

ISSUE DATE: July 2, 1997

DOCKET NO. E-999/CI-93-583

ORDER AFFIRMING IN PART AND MODIFYING IN PART ORDER ESTABLISHING  
ENVIRONMENTAL COST VALUES

BEFORE THE MINNESOTA PUBLIC UTILITIES COMMISSION

Edward A. Garvey  
Joel Jacobs  
Marshall Johnson  
Don Storm

Chair  
Commissioner  
Commissioner  
Commissioner

In the Matter of the Quantification of  
Environmental Costs Pursuant to Laws of  
Minnesota 1993, Chapter 356, Section 3

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VALUES

**PROCEDURAL HISTORY**

On January 3, 1997, the Commission issued its ORDER ESTABLISHING ENVIRONMENTAL COST VALUES in this proceeding.

The following parties filed petitions/requests/applications for reconsideration and/or rehearing on the dates indicated:

State of North Dakota (North Dakota), January 14, 1997; Minnesota Pollution Control Agency (MPCA), January 21, 1997; Otter Tail Power Company (Otter Tail), January 22, 1997; Dairyland Power Cooperative (Dairyland), January 22, 1997; Cooperative Power Association, Minnkota Power Cooperative, and United Power Association (the Cooperatives), January 22, 1997; Northern States Power Company (NSP), January 22, 1997; Minnegasco and Peoples Natural Gas Company (the Natural Gas Utilities), January 23, 1997; Western Fuels Association, Inc. (Western Fuels or WFA), January 23, 1997; Minnesota Power (MP), January 23, 1997; Lignite Energy Council (LEC), January 23, 1997; Minnesota Department of Public Service (the Department), January 23, 1997; Center for Energy & Economic Development (CEED), January 23, 1997; and the Office of the Attorney General's Residential Utilities Division (RUD-OAG), January 23, 1997.

The following parties submitted answers on the dates indicated:

The Department (to North Dakota), January 21, 1997; LEC/North Dakota (to MPCA and Other Petitions Challenging the 200 Mile Limit), January 27, 1997; Environmental Coalition, January 27, 1997; the Department (to MPCA), January 27, 1997; the MPCA, January 31, 1997; the Department (to CEED, the Cooperatives, Dairyland, LEC, Minnesota Power, NSP, Otter Tail and Western Fuels), January 31, 1997; Minnesota Power, February 3, 1997; North Dakota (to the Natural Gas Utilities), February 3, 1997; NSP, February 3, 1997; and the RUD-OAG, February 3, 1997.

On February 10, 1997, subsequent to the deadline for filing answers, Dairyland filed a Motion for Permission to File Reply to the Department of Public Service Response to the Petition for Rehearing and Reconsideration Filed by Dairyland Power Cooperative. Dairyland included a two-page reply to the Department's answer.

On March 27, 1997, the Commission met to consider this matter.

## **FINDINGS AND CONCLUSIONS**

### **I. Preliminary Matter: Dairyland's Late-Filed Reply**

Minn. Rules, Part 7829.3000, subd. 1 and 4 authorizes and sets the times for filing petitions for rehearing, amendment, vacation, reconsideration, or reargument and for filing answers to such petitions. Dairyland has filed a petition for reconsideration but did not file an answer to the petitions for reconsideration filed by any other party.

Replies to answers are not permitted without specific Commission authorization. Minn. Rules, Part 7829.3000, subd. 5. In support of its request for authorization to file a response to the Department's answer to Dairyland's petition for reconsideration, Dairyland stated that it believed that the Department had misunderstood Dairyland's petition.

The Commission finds that no party would be prejudiced by allowing Dairyland to file this reply, that the reconsideration process is not unduly complicated or delayed by this additional filing, and that Dairyland believes that this filing will be helpful to avoid any potential misunderstanding. Without determining whether the Department did in fact misunderstand Dairyland's petition, the Commission will allow the filing of Dairyland's reply.

### **II. Summary of Action Upon Reconsideration**

The Commission has reviewed all the issues raised by the parties in their petitions for reconsideration and taken into account all the arguments made in their answers and orally before the Commission.

