

SaskPower's Response to the June 17th Stakeholder Workshop

Introduction:

SaskPower is the principal supplier of electricity in Saskatchewan, currently serving in excess of 430,000 customers. Founded as the Saskatchewan Power Commission in 1929, our mandate is to deliver safe, reliable, cost-effective power to the residents of Saskatchewan.

SaskPower's values reflect an ongoing commitment to protecting the environment, and recognition of the need to address climate change. SaskPower has been a Voluntary Challenge Registry (VCR) Inc. registrant since 1995, annually publishing its Climate Change Action Plan Progress Report, which details not only greenhouse gas (GHG) emissions, but also our strategy to reduce these emissions. Since 2001, the VCR Inc has recognized SaskPower as a Gold Level Reporter.

In accordance with our corporate GHG emission reduction strategy, SaskPower has invested in several GHG offset projects and is pursuing collaborative offset opportunities through participation with the Greenhouse Gas Emission Reduction Trading (GERT) pilot and the Greenhouse Emissions Management Consortium (GEMCo).

SaskPower's GHG emission reduction strategy also includes support for research into opportunities to physically mitigate GHG emissions. SaskPower is currently involved with several collaborative research initiatives aimed at flue gas capture of carbon dioxide (University of Regina and CANMET), and the development of a clean coal technology (Zero Emissions Coal Alliance and Canadian Clean Power Coalition). SaskPower is also involved in a study being conducted by the Petroleum Technology Research Centre assessing the feasibility of the geological sequestration of carbon dioxide in the Weyburn oil fields.

For further details regarding SaskPower's GHG emission reduction activities, please see the 2001 Climate Change Action Plan Progress Report, posted on the Internet at www.saskpower.com and www.vcr-mvr.ca.

General Comments:

The federal workshop held in Regina on June 17 was an excellent opportunity for stakeholders to begin developing a shared response to international agreements calling for the reduction of GHG emissions. SaskPower will continue to meet its historic mandate to serve the people of Saskatchewan while addressing the current challenges presented by climate change, including anticipated regulatory changes.

It is SaskPower's opinion that any regulatory changes affecting the electrical industry must be implemented in a prudent fashion – a principle we believe is shared by other government and industry stakeholders. SaskPower is supportive of a national GHG emissions management plan, provided that it is based on realistic assumptions and does not place undue burden on any one industry or region in Canada.

Implementing an incomplete and ill-conceived response to the issue of climate change could result in a significant, negative impact on electricity rates across the country – and thus have an adverse impact on provincial and national economic growth.

SaskPower believes that the most prudent approach to GHG emissions management would consider the effect of GHG emissions on the regulation of pollutants. Effective control of GHG emissions from the electricity sector will require a fundamental change in the infrastructure currently supporting the industry. Two examples serve to highlight this challenge:

1. The large scale conversion to natural gas fired electricity generation would require an increase in the available supply of natural gas, and an expansion of existing natural gas transmission networks.
2. The capacity of the East-West transmission lines, which currently limit the inter-provincial trade of electricity, would require upgrading.

To succeed in reducing GHG emissions, these infrastructure changes would have to be planned in a holistic manner at a macro level and involve industry participation from various sectors. Due to the scope of these and other necessary changes, meaningful reductions in GHG emissions will require a time horizon beyond the 2010 time frame modeled by the federal analysis. A hurried, piecemeal approach would be far less efficient, and yield only limited results at relatively high costs.

At the same time, none of the stakeholders can afford to operate in a timeless vacuum. SaskPower, appreciating the need to register short term successes, is already using GHG credit trading as a transitional tool. To date, SaskPower has made several significant acquisitions of GHG credits. Having gained considerable expertise in the GHG emission areas of market based mechanisms and technological mitigation, SaskPower would welcome the opportunity to provide input and help forge a dialogue among stakeholders to facilitate the formation of a domestic implementation plan for GHG emission mitigation. It is imperative that this dialogue extends beyond the scope of this submission.

SaskPower believes the use of any GHG credit-trading tool should be balanced with the need for spending on the research and development of environmentally friendly technologies.

Comments on the *Federal Discussion Paper Analysis*:

While the aim of the *Federal Discussion Paper* is well-intentioned, upon detailed review and consideration of information gained from the June 17 workshop in Regina, SaskPower has found that the sections reporting on the analysis results are very scarce on detail – specifically, the absence of any micro-economic assessment.

The current level of detail in the *Federal Discussion Paper* leads SaskPower to conclude that compliance costs for the electricity sector have been grossly underestimated. For example, it is not prudent to suggest, as the federal analysis does, that clean coal technology will yield significant emission reductions by 2010. The analysis also seems to ignore the transaction costs associated with the creation of a domestic emission trading (DET) system, the development of monitoring and verification protocols for GHG emissions measurements, and the establishment of an international bureaucracy to administer the Kyoto Protocol.

Regarding the design of a DET system, SaskPower feels that the development of any such system should include a maximum number of market based emission reduction and offset mechanisms and should minimize the need for international permit acquisitions. The incorporation by the DET of the offsetting sectors is viewed as desirable. However, important mechanisms such as Forest Carbon Management (FCM) were conspicuously absent from the federal discussion. Reductions realized from FCM are credible, internationally recognized and should be incorporated into the

DET system. If consulted, SaskPower would be willing to share expertise gained through the Greenhouse Emissions Reduction Trading (GERT) pilot and various other GHG emission reduction projects to aid in the development of a DET system.

The development of new technology is key to mitigating GHG emissions, especially within the electricity sector. Rather than discouraging research and development spending by focusing on short-term solutions, SaskPower urges that the federal government make available additional funds to facilitate the innovation process. The federal analysis assumes that stakeholder companies have an unlimited supply of capital funds. In reality, funds spent on short-term compliance costs become unavailable for research and development spending.

