Minnesota Public Utilities Commission

Staff Briefing Papers

Meeting Date: October 18, 2012 ..... ** Agenda Item # **_2_**

Company: All Electric Utilities

Docket No. E-999/CI-07-1199

In the Matter of Establishing an Estimate of the Costs of Future Carbon Dioxide Regulation on Electricity Generation Under Minn. Stat. §216H.06

Issue(s): What values should the Commission adopt as the likely range of costs for future carbon dioxide regulation on electricity generation?

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Relevant Documents

Commission Order Establishing Estimate of Future Carbon Dioxide Regulation Costs ..... December 21, 2007
Commission Order Establishing 2009 and 2010 Estimate of Future Carbon Dioxide Regulation Costs ..... October 8, 2009
Commission Order Establishing 2011 Estimate of Future Carbon Dioxide Regulation Costs ..... June 3, 2011
Letter from the Minnesota Pollution Control Agency and the OES..... July 19, 2012
Otter Tail Power Company Comments ..... August 17, 2012
Minnesota Large Industrial Group Comments ..... August 20, 2012
Minnesota Power Comments ..... August 20, 2012
Xcel Energy Comments ..... August 20, 2012
Interstate Power and Light Company Comments ..... August 20, 2012
Dairyland Power Cooperative Comments ..... August 20, 2012
Minnesota Chamber of Commerce Comments ..... August 20, 2012
Interstate Power and Light Company Additional Comments ..... August 21, 2012
Department of Commerce Comment ..... August 30, 2012
Izaak Walton League of America, Fresh Energy, and Minnesota Center for Environmental Advocacy Reply Comments ..... August 30, 2012

Statement of the Issue

What values should the Commission adopt as the likely range of costs for future carbon dioxide regulation on electricity generation?

Relevant Statute

The entire Minn. Stat. § 216H. Greenhouse Gas Emissions is attached to the briefing papers. The portion of the statute being deal with here is Minn. Stat. § 216H.06 Greenhouse Gas Emissions Consideration in Resource Planning:

> By January 1, 2008, the Public Utilities Commission shall establish an estimate of the likely range of costs of future carbon dioxide regulation on electricity generation. The estimate, which may be made in a commission order, must be used in all electricity generation resource acquisition proceedings. The estimates, and annual updates, must be made following informal proceedings conducted by the commissioners of commerce and pollution control that allow interested parties to submit comments

Background

The Next Generation Energy Act, Minnesota Session Laws 2007, Chapter 136, Article 5, was codified as Minnesota Statutes 2007, Chapter 216H, Greenhouse Gas Emissions. Minn. Stat. §216H.06 required the Commission to establish an estimate of the likely range of costs of future carbon dioxide regulation on electricity generation, and update the estimates annually following informal proceedings conducted by the commissioners of commerce and pollution control that allow interested parties to submit comments.

On December 21, 2007, the Commission issued an order estimating that CO_2 regulation of electricity generation will cost between \$4/ton and \$30/ton for CO_2 emitted in 2012 and thereafter.

On October 8, 2009, the Commission issued an Order Establishing 2009 and 2010 Estimate of Future Carbon Dioxide Regulation Costs, establishing a range of \$9 to \$34/ton for CO_2 emitted in 2012 and thereafter.

On June 3, 2011, the Commission issued an Order Establishing 2011 Estimate of Future Carbon Dioxide Regulation Costs maintaining the estimate of the range of likely costs of CO_2 regulation at between \$9 and \$34 per ton of CO_2 emitted in 2012 and thereafter.

As part of the process of developing a recommendation for the range of cost estimates for future cost of carbon dioxide regulation on electricity generation, the Minnesota Pollution Control Agency ("MPCA") and the Minnesota Department of Commerce, Division of Energy Resources ("DOC" or "Department) (together the "State Agencies") published preliminary recommendations and requested comments from interested parties.

On March 9, 2012, in response to the invitation to comment on the State Agencies' preliminary recommendation, Xcel Energy ("Xcel"), Interstate Power and Light ("IPL"), and Otter Tail

Power ("Otter Tail") each filed comments with the Commission and the State Agencies. The State Agencies also received comments from the Industrial Commission of North Dakota ("ICND") and the Lignite Energy Council ("LEC").

On March 15, 2012, the Izaak Walton League of America, Fresh Energy, and Minnesota Center for Environmental Advocacy Reply Comments ("Environmental Organizations") filed with the Commission, a copy of its reply comments filed with the MPCA.

On July 19, 2012, the State Agencies filed a report with the Commission ("July 19 Report") recommending that the Commission maintain the current estimate of the range of likely costs of CO_2 regulation at $9 to $34 per ton.

On July 23, 2012, the Commission issued a Notice of Comment Period for establishing the 2012 values. The Notice stated that Commission would consider comments already filed in response to the Notice issued by Commerce and the MPCA which are included in Appendix B of the July 19, 2012 filing.

On August 17, 2012, comments were filed by Otter Tail Power Company.

On August 20, 2012, the Minnesota Large Industrial Group Comments ("LIG"), Minnesota Power, Xcel, IPL, Dairyland Power Cooperative ("Dairyland"), and the Minnesota Chamber of Commerce ("MCC" or the "Chamber") each filed comments.

On August 21, 2012, Interstate filed additional comments containing their March 9, 2012 comments to the State Agencies.

On the August 30, 2012, Environmental Organizations filed reply comments.

Party Positions

State Agencies

The State agencies recommended that the Commission maintain the current estimate of the range of likely costs of CO_2 regulation at between $9 and $34 per ton of CO_2 emitted. They stated that their recommendation does not include a recommendation regarding the year the cost range should begin to be applied.