Based on its review, the Commission finds that most issues raised on reconsideration were considered and adequately addressed in the Commission's January 3, 1997 Order in this matter. On some issues, the Commission has modified or changed its view and therefore will explain its rationale for those changes in this Order. On other issues, while the Commission maintains the same decision expressed in the January 3, 1997 Order, the Commission believes that additional discussion is warranted in this Order.

### **III. Commission Analysis**

#### **A. CEED's Claim Regarding the Low Ends of the Ranges**

CEED asked reconsideration of the Commission's decisions to exclude a zero value in the range

of adopted values. CEED argued that failure to include the zero value within the range of cost values for each pollutant was contrary to the deliberations and vote that occurred on September 19, 1996. CEED added that, to the extent that it changed its vote on the "zero-value" issue, the Commission violated the Minnesota Open Meeting Law.

The Commission does not accept CEED's characterization of the action taken on this issue at the Commission's September 19, 1996 meeting. In reviewing its deliberations and motions adopted at the September 19, 1996, it is clear that the Commission did not adopt zero as the bottom endpoint of any range for environmental costs that it adopted. The use of a zero option was established in the following motion:

Commissioner Johnson moved that the Commission indicate that, regardless of its choice of endpoints of the ranges for environmental costs, it wants in resource procurement submissions a base-case analysis considering direct costs only, i.e. attributing a zero value to external costs.

The motion passed 4-0.

The Commission then proceeded, as contemplated in Commissioner Johnson's motion, to adopt ranges of environmental costs for several pollutants. None of the adopted ranges set the bottom endpoint at zero.<sup>1</sup> The Commission's January 3, 1997 Order properly reflected all these motions. No changes occurred between passage of the motions in question and the Commission's Order. No violation of the Open Meeting Law is indicated.

Regarding the merits of the proposal that the bottom endpoints should be zero, the Commission analyzed and rejected that argument in its January 3, 1997 Order. See Order at page 20.

## **B. Limited Applicability of CO<sub>2</sub> Environmental Cost Values**

In its January 3, 1997 Order, the Commission limited the applicability of the adopted environmental cost range for carbon dioxide to within 200 miles of the Minnesota border, the same geographical area used for the criteria pollutants.

Several parties<sup>2</sup> objected that consistency requires that, since the value for CO<sub>2</sub> was set using a global approach, the values for CO<sub>2</sub> should be applied regardless of the location of the proposed

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<sup>1</sup> This is further shown by Ordering Paragraph 2 (Order at page 33) which reflects Commissioner Knaak's motion at the September 19, 1996 meeting. Ordering Paragraph 2 directs utilities, in filing their resource plans, to present the cost of resource options at three levels: 1) direct cost alone (the zero option); 2) direct cost plus the minimum (bottom-end) values; and 3) direct cost plus the maximum (high-end) values.

<sup>2</sup> The MPCA, the Natural Gas Utilities, the Environmental Coalition, and the Residential and Small Business Utilities Division of the Office of the Attorney General (RUD-OAG),

power plant. This argument has merit.

Others objected to establishing any environmental values for CO<sub>2</sub> at all, citing the uncertainties associated with assessing CO<sub>2</sub> damage. This argument also has appeal.

The Commission finds that CO<sub>2</sub> is markedly different from the other pollutants for which it has established ranges of environmental costs. In addition to the global damage implications noted earlier, each of the other emission types for which values were selected by the ALJ and the Commission was the subject of a detailed damage-cost study prepared by Triangle Economic Research (TER). That study was evaluated and commented upon extensively by the other parties. The ranges accepted by the Commission represent confidence intervals; the chance of the actual environmental costs values lying outside those ranges is quite low (statistically, only ten percent).

While the Commission finds the methodology used by MPCA witness Ciborowski sufficient to provide a meaningful estimate of the potential costs from carbon dioxide emissions, the uncertainties related to the assumptions used and uncertainty related to bringing back to present value the significant damage costs assumed to occur many years into the future certainly make the quantification more complex than for the criteria pollutants. Indeed, the ALJ modified the assumptions used by PCA witness Ciborowski for reasons the Commission accepts, as explained in the January 3, 1997 Order. While the Commission agrees with the ALJ that it is practicable to establish an environmental cost range for carbon dioxide, the Commission has a lesser level of confidence in the results for the reasons given above.

