discretion of municipalities as well as individual government departments to make land-use decisions. These objectives should be developed through a public process that allows for meaningful stakeholder engagement.

In order to achieve landscape-scale objectives, land-use planning must also be integrated across geography and across time. Planning must be done on a regional basis, and must consider cumulative effects on the broader region, rather than simply the area proposed for a specific development. Regions should be rationally derived and should align with ecosystem elements. Municipal boundaries do not necessarily conform to ecosystem boundaries and, thus, municipalities make for poor planning regions. A better example of a rationally derived planning region is a watershed. Because all land-uses within a watershed have potential to impact the quantity and quality of water within the watershed, cumulative effects of land-use decisions must consider impacts throughout the entire watershed.

Need to establish regulatory limits

Integrated landscape management amounts to more than simply coordinating activities in order to reduce industrial footprints on the landscape. It is about setting and prioritizing landscape-scale objectives and developing a planning strategy to achieve those objectives.⁴ In order to achieve landscape-scale objectives, the planning strategy must include the setting of limits on the total amount and intensity of activity in a given, rationally derived, region. By building into landscape-scale planning documents limits such as limits on linear disturbance density, the density of stream crossings or the total amount of forest cover that can be removed, planners help to ensure that incremental decision making does not put the landscape-scale objectives in jeopardy.⁵ Meaningful consequences must lie for decision-making that does not respect established limits and thresholds. This will require that thresholds and limits be incorporated in binding law and regulation and that decisions be in writing and be appealable.

Resolving land-use conflicts

The provincial government should create mechanisms for resolving land-use conflicts at the provincial, regional and local level. The establishment of priorities for land-use activities and the enforcement of limits on activities and impacts on the land will inevitably lead to land use conflicts. Because land use decisions affect economic and non-economic values of land and the environment, an arbitrator of land-use conflicts must allow for meaningful participation by all interested persons, rather than extending participation rights only to those with economic interest. This process should grant participation rights to any person or group who has a legitimate interest that ought to be represented in the proceeding or process, or has an established record of legitimate concern for the interest they seek to represent.⁶

Adequacy of information for decision makers

When decisions are made by the provincial government or a regional land use planning body to establish a regional, landscape scale objective for a particular region, that decision maker requires sufficient information to satisfy itself that it can establish an effective and enforceable landscape-scale objective that will be adhered to by all decision-makers approving particular land-uses within that region. Once landscape-scale objectives have been established, decision-makers responsible for approving land-uses require, in each case, sufficient information to enable them to satisfy themselves that the proposed land use is consistent with established landscape-scale objectives for the particular region.

It is important that land use decision-makers are appropriately inclusive in the manner in which they receive the above-noted information. At the level of setting landscape-scale objectives, decision-makers should allow the broadest public participation. At the level of approving specific land uses, the process must allow for proponent information respecting impacts of a proposed activity on a region to be publicly tested.

Performance in relation to provincial and regional land-use objectives should be monitored and publicly reported. Land-use decision makers must be able to see the positive and negative consequences of their decisions. Without monitoring and reporting information on the various elements reflected in the landscape-scale objectives and limits, decision-makers cannot know if they are headed in the right direction.

Interaction with dispositions

The footprint created by Alberta's energy industry is enormous. Alberta Energy sells mineral rights in response to market demand in the absence of a public planning framework. If the proposed Land-Use Framework is to succeed, it must be applicable to all significant land uses, including energy development.

The provincial government has taken the position that there is a need to meet formal commitments already made through current land-use decisions. The province is facing a cumulative effects crisis precisely because current land use decisions have been made in the absence of effective integrated land management considerations. To insist that the starting point for a Land-Use Framework is to require that there can be no revisiting existing dispositions indicates that there may be little point in developing this process. The province should develop criteria and process to allow for the Crown to take dispositions back and determine appropriate compensation.

Conclusion

The ELC considers that the development of a landscape-scale land use-planning framework is urgently required to address the problem of cumulative effects associated with increasing land-use in Alberta. In order for the Land-Use Framework to address this problem, it must have cumulative effects as its central problem to be solved.

The Land-Use Framework, recognizing and applying integrated landscape management principles, should establish landscape-scale objectives and should allow for the creation of limits on activities and impacts in order to achieve those objectives. The Land-Use Framework, and the discipline it will impose on land-use decision-making, must be applicable to all significant land uses in the province, including the development of oil and gas resources. Further, and most importantly, it must be enforceable and legally binding. Enshrining it in legislation would have this desired effect.

The Land-Use Framework must be supported by a strong political commitment by the highest levels of the provincial government. The setting of priorities and limits will result in trade-offs. No longer can the mantra "everything, anywhere, anytime" be applicable if the problem of cumulative effects is to be addressed in a meaningful way.

¹ Dean Watt, *Written Submission Accompanying Land Use Framework Workbook* (Edmonton: Environmental Law Centre, 2007), online:

<<http://www.elc.ab.ca/ims/client/upload/Land%20Use%20Framework%20Submission.pdf>>.

² *Rio Declaration on Environment and Development*, 14 June 1992, 31 I.L.M. 874, Principle 15.

³ Steven A. Kennett, "A Checklist for Evaluating Alberta's New Land Use Initiatives", *Resources* No. 95, Summer 2006, Canadian Institute of Resources Law at 3, online:

<<http://www.ucalgary.ca/~cir/pdf/Resources95.pdf>>.

⁴ See Jodie Hierlmeier, *Submissions to the Oil Sands Panel on Phase II Proposed Options and Strategies and Actions for Oil Sands Development in Alberta* (Edmonton, Environmental Law Centre, 2007), online:

<<http://www.elc.ab.ca/ims/client/upload/Submission%20as%20presented%20to%20the%20Oil%20Sands%20Panel%20in%20Edmonton%20on%20%20April.pdf>>.

⁵ *Supra* note 3 at 6.

⁶ See Cindy Chiasson & Jodie Hierlmeier, *Public Access to Environmental Appeals: A Review and Assessment of Alberta's Environmental Appeals Board* (Edmonton: Environmental Law Centre, 2006) for a discussion of standing in the context of the Environmental Appeals Board. See also Cindy Chiasson, *Submissions to the Oil Sands Panel on Phase II Proposed Options and Strategies and Actions for Oil Sands Development in Alberta* (Edmonton, Environmental Law Centre, 2007), online:

<<http://www.elc.ab.ca/ims/client/upload/Submission%20as%20presented%20to%20the%20Oil%20Sands%20Panel%20in%20Calgary.pdf>>.