To develop the 2012 update to the CO_2 values, the State Agencies conducted a 30-day comment period for interested parties to submit comments. The State Agencies stated that they received five comments. Their July 19 Report included a summary of the five sets of comments, along with copies of the comments of four parties. (Interstate Power stated that although they provided comments to the State Agencies, their comments were not included in the July 19 Report. Copies of its comments to the State Agencies were included as Attachment A to its August 21, 2012, filing in this docket.)

Summarizing the comments the State Agencies stated:

> Two commenters questioned the Commission's authority to adopt an estimate of the likely range of costs of future carbon dioxide regulation. Two other commenters supported maintaining the current cost range, but delaying the effective start until at least 2020. One commenter supported the current cost range.

After reviewing the comments, the State Agencies recommended that the Commission maintain the current estimate of the range of likely costs of CO_2 regulation at between $9 and $34 per ton of CO_2 emitted. The State Agencies indicated that they are not aware of significant changes that have occurred during the past year that warrant a re-evaluation of the current range. They stated that factors that were addressed in its letter of December 9, 2010 continue to be appropriate. As a result, the State Agencies did not undertake an in-depth study to confirm the continued appropriateness of the current cost range.

The State Agencies stated that their recommendation is limited to the cost range, and does not include a recommendation regarding the year the cost range should begin to be applied. Given the passage of time, and the continued uncertainty regarding greenhouse gas regulation at the federal level, the PUC should evaluate whether 2012 is an appropriate initial effective year. The State Agencies suggest that a conservative approach would warrant an effective date sooner than the year 2020. They stated that given that Minn. Stat. §216H.06 provides for an annual update, establishing an initial effective year of 2013 would ensure that potential CO_2 regulation costs are considered in utility planning processes.

State Agency Summary of Received Comments and State Agency Responses

Below is a summary of the comments received by the State Agencies and their response to those comments.

Industrial Commission of North Dakota

The Industrial Commission of North Dakota argued that the cost estimate range should not be applied to out-of-state facilities.

The State Agencies noted that the Industrial Commission of North Dakota made this argument in its October 5, 2008, comments in this Docket and that the Commission decided the issue in its December 21, 2007, Order Establishing 2011 Estimate of Future Carbon Dioxide Regulation Costs. The State Agencies concluded that the issue is no longer relevant to the matter of updating the range of costs of future carbon dioxide regulation.

Lignite Energy Council

The Lignite Energy Council (LEC) argued that:

> The application of a resource selection penalty will have an adverse impact on lignite-fired generation. The existence of the resource selection penalty, if applied to remote lignite-fired generation, will have a chilling and negative impact on the consideration of lignite-fired

generation as a resource of choice among utility planners in advance of formal consideration by the Commission of competing resource choices.

Minnesota's adoption of externality values that would be applied to electricity from out-of-state resources, creates the potential for jurisdictional and regulatory conflicts.

The assignment of a cost for CO_2 regulation on facilities located outside Minnesota's borders is beyond the police power of the state of Minnesota and in violation of the Commerce Clause of the United States Constitution.

The LEC requested that the Commission either reaffirm its 1997 decision (in Docket No E-999/CI-93-583) and not apply a value to the cost of CO_2 regulation on out-of-state electric generating resources, or determine that the appropriate value for out-of-state electric generation is $0.

In response to the LEC the State Agencies offered the following comments:

Whether to apply an estimate of the likely range of costs of future carbon dioxide regulation on electricity generation resource acquisition proceedings is moot, given the requirements of MN Stat. § 216H.06, and is beyond the scope of this proceeding.

In its December 21, 2007, Order Establishing 2011 Estimate of future Carbon Dioxide Regulation Costs, the Commission already addressed the issue of assigning cost for CO_2 on facilities located outside Minnesota's borders. In that Order the Commission indicated that it favored applying the CO_2 regulatory cost estimates to all potential sources of electricity serving Minnesota customers without discriminating on the basis of the state in which the electricity is generated. The State Agencies concluded that this issue is no longer relevant to the matter of updating the range of costs of future carbon dioxide regulation.

The 1997 decision referred to by the LEC concerns Docket No. E999/CI-93-583. That docket was initiated in response to MN Stat. § 216B.2422, subd. 3a. The Commission's December 21, 2007, Order in Docket No. E999/CI-93-583, clarified the application of MN Stat. § 216B.2422, subd. 3a and MN Stat. § 216H.06 stating:

> While the calculation of externality values under § 216B.2422 is not directly comparable to the estimate of regulatory costs under § 216H.06, the both reflect steps to account for the burdens that CO_2 emissions impose on third parties. When a utility calculates the cost of emitting another ton of CO_2 in any given year, therefore, it would be inappropriate to use both the CO_2 externality value and the CO_2 regulatory cost estimate. But utilities should continue to apply the Commission's CO_2 externality values otherwise.

The State Agencies argued that the externality values under MN Stat. § 216B.2422 and the estimate of regulatory costs under MN Stat. § 216H.06 are separately valid as appropriately applied. Therefore there is no need for the Commission to reaffirm its 1997 decision regarding externality values since that decision remains in effect.

Xcel Energy

Xcel Energy did not object to the cost range recommended by the State Agencies. It does not believe that CO_2 that costs will be assessed in the near future and recommended that 2020 be established as the year in which utilities should start including these costs for planning purposes.

In response to Xcel Energy's comments the State Agencies stated that their recommendation regarding the cost range is limited primarily to the cost range. While it is apparent that 2012 is no longer an appropriate initial effective year, a conservative approach would warrant an effective date sooner than the year 2020. The Commission will determine the specific effective date of the cost range.

Otter Tail Power

Otter Tail supported maintaining the cost range with an effective date of 2020.