In addition, there are serious considerations of inter-jurisdictional fairness and interstate comity raised by Dairyland Power Cooperative and the State of North Dakota respectively:

### **Dairyland Power**

Dairyland Power Cooperative, a generation and transmission cooperative that has much of its service area in Wisconsin, indicated that the application of CO<sub>2</sub> values to energy produced by its generating plants (all outside Minnesota at this time) would be problematic. Dairyland indicated that it does not want to have to produce different resource plans for Minnesota and Wisconsin. While the State of Wisconsin has adopted environmental cost values for carbon dioxide based on a risk of regulation method, Dairyland has received an exemption from applying those values in resource plans required by the Wisconsin Public Service Commission. Thus, imposing the carbon dioxide values on Dairyland for facilities proposed for Wisconsin would require Dairyland to expend a considerable amount of extra time and expense. Given the respective sizes of Dairyland's service areas within the two states, the Commission is sympathetic to Dairyland's concerns.

### **State of North Dakota**

The State of North Dakota has indicated that the application of carbon dioxide values is a

significant issue for that state. Given the uncertainty over the actual effects of carbon dioxide, as indicated by the testimony in the proceeding and the range adopted by the Commission, North Dakota requested that the Commission not apply the carbon dioxide values to facilities proposed within their jurisdiction.

As a matter of interstate comity, in the process of establishing environmental cost values, the Commission believes it is reasonable to consider the concerns of other states, such as North Dakota and Wisconsin.

An additional concern, as expressed in the January 3, 1997 Order, is that applying the values for CO<sub>2</sub> to more remote geographic areas would greatly complicate an already complex resource evaluation process for no or little added analytical benefit. Because the lower limit of the adopted CO<sub>2</sub> range is so close to zero, it is unlikely to alter a resource plan. Hence, applying the value to territory beyond the boundaries of the State of Minnesota would cause considerable effort by the utilities for little or no added benefit.

### **Commission Conclusion**

The Commission believes it has the authority to require utilities to apply the adopted environmental cost values for CO<sub>2</sub> to facilities outside of the State of Minnesota in resource selection analyses submitted in Minnesota. However, the Commission also believes that the “to the extent practicable” standard established in Minn. Stat. § 216B.2422 allows it to take into consideration the factors cited above. Having done so, the Commission will decline to apply the CO<sub>2</sub> values to facilities located beyond the territorial boundaries of Minnesota. The Commission clarifies, however, that it will continue the qualitative evaluation of the CO<sub>2</sub> associated with such generation.

### **C. SO<sub>2</sub> Environmental Cost Values**

In its January 3, 1997 Order, the Commission adopted the Administrative Law Judge’s (ALJ’s) recommended ranges for SO<sub>2</sub>, updated to 1995 dollars. The Commission addressed the applicability of that range as follows:

Regarding the post-2000 issue, the Commission finds that SO<sub>2</sub> damages will be internalized after 2000 and, therefore, applying externality costs would be unwarranted. Order at page 20.

However, the Ordering Paragraph setting out the established environmental values for SO<sub>2</sub> did not explicitly reflect that cut-off date. The Cooperatives argued that the Order is not sufficiently clear that the adopted environmental values for SO<sub>2</sub> are applicable only to the year 2000, after which the values will be zero for all geographical locations.

The Commission finds it appropriate to clarify that its intent has always been that the cost values for SO<sub>2</sub> will revert to zero in the year in the year 2000 for the reason stated in the January 3, 1997 Order, i.e. that SO<sub>2</sub> damages will be internalized after that date. The official environmental cost table will be modified to include a separate line to reflect that conclusion. See Ordering Paragraph 2 on page 8 of this Order.

#### **D. Escalation of the 1995 Dollars**

In its January 3, 1997 Order, the Commission chose the environmental cost ranges recommended by the ALJ and updated them to 1995 dollars using a procedure suggested by the Department. Order at page 19.

The Department asked the Commission to clarify its Order to include a reference on the appropriate escalation factor for the approved environmental cost values. The Department indicated that the Commission did not address the issue of escalation factors for the approved values, which were stated in 1995 dollars. The Department pointed out that the ALJ had indicated the Commission could direct utilities to escalate the values to the year to which they are applied using whatever appropriate inflation values the Commission chooses. The Department suggested that the Commission simply direct the utilities to use an appropriate and reasonable escalation factor in proceedings before the Commission. According to the Department, the Commission could then make a case-by-case determination as to the reasonableness of the escalation factor employed by each utility.