SaskPower is very encouraged by the invitation from the federal government to offer feedback on the discussion paper. However, before SaskPower is able to comment in a meaningful fashion on the relative merits of any one of these options, we require clarification on several points of the analysis, in order to better understand the analysis results. These questions are highlighted below. In addition to providing clarification, SaskPower also urges that the federal government conduct a micro-economic assessment of its analysis options to determine the cost impacts on sectors and regions.

Questions on the Analysis:

1. The analysis seems to be focused entirely on reductions for 2010. As noted earlier, the capacity for the electricity sector to provide significant technologically based emission reductions by 2010 is limited, due primarily to available technology, but also capital stock turnover rate. Given the expense and long life of capital, the electricity sector planning horizon typically extends well beyond 25 years, mandating that decisions on new electrical generation be made well in advance. Provided with a longer planning horizon, technological solutions to GHG mitigation from the electricity sector will be available. Provided with only a seven year lead time, and no proven technological measures at our disposal, large scale GHG reductions cannot reasonably be achieved.

Questions:

- a) What national levels of GHG reductions are expected beyond 2010?
 - b) What level of reductions can the electricity sector plan to expect beyond 2010?
2. SaskPower is one of seven members seeking to develop clean coal electricity generation technology through the Canadian Clean Power Coalition (CCPC). Although the research and development work of the CCPC is some of the most advanced in the field, commercial scale application of clean coal technology is not expected before 2017. The costs associated with the technology in 2017 are as of yet still highly uncertain. However, the *Federal Discussion Paper* analysis assumes that clean coal technology will yield 19.5 million tonnes (MT) of GHG reductions by 2010.

Questions:

- a) What technology does the analysis assume will be available in time for 2010?
- b) What are the costs assumed by the model for the emission reductions from clean coal technology?
- c) Where does the model assume these emission reductions will take place?

3. SaskPower is currently in the process of constructing the 5.9 Megawatt (MW) Cypress Wind Power Project in southwestern Saskatchewan. This is the second wind power project in Saskatchewan. The 11 MW SunBridge Wind Power Project was commissioned in 2001, with the federal government currently purchasing some of the GreenPower output from SaskPower. In addition to acquiring GreenPower, the federal government is also receiving emission reduction credits (ERC) generated by the SunBridge Project. The ERC are calculated based on a monitoring and verification protocol established specifically for this purpose. The *Federal Discussion Paper* analysis assumes that new renewable energy production will yield 13 MT of GHG reductions by 2010. Based on the protocol SaskPower developed for the federal government, 13 MT of reductions would require the construction of more than 7,600 MW of zero emission electricity. At the beginning of 2002, Canada had 207 MW of operating wind capacity.

Questions:

- a) In which provinces are these reductions expected to take place?
 - b) What form does the model assume the renewable energy will take (noting that large hydro projects and the supporting transmission lines can take well over 10 years to gain regulatory approvals)?
 - c) What are the costs assumed by the model for emission reductions from renewable energy?
4. One of the characteristics of coal based electricity generation is that it involves significant long-term capital investments. The premature retirement of coal plants and replacement by low emitting capacity would involve significant investment in new capacity earlier than would otherwise be required. Coal contracts would also have to be cancelled, resulting in payment of significant penalties. The consequence is that customers, taxpayers and/or shareholders would be required to bear the costs arising from the incremental cost of replacing existing generation, plus the remaining stranded capital value of the prematurely retired coal capacity, plus the coal contract penalties.

Questions:

- a) What costs does the analysis assume are associated for the construction of new low emitting generation facilities?
 - b) Does the analysis account for the costs of coal contract penalties?
 - c) Does the analysis account for the costs of stranded capital?
5. Some of the reductions from the electricity sector are realized from increased imports and reduced exports to the U.S. Since the U.S. based electricity generators are on average significantly more GHG intensive (kg CO₂/kW.h) relative to Canadian exporters, this change in imports/exports would likely cause an increase in North American GHG emission levels.

Questions:

- a) Did the analysis estimate the North American impact on GHG emissions of increased generation in the U.S.? If so, what was the impact?
 - b) Did the analysis assume the imported electricity from the U.S. is GHG emission free?
6. SaskPower feels that the DET permit allocation options outlined in the *Federal Discussion Paper* would likely place an unfair burden on coal fired electric utilities by: 1) using natural gas as the benchmark; and 2) incorporating a “scale-back factor”. Although not explicitly stated,

the DET permit allocation regime discussed in the *Federal Discussion Paper* seems to suggest that the benchmark emissions intensity per unit of production will be based on natural gas generation. Since natural gas is significantly less GHG intensive relative to coal, the electric utilities that rely predominantly on coal will suffer considerable disadvantage. In addition to this, the allocation mechanism also incorporates a scale back factor implying that best available technology would be insufficient to meet GHG targets. This scale-back factor is equivalent to a tax on the emissions of firms, even the highly GHG-efficient firms using best available technology.

Questions:

- a) The DET allocation mechanism was modeled by the AMG for Option #3, what was the industry benchmark electricity intensity (in tonnes CO₂/MW.h) used?
 - b) What is the emission intensity currently being considered under Option #4?
 - c) What is the “scale-back factor” being considered under Option #4?
7. The analysis indicates that Action Plan 2000 and Budget 2001 will yield 50 MT of GHG reductions by 2010. Without a breakdown or any further details being included in the *Federal Discussion Paper*, SaskPower has concerns regarding the likelihood of achieving these reductions.

Questions:

- a) Where in Canada and through what specific projects are the 50 MT of reductions obtained?
- b) Is there a measurement and verification protocol in place to verify these reductions, since these reductions would ultimately have to be approved by an international body?