As in their response to Otter Tail's comments the State Agencies stated that their recommendation regarding the cost range is limited primarily to the cost range. While it is apparent that 2012 is no longer an appropriate initial effective year, a conservative approach would warrant an effective date sooner than the year 2020.

Minnesota Center For Environmental Advocacy

The Minnesota Center for Environmental Advocacy supported the State Agencies' recommendation to maintain the current range of $9 to $34 per ton of CO_2 emitted. It agreed that there have been no changes in the last year that warrant re-evaluation of the current cost range.

Interstate Power

IPL stated that on March 9, 2012, it filed a response with the State Agencies on March 9, 2012, however, the comments were not included in the State Agencies' July 19 Report. IPL included a copy of its March 9 Response as Attachment A to its comments in this docket.

IPL stated that it can generally support the $9 to $34 per ton range recommended by the State Agencies. However, IPL does not support applying the values in 2013. It argued:

> An initial effective year of 2013 would suggest that legislation by the United States Congress or action by United States Environmental Protection Agency (EPA) to impose a cost on CO_2 emissions through a cap-and-trade approach or a tax is imminent. However, there has been very little recent activity at either the federal or regional level that would suggest a cost will be applied to CO_2 emissions in the short term.
>
> Given that 2012 is an election year, it is unlikely that the Obama Administration or the United States Congress will consider a national CO_2 cap-and trade or tax proposal during 2012.

The presumed Republican presidential nominee has not openly supported a national CO_2 cap-and-trade or tax proposal.

Consulting firms that offer energy and fuel price forecasts are assuming that any effective initial dates for imposing a cost on CO_2 emissions have been delayed. Wood Mackenzie's current forecast assumes a CO_2 price of $14 per ton beginning in 2022 and escalating at 6% annually to reach $26.58 by 2033.

In 2009 the United States House of Representatives passed CO_2 regulation in the form of the Waxman-Markey bill. Under the legislation adopted by the House of Representatives but not by the United States Senate, the utility cap-and-trade program was scheduled to begin in 2012, three years after the date of the passage of legislation.

A review of the Clean Air Interstate Rule ("CAIR") and Clean Air Mercury Rule ("CAMR") also suggest it is reasonable to assume a delay from the date of the initial adoption of rules until compliance requirements begin. Final CAIR and CAMR were published by the EPA in 2005, however, compliance requirements did not begin until 2009, four years later.

IPL stated that, based upon past implementation history of significant environmental legislation, rules, and regulations, it is reasonable to believe that even if legislation were adopted by the United States Congress in 2013, it is unlikely that any CO_2 emission reduction programs would begin any earlier than 2016 and potentially as late as 2018.

IPL stated that the EPA may promulgate CO_2 emission generation performance standards for existing electric generating units rather than the imposition of some type of national CO_2 cap-and-trade program or tax. In April 2012, EPA proposed CO_2 emission generation performance standards for new electric generating units. This standard is expected to be effective in 2013. However, complying with this standard will require incremental costs, to the extent that any exist, to be fully internalized in any new generating resources considered in resource planning.

It stated that under EPA regulation to reduce power plant CO_2 emissions, compliance costs would be internalized as part of the resource planning process, meaning that the cost of compliance would be included as part of the cost of the resource selected, whether as a capital expenditure or as an on-going O&M expense. Including a CO_2 price when these EPA regulations are in place would result in a duplicative cost.

IPL's position is that the implementation of any type of CO_2 cap-and-trade program or tax will be delayed significantly beyond 2012 or 2013. The Commission should, based upon available evidence, adopt an initial starting date that is realistic and will allow meaningful modeling results. Adoption of an initial starting date (e.g. 2013) that is not based upon evidence may be significant enough to alter the results of integrated resource plans and thus may have an adverse impact on the electric customers of Minnesota.

IPL recommended that the Commission adopt an effective date of no earlier than 2020.

Minnesota Power

Minnesota Power stated that it believes that the most accurate approach the Commission can take is to update the previously approved ranges, adjusted for inflation. Until federal legislation is enacted and more specific regulatory costs are known, the Commission should update the start date for applying these ranges to no earlier than 2021. Minnesota Power argued that this date reflects the continued regulatory uncertainty around carbon policy and is consistent with prior Commission determinations in this Docket

MP noted that assumptions regarding carbon emissions, including their dollar level and particularly their timing, are a key determinant of base load modeling outcomes. In its 2010 Integrated Resource Plan and the evaluation of its Baseload Diversification Study (Docket No. E015/RP-09-1088), the parties utilized different carbon assumptions, leading to significantly different timing and outcomes on base load units. In its analysis of Minnesota Power's Baseload Diversification Study, the Department used 2012 as the start of a carbon cost based on the Commission's previous decision in this docket. Minnesota Power stated that the Commission's reasoning for using the 2012 start date, as explained in its December 21, 2007 Order in this Docket, is instructive as to how the Commission should proceed.

Minnesota Power stated that the Commission determined that it would be "inappropriate to apply the proposed cost estimates to CO_2 that would be emitted before the regulations could be expected to affect electricity costs." At that time it was appropriate that the prospective 2012 date was selected based on following the state's legislative standard and the Commission's and the parties' expectations. If the Commission continues to require carbon valuation numbers be applied on all resource planning decisions, the date for application should again be prospective and be updated to reflect when the Commission reasonably expects, given the continued and even greater policy uncertainty around CO_2 penalties at this time.