The Commission clarifies that its decision not to adopt an escalation factor for the approved values in the January 3, 1997 Order was based on its belief that the record established in this matter does not provide adequate evidentiary support for any particular escalation rate. This is not to say that the Commission does not recognize that ranges will get out of date as more information is gathered. It does mean that the 1995 dollar values will be retained until the environmental cost values are revisited and updated in a subsequent proceeding. See Order at page 32.

Nor does it mean that the Commission will automatically reject use of any escalation factor used by any party in connection with a future-filed resource plan. The Commission is simply not adopting a particular escalation factor for general use in those filings at this time. In reviewing particular resource plans in the future, the Commission will review any escalation factor proposed for use at that time and will approve its use if it is adequately supported.

## **E. Mercury**

In its January 3, 1997 Order, the Commission explained why it rejected the requests by the MPCA 1) to establish a Mercury Advisory Committee and 2) to require the filing of specific mercury information and instead chose to require utilities to explain in their resource plan filings how mercury emissions were considered in their evaluation of resource options. Order at pages 32-33.

In their petitions for reconsideration, some of the parties argued that the Commission has no authority in this proceeding to do anything other than quantify and establish environmental cost values. As a consequence, they argued, the Commission cannot order the utilities to use a “qualitative” cost value for mercury.

The Commission notes that no particular treatment of mercury is prescribed and finds that simply requiring a description of how the utility has in fact treated mercury in preparing its resource plan is reasonable and well within its authority:

- **Authority**

The Commission has a legitimate interest in facilitating development of the record on issues relevant to its consideration of resource plans. As the Commission noted in its January 3, 1997 Order, even in the absence of an established quantitative measure of mercury’s environmental cost, mercury’s impact on the environment will be considered on a qualitative basis in resource plan proceedings. Order at page 31. Hence, given the controversial nature of the mercury issue, it is inevitable that some parties in resource selection treatments will inquire into the filing utility’s response to mercury concerns and criticize treatments that they do not like.<sup>3</sup> As such, the Commission’s directive simply expedites development of that issue.

- **Reasonable**

The requirement is far from burdensome. No particular treatment is required and since the utility will have either considered or not considered mercury damages in preparing its resource plan, simply describing how mercury was treated in preparing its resource plan will be quite easily done.

## **ORDER**

1. The petitions for reconsideration and clarification of the Commission’s January 3, 1997 Order in this matter are granted in part and denied in part, as described in the text of this Order.
2. The environmental values adopted by the Commission in its January 3, 1997 Order,

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<sup>3</sup> Note the extensive record in this proceeding reflecting possible, although difficult to quantify, damage to the environment from mercury.



stated in terms of 1995 dollars and revised in this Order after reconsideration to show 1) zero values for SO<sub>2</sub> starting after the year 2000 and 2) zero values for CO<sub>2</sub> beyond the borders of the State of Minnesota, are as follows:

### **Commission's Official Environmental Cost Table**

		Urban	Metropolitan Fringe	Rural	Within 200 Miles of Minnesota
SO <sub>2</sub> (present to year 2000) \$/ton		112 - 189	46 - 110	10 - 25	10 - 25
SO <sub>2</sub> (year 2000 and beyond) \$/ton		0	0	0	0
PM <sub>10</sub>	\$/ton	4,462 - 6,423	1,987 - 2,886	562 - 855	562 - 885
CO	\$/ton	1.06 - 2.27	0.76 - 1.34	0.21 - 0.41	0.21 - 0.41
NO <sub>x</sub>	\$/ton	371 - 978	140 - 266	18 - 102	18 - 102
Pb	\$/ton	3,131 - 3,875	1,652 - 1995	402 - 448	402 - 448
CO <sub>2</sub>	\$/ton	.30 - 3.10	.30 - 3.10	.30 - 3.10	0

3. In all respects not specifically amended or clarified in the text of this Order, the Commission's January 3, 1997 Order in this matter remains unchanged.
4. This Order shall become effective immediately.

BY ORDER OF THE COMMISSION

Burl W. Haar  
Executive Secretary

(S E A L)

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