MP argued that a reasonable starting date for carbon cost assumptions is essential to maintain the integrity of resource planning. Incorrect timing for carbon assumptions would skew resource cost calculations and lead to false comparisons of resource choices, masking the facts regarding what are the most economic choices for customers and likely leading to unnecessarily higher rates. MP argued that the State Agencies' recommendation to use 2013 contradicts the legislative direction on how to estimate CO_2 impacts and may contradict Minn. Stat. § 216H.06. Minn. Stat. § 216H.06 requires that the Commission establish "an estimate of the likely range of costs of future carbon dioxide regulations on electricity generation." This estimate "must be used in all electricity generation resource acquisition proceedings."

Minnesota Power stated that it does not dispute that carbon regulation costs should be considered in utility planning processes, and understands that "resource acquisition proceedings" could be interpreted broadly to apply generally to resource plans. However, the Commission should also ensure that this range is tied to realistic expectations on when future carbon dioxide regulations may be implemented at the federal or state level.

MP stated that there is no carbon penalty existing in 2012 and, and no date certain for a penalty on the horizon, especially for 2013. Using a 2013 start date for a carbon penalty unnecessarily and falsely increases resource cost estimates for the near term. Given the state of play on carbon at the federal level, Minnesota Power suggested in its Baseload Diversification

Study that a reasonable date is 2021.

MP stated that ongoing state energy policies requiring renewable energy supplies and energy conservation and constraining the introduction of new coal fired energy supplies carry an implicit CO_2 value that assigns additional cost to Minnesota's electricity generation. These policies are already placing a price on carbon emissions indirectly and are propelling a transition in the state's energy supply to a lower greenhouse gas emission basis.

MP argued that the increase in generation supplies of renewable energy is evidence there is no need for an aggressive date for carbon assumptions to be applied.

Minnesota Power requested that the Commission make a determination on CO_2 cost application that can be utilized in its next Integrated Resource Plan to be filed by March 1, 2013. It stated that the assumptions around carbon will be an area of emphasis in that resource plan, specifically as the Commission considers decisions on the futures of Laskin Energy Center and Taconite Harbor Unit 3.

Otter Tail Power

In its August 17, 2012, comments, Otter Tail stated that it continues to support the range of $9 to $34 a ton as an estimate of the costs of CO_2 regulation. Otter Tail recommended that, for the reasons contained in its comments to the State Agencies, the estimated effective date for the regulatory costs should be 2020 or later.

OTP stated that since the costs of CO_2 regulation in this docket will be used for generation resource decisions, a realistic start date for those costs should be established. A 2013 start date for such regulatory costs is not reasonable. Otter Tail supported the use of the same proposed CO_2 values for 2012 and 2013. However, it stated that if the Commission chooses to use the same values for both years, it is even more important that a realistic effective date be used.

Xcel Energy

In its August 20, 2012, comments, Xcel stated that it supports the cost range of $9 to $34 per ton of CO_2 emitted.

It stated that based on its review of forecasts of the potential for federal policy action, it recommends that 2020 be established as the year in which utilities should start including these cost for planning purposes. It stated that as a practical matter, even the most aggressive scenarios have implementation out to the end of the decade, at the earliest.

Dairyland

Dairyland's filing argued that the externality costs have become obsolete as a regulatory matter, and requested clarification as what role, if any, the cost estimate should play in utilities' integrated resource plans.

Dairyland argued that regulatory developments following the Commission's establishment of an

initial interim estimate and subsequent revisions to the range of cost estimates have greatly diminished the value of the estimate in resource acquisition proceedings.

Dairyland stated that it questions the ongoing usefulness of the CO_2 cost estimate due to the practical impossibility of siting new coal plants within the State of Minnesota or importing electricity generated from new coal plants sited outside the State. It noted that as of 2009, Minn. Stat. § 216H.03 effectively imposed a moratorium on both new coal construction and imports of electricity from new coal plants. Minn. Stat. § 216H.03 provides that unless a "comprehensive state law or rule … that directly limits and substantially reduces greenhouse gas emissions" on and after August 1, 2009:

> no large fossil fuel-fired power plant can be built in Minnesota;
>
> no utility can import electricity from a large fossil fuel-fired power plant built in another state that was not operating on Jan. 1, 2007; and
>
> no Minnesota utility can purchase electricity from an outstate utility under a contract that exceeds 50 megawatts for a term of five years.

It noted that recent federal regulatory developments also make it highly unlikely that new coal plants will be built in the foreseeable future. On April 13, 2012, the EPA published in the Federal Register standards of performance for all new fossil fuel-fired electricity-generating units requiring them to meet an electricity-output-based emission rate of 1,000 lb of carbon dioxide for every MWH of electricity generated. The only plants that can meet this standard without implementing costly carbon capture and storage technology are natural gas plants. The New Source Performance Standards are likely to end new construction of conventional coal-fired power plants as utilities will choose natural gas over coal.

Dairyland argued that the State of Minnesota moratorium on new coal plants, as well as EPA's New Source Performance Standards, are sufficiently effective to prompt utilities to modify their resource plans regardless of the upper limit of the estimated range of likely CO_2 costs arrived at by the Commission. As a result, Dairyland disagrees with the State Agencies' conclusion that there have been "no significant changes" to warrant re-evaluation of the current range of cost estimates.

Dairyland noted that the Commission's December 21, 2007 Order in this docket found that "it would be inappropriate to apply the proposed cost estimates to CO_2 that would be emitted before [future] regulations could be expected to affect electricity costs." The Commission determined to begin applying the CO_2 cost estimate to projected emissions from 2012 forward, based on the 2012 implementation date of the "most active federal bill addressing CO2 emissions—the America's Climate Security Act of 2007" (a/k/a the Leiberman-Warner bill.)

Dairyland argued that the rationale for using a 2012 effective date was not substantively re-evaluated in the Commission's successive orders dated October 8, 2009, and June 3, 2011. The Leiberman-Warner bill died in the Senate in June 2008. A successor bill, the American Clean Energy and Security Act ("Waxman-Markey") met a similar fate. Since that time, EPA rulemaking has been the major focus of regulatory efforts to control greenhouse gases, and the

consensus of most commenters is that climate change legislation has been indefinitely delayed due to economic and political conditions.

Dairyland argued that the lack of progress on any comprehensive federal greenhouse gas initiative and the changed regulatory focus to EPA permitting rules represent significant changes that should prompt the Commission to reevaluate the applicable emissions date for applying the cost estimate in resource acquisition proceedings. Given that the 2012 date has no basis in any current federal legislative initiative, and that there is no more recent legislation that could reasonably be used to mark the anticipated effective date such costs would begin to be incurred, Dairyland argued that the application of the CO_2 cost estimate should be suspended until there is greater certainty regarding the implementation date of comprehensive greenhouse gas regulation.

Most sources relied upon by the MPCA have assumed that a future regulatory framework would be a cap-and-trade approach rather than a tax. Using that assumption, the collapse of the voluntary carbon market due to low prices and minimal activity signals that the minimum of $9/ton is too high. Based on the diminished likelihood of comprehensive greenhouse gas legislation, Dairyland believes that the range of CO2 cost estimates should be revised to reflect a $0 minimum.

Dairyland stated that it seeks clarification as to the nature of resource acquisition proceedings as to which the current cost estimate is to be applied.

Minnesota Chamber of Commerce

The Chamber stated that including a cost of carbon for planning purposes beginning in 2012, when such regulation is neither pending nor considered likely, is not a prudent regulatory practice. Inclusion of such costs results in increased energy prices. Prematurely considering a carbon price inappropriately skews important resource acquisition and retention decisions that could result in premature retirement of existing plants. Such existing plants are most likely depreciated and would not need to be retired, but for, the carbon price adder.

The Chamber argued that considering externalities, like the cost of carbon, places Minnesota at odds with neighboring states like North Dakota when competing for jobs and economic development.

The Chamber stated that it supports the position of Interstate Power and Light, Xcel Energy, and Otter Tail to, if the Commission supports a carbon price, delay the effective date to no earlier than 2020, and possibly 2022. It argued that the Commission should also consider expanding the range to include a carbon sensitivity of $0 when evaluating resource selections. The Chamber stated that it is important the public understands the cost of acquiring and operating a resource if carbon pricing never materializes. Delaying the effective date and including $0 in any sensitivity analysis would ensure that Minnesota's utilities use realistic assumptions and have the analysis necessary to plan for and procure competitively priced and reliable electricity.

Minnesota Large Industrial Group

The Minnesota Large Industrial Group limited its analysis to the appropriate time to apply the

estimated future costs. The LIG argued that the State Agencies suggestion to select 2013 as the initial effective year for applying the CO_2 cost estimates is contrary to expert predictions and lacks evidentiary support. It noted that in 2007 and 2009 the Commission concluded that the 2012 start was reasonable because of propose legislation and the fact that a cap-and-trade mechanism for 2012 was part of the President's proposed budget. It noted that subsequent orders did not detail justification for a 2012 starting date.

The LIG argued that the federal regulatory landscape has changed since 2009. The utilities are recommending start dates no sooner than 2020 based on the analysis of various sources including HIS Cambridge Energy Research Associates, PIRA, Wood Mackenzie, and Synapse Energy Economics, Inc. LIG argued that given the new evidence, the Commission should re-evaluate its previous decision. Resource planning decisions are impacted when forced to incorporate a 2012 start date for CO_2 costs. It noted that:

> With respect to Xcel Energy's pending resource planning docket, the Department stated "The Department's no-CO_2 cost scenario analysis changed when the first CC unit was added in the base case. In the least cost plan the first 400 MW CC unit was deferred until 2024 when CO_2 costs were removed."
>
> In Minnesota Power's resource planning docket, the Department conceded that imposing the midpoint of Commission's internal CO_2 costs starting in 2012 was one of the triggers to retire Laskin unit 1 and 2, Taconite harbor units 1 and 2, and the addition of 1 CT unit.

The LIG argued that this analysis demonstrates that building in a non-existent CO_2 cost could materially skew the resource planning process and potentially shift the burden to intervenors to propose alternative resource plans.

The LIG stated that postponing the start date until at least 2020 would be consistent with the mandate under § 216H.06 of the Minnesota Statutes. The decision could be revisited at a later date if circumstances change.

Environmental Organizations

The Environmental Organizations support the State Agencies' proposal to maintain the current range of CO_2 regulatory costs for Commission resource acquisition proceedings. They recommended that the Commission require electric utilities to analyze the State Agencies' recommended cost range for resource acquisitions occurring in 2013 or later.

The Environmental Organizations stated that the longer Congress, federal, regional, and/or state regulators delay pricing CO_2 emissions, the longer society is taking to make an affirmative decision to externalize the harmful environmental costs of carbon. It argued that Commission energy planning decisions in any year should reflect both the expected internal and remaining external costs of generation resources.

The Environmental Organizations stated that it is less important to debate the unknown and unknowable date for when decisive action to internalized at least some of the environmental and social costs of greenhouse gas emissions will occur. It is far more important of the Commission

to ensure that all of its resource acquisition decisions reflect the costs of carbon dioxide pollution.

The Environmental Organizations argued that the electric utilities' proposals assume that it will cost close to nothing to emit a ton of carbon dioxide until 2020. However, society and the state are paying and will pay the price for these emissions. Carbon-curbing governmental policies that are slow in coming mean only that the costs continue to be hidden. Because the costs of carbon pollution are real, regardless of when the political system addresses them, the Commission should continue to require electric utilities to apply the State Agencies' recommended carbon cost range in 2013 and each following year.

Staff Analysis

With the exception of Dairyland, parties are not arguing over the values (as discussed above, the Industrial Commission of North Dakota and the Lignite Energy Council have argued that the values should not apply to out-of-state facilities). As a result, it would be reasonable to continue the use of the existing range of $9/ton to $34/ton for 2012.

With the current status of greenhouse gas regulation, it may be reasonable to adopt a different year in which utilities should begin including the costs in their planning. As noted by the parties, does not appear likely that there will be costs of regulating CO2 in 2013. If the Commission decides that utilities should begin applying the CO_2 values in a year later than 2012, the CO_2 values from the Environmental Externalities Docket (E-999/CI-93-583) will continue to be reflected in the utilities' resource plans. The current range for these values is $0.42 to $4.31 per ton for emissions within the state of Minnesota.

Although there is not major disagreement over the values, some of the issues the Commission deal with when first determining a range still exist. The fact that there is not legislation specifically taxing or limiting CO_2 emissions does not change the fact that the emissions still exist, as externalities. The Commission is left with the task of estimating what the future regulations might be, and how those regulations will affect facilities in current resource decisions. As noted by the Environmental Organizations, the electric utilities' proposals assume that it will cost close to nothing to emit a ton of carbon dioxide until 2020.

In its December 21, 2007, Oder Establishing Estimate of Future Carbon Dioxide Regulation Costs, the Commission explained:

> It is important to note what Minnesota Statutes § 216H.06 does and does not require. The statute reflects the Legislature's conclusions that eventually laws will govern the emission of CO_2 and that utilities and their ratepayers will need to bear these costs. The statute's chief requirement is to compel utilities to plan accordingly. A utility's failure to correctly forecast the magnitude of CO_2 regulation costs may result in utility making choices that prove to be costly in retrospect, the same as any other forecasting error. But the forecasts themselves will neither increase nor decrease any utilities wholesale costs or retail rates for electricity. They are simply planning tools, little different than any other forecast a utility makes.

The Commission further explained:

> The Commission acknowledges that all forecasts entail a degree of doubt. This fact, however, is only tangentially relevant to the Commission's decision. The future is uncertain. The need to plan for the future is not. The degree of uncertainty regarding future CO_2 regulation and future technology makes the task of estimating regulatory costs more difficult; it does not make the task any less necessary. And it certainly does not lead the Commission to conclude that the most likely estimate of CO_2 costs is effectively $0.

The current regulatory environment regarding CO_2 emissions continues to be uncertain and, arguably, is more uncertain than it was in 2007. As noted by Dairyland, in 2007, the Commission relied in part on an expectation the America's Climate Security Act of 2007, S. 2191 (Lieberman-Warner) would begin implementing a cap-and-trade system of regulation in 2012. As also noted by Diaryland, that bill died in the Senate in 2008. While CO_2 legislation is not currently proposed, a conservative approach could justify an effective date sooner than 2020.

It seems unlikely that there will not be any costs associated with CO_2 regulation in the future. In recent resource plan Orders the Commission has indicated an expectation there will be some future cost of CO_2 and has required that utility base case scenarios use the midpoint of the CO_2 values in future resource plans. In its march 2, 2012 Order in IPL's most recent resource plan, Docket No E001/RP-08-673, the Commission stated:

> The Commission believes it is in the public interest for utilities to incorporate the anticipated costs in their base case for resource planning purposes. Including CO_2 costs in the base case ensures that the resource planning process is consistent with the statutory requirement to include CO_2 costs as a factor in resource acquisition proceedings. The Commission will therefor require IPL's next resource plan to incorporate in its base case the mid-point of the Commission approved range for CO_2 costs.

Ordering paragraph 4 in that order states:

> IPL shall include in its base case a CO_2 cost at the mid-point of the Commission-approved range for subsequent resource plans.

Similar language is found in the Commission's February 9, 2012 Order in OTP's resource plan proceeding, Docket No. E017/RP-10-623, where ordering paragraph 6 states:

> In its next resource plan, the Company shall include in its base case carbon dioxide costs equal to the mid-point of the Commission–approved range. It shall also include a low and a high range in sensitivity options.

Even if the companies are required to use cost values in their base case, they can use a value of zero for sensitively testing.

Given that values for 2012 are being established so late in the year, and that there is not

additional state or federal legislative direction, staff suggests that it may be appropriate to use the same values for 2013. This would not preclude a party, or the Commission on its own motion, from reviewing the values soon if there was a change in circumstances.

Decision Alternatives

Some Commission options are:

I. Appropriate CO_2 cost estimate for 2012

   a. Determine to continue using current range of $9 to $34 per ton of CO_2 as recommended by the State Agencies.

   b. Determine to establish $0 as the bottom of the range to reflect current regulatory uncertainty for a range of $0 to $34 per ton of CO_2.

   c. Update the range to use other values the Commission considers appropriate.

II. Year to Begin Applying the Values

   a. Keep 2012 as the year in which utilities begin applying these costs in their planning.

   b. Determine that utilities should begin applying values as of 2013.

   c. Adopt the start date for applying these ranges as of 2020.

   d. Determine that some other effective date is appropriate.

III. Values for 2013

   a. Determine that there is not additional state or federal legislative direction to suggest that the values should be changed for 2013 and adopt the range of $9/ton to $34/ton values for 2013.

   b. Take no action.

Minnesota Statutes
Chapter 216H. Greenhouse Gas Emissions

216H.01 DEFINITIONS.

Subdivision 1. **Scope.** For the purpose of this chapter, the terms defined in this section have the meanings given them.

Subd. 2. **Statewide greenhouse gas emissions.** "Statewide greenhouse gas emissions" include emissions of carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride emitted by anthropogenic sources within the state and from the generation of electricity imported from outside the state and consumed in Minnesota. Carbon dioxide that is injected into geological formations to prevent its release to the atmosphere in compliance with applicable laws, and carbon dioxide associated with the combustion of fuels other than coal, petroleum, and natural gas are not counted as contributing to statewide greenhouse gas emissions.
History: *2007 c 136 art 5 s 1*

216H.02 GREENHOUSE GAS EMISSIONS CONTROL.

Subdivision 1. **Greenhouse gas emissions reduction goal.** It is the goal of the state to reduce statewide greenhouse gas emissions across all sectors producing those emissions to a level at least 15 percent below 2005 levels by 2015, to a level at least 30 percent below 2005 levels by 2025, and to a level at least 80 percent below 2005 levels by 2050. The levels shall be reviewed based on the climate change action plan study.

Subd. 2. **Climate change action plan.** By February 1, 2008, the commissioner of commerce, in consultation with the commissioners of the Pollution Control Agency, the Housing Finance Agency, and the Departments of Natural Resources, Agriculture, Employment and Economic Development, and Transportation, and the chair of the Metropolitan Council, shall submit to the legislature a climate change action plan that meets the requirements of this section.

Subd. 3. **Stakeholder process.** The plan required by subdivision 2 must be developed through a structured, broadly inclusive stakeholder-based review of potential policies and initiatives that will reduce statewide greenhouse gas emissions from a broad range of sources and activities. The commissioner shall engage a nationally recognized independent expert entity to conduct the stakeholder process. The report of the stakeholder process must form the basis for the plan submitted by the commissioner under subdivision 2.

Subd. 4. **General elements of the plan.** The plan must:
(1) estimate 1990 and 2005 greenhouse gas emissions in the state and make projections of emissions in 2015, 2025, and 2050;

(2) identify, evaluate, and integrate a broad range of statewide greenhouse gas reduction options for all emission sectors in the state;

(3) assess the costs, benefits, and feasibility of implementing the options;

(4) recommend an integrated set of reduction options and strategies for implementing the options that will achieve the goals in subdivision 1, including analysis of the associated costs and benefits to Minnesotans;

(5) estimate the statewide greenhouse gas emissions reductions anticipated from implementation of existing state policies;

(6) recommend a system to require the reporting of statewide greenhouse gas emissions, identifying which facilities must report, and how emission estimates should be made; and

(7) evaluate the option of exempting a project from the prohibitions contained in section 216H.03, subdivision 3, if the project contributes a specified fee per ton of carbon dioxide emissions emitted annually by the project, the proceeds of which would be used to fund permanent, quantifiable, verifiable, and enforceable reductions in greenhouse gas emissions that would not otherwise have occurred.

Subd. 5. **Specific plan requirements.** (a) The plan must evaluate and recommend interim goals as steps to achieve the goals in subdivision 1.(b) The plan must determine the feasibility, assess the costs and benefits, and recommend how the state could adopt a regulatory system that imposes a cap on the aggregate air pollutant emissions of a group of sources, requires those subject to the cap to own an allowance for each ton of the air pollutant emitted, and allows for market-based trading of those allowances. The evaluation must contain an analysis of the state implementing a cap and trade system alone, in coordination with other states, and as a requirement of federal law applying to all states. The plan must recommend the parameters of a cap and trade system that includes a cap that would prevent significant increases in greenhouse gas emissions above current levels with a schedule for lowering the cap periodically to achieve the goals in subdivision 1 and interim goals recommended under paragraph (a). The plan must consider cost savings and cost increases on energy consumers in the state.(c) The plan must include recommendations for improvements in the emissions inventory and recommend whether the state should require greenhouse gas emissions reporting from specific sources and, if so, which sources should be required to report. The plan must also evaluate options for an emissions registry after reviewing registries in other states and recommend a registry that will insure the greatest opportunity for Minnesota entities to obtain marketable credits.

Subd. 6. **Regional activities.** The state must, to the extent possible, with other states in the Midwest region, develop and implement a regional approach to reducing greenhouse gas emissions from activities in the region, including consulting on a regional cap and trade system. The commissioner of commerce shall coordinate Minnesota's regional activities under this subdivision and report to the legislative committees in the senate and house of representatives with jurisdiction over energy and environmental policy by February 1, 2008, and February 1, 2009, on the progress made and recommendations for further action. The commissioner of commerce, as part of the activities required under this subdivision, must meet with responsible officials from bordering states, other states in the Midwest region, and states in other regions of the country to:

(1) determine whether other states are interested in establishing and cooperating in a multistate or regional greenhouse gas cap and trade allowance program;

(2) identify and prepare an inventory of greenhouse gas reduction resources available to

support a multistate or regional greenhouse gas cap and trade allowance program;

(3) seek cooperation on a regional inventory of greenhouse gas emission sources; and

(4) prepare an inventory of available renewable energy resources within a state or region.The commissioner of commerce must develop a definition of scope of this regional activity that is in addition to the components described in clauses (1) to (4). The commissioner must report on the additional scoping definitions to the chairs and ranking minority members of the legislative committees with jurisdiction over energy and environmental finance and policy on or before the commencement of the 2008 regular legislative session.

History: *2007 c 136 art 5 s 2*

216H.03 FAILURE TO ADOPT GREENHOUSE GAS CONTROL PLAN.

Subdivision 1. **Definition; new large energy facility.** For the purpose of this section, "new large energy facility" means a large energy facility, as defined in section 216B.2421, subdivision 2, clause (1), that is not in operation as of January 1, 2007, but does not include a facility that (1) uses natural gas as a primary fuel, (2) is designed to provide peaking, intermediate, emergency backup, or contingency services, (3) uses a simple cycle or combined cycle turbine technology, and (4) is capable of achieving full load operations within 45 minutes of startup for a simple cycle facility, or is capable of achieving minimum load operations within 185 minutes of startup for a combined cycle facility.

Subd. 2. **Definition; statewide power sector carbon dioxide emissions.** For the purpose of this section, "statewide power sector carbon dioxide emissions" means the total annual emissions of carbon dioxide from the generation of electricity within the state and all emissions of carbon dioxide from the generation of electricity imported from outside the state and consumed in Minnesota. Emissions of carbon dioxide associated with transmission and distribution line losses are included in this definition. Carbon dioxide that is injected into geological formations to prevent its release to the atmosphere in compliance with applicable laws, and emissions of carbon dioxide associated with the combustion of biomass, as defined in section 216B.2411, subdivision 2 , paragraph(c), clauses (1) to (4), are not counted as contributing to statewide power sector carbon dioxide emissions.

Subd. 3. **Long-term increased emissions from power plants prohibited.** Unless preempted by federal law, until a comprehensive and enforceable state law or rule pertaining to greenhouse gases that directly limits and substantially reduces, over time, statewide power sector carbon dioxide emissions is enacted and in effect, and except as allowed in subdivisions 4 to 7, on and after August 1, 2009, no person shall:

(1) construct within the state a new large energy facility that would contribute to statewide power sector carbon dioxide emissions;

(2) import or commit to import from outside the state power from a new large energy facility that would contribute to statewide power sector carbon dioxide emissions; or

(3) enter into a new long-term power purchase agreement that would increase statewide power sector carbon dioxide emissions. For purposes of this section, a long-term power purchase agreement means an agreement to purchase 50 megawatts of capacity or more for a term exceeding five years.

Subd. 4. **Exception for facilities that offset emissions.** (a) The prohibitions in subdivision 3 do not apply if the project proponent demonstrates to the Public Utilities Commission's satisfaction that it will offset the new contribution to statewide power sector carbon dioxide emissions with a carbon dioxide reduction project identified in paragraph (b) and in compliance with paragraph (c).

(b) A project proponent may offset in an amount equal to or greater than the proposed new contribution to statewide power sector carbon dioxide emissions in either, or a combination of both, of the following ways:

(1) by reducing an existing facility's contribution to statewide power sector carbon dioxide emissions; or

(2) by purchasing carbon dioxide allowances from a state or group of states that has a carbon dioxide cap and trade system in place that produces verifiable emissions reductions.

(c) The Public Utilities Commission shall not find that a proposed carbon dioxide reduction project identified in paragraph (b) acceptably offsets a new contribution to statewide power sector carbon dioxide emissions unless the proposed offsets are permanent, quantifiable, verifiable, enforceable, and would not have otherwise occurred. This section does not exempt emissions that have been offset under this subdivision and emissions exempted under subdivisions 5 to 7 from a cap and trade system if adopted by the state.

Subd. 5. **Exception for new steel production facility.** The prohibitions in subdivision 3 do not apply to increases in statewide power sector carbon dioxide emissions from a new steel production project located in a taconite relief area that has filed an application for an air quality permit from the Pollution Control Agency prior to January 1, 2007.

Subd. 6. **Exception for iron nugget production facility.** The prohibitions in subdivision 3 do not apply to an iron nugget production facility that began construction prior to January 31, 2007, nor to associated mining activities and beneficiation facilities with a concentrate capacity of up to three million tons annually. For the purposes of this subdivision, "iron nugget" means a product with at least 90 percent iron content.

Subd. 7. **Other exemptions.** The prohibitions in subdivision 3 do not apply to:

(1) a new large energy facility under consideration by the Public Utilities Commission pursuant to proposals or applications filed with the Public Utilities Commission before April 1, 2007, or to any power purchase agreement related to a facility described in this clause. The exclusion of pending proposals and applications from the prohibitions in subdivision 3 does not limit the applicability of any other law and is not an expression of legislative intent regarding whether any pending proposal or application should be approved or denied;

(2) a contract not subject to commission approval that was entered into prior to April 1, 2007, to purchase power from a new large energy facility that was approved by a comparable authority in another state prior to that date, for which municipal or public power district bonds have been issued, and on which construction has begun; or

(3) a new large energy facility or a power purchase agreement between a Minnesota utility and a new large energy facility located outside Minnesota that the Public Utilities Commission has determined is essential to ensure the long-term reliability of Minnesota's electric system, to allow electric service for increased industrial demand, or to avoid placing a substantial financial burden on Minnesota ratepayers. An order of the commission granting an exemption under this

clause is stayed until the June 1 following the next regular or annual session of the legislature that begins after the date of the commission's final order.

Subd. 8. **Enforcement.** Whenever the commission or the Department of Commerce determines that any person is violating or about to violate this section, it may refer the matter to the attorney general who shall take appropriate legal action. This section may be enforced by the attorney general on the same basis as a law listed in section 8.31, subdivision 1, except that the remedies provided by section 8.31, subdivision 3a, do not apply to a violation of this section.
History: *2007 c 136 art 5 s 3*

216H.06 GREENHOUSE GAS EMISSIONS CONSIDERATION IN RESOURCE PLANNING.

By January 1, 2008, the Public Utilities Commission shall establish an estimate of the likely range of costs of future carbon dioxide regulation on electricity generation. The estimate, which may be made in a commission order, must be used in all electricity generation resource acquisition proceedings. The estimates, and annual updates, must be made following informal proceedings conducted by the commissioners of commerce and pollution control that allow interested parties to submit comments.
History: *2007 c 136 art 5 s 4*