

STATE OF MINNESOTA
OFFICE OF ADMINISTRATIVE HEARINGS
FOR THE PUBLIC UTILITIES COMMISSION

In the Matter of the Further Investigation in
to Environmental and Socioeconomic Costs
Under Minnesota Statute 216B.2422,
Subdivision 3

**ORDER ON MOTIONS BY MINNESOTA
LARGE INDUSTRIAL GROUP AND
PEABODY ENERGY CORPORATION
TO EXCLUDE AND STRIKE
TESTIMONY**

An evidentiary hearing is scheduled to be held in this matter on the issue of the cost of carbon dioxide before Administrative Law Judges LauraSue Schlatter and J. Jeffery Oxley on September 24-25 and 28-30, 2015, in the Large Hearing Room at the Public Utilities Commission, 350 Metro Square Building, 121 Seventh Place East, St. Paul, Minnesota.

Appearances:

Kevin Reuther, Leigh Currie and Kingston Hudson, Minnesota Center for Environmental Advocacy, represents The Izaak Walton League of America – Midwest Office, Fresh Energy and Sierra Club (Clean Energy Organizations or CEO).

Tristan L. Duncan, Shook, Hardy & Bacon, LLP, Kansas City, Missouri, represents Peabody Energy Corporation (Peabody).

Linda Jensen, Assistant Attorney General, represents the Minnesota Department of Commerce, Division of Energy Resources and the Minnesota Pollution Control Agency (Agencies).

Eric F. Swanson, Winthrop & Weinstine, PA, represents the Lignite Energy Council.

B. Andrew Brown and Hugh Brown, Dorsey & Whitney, LLP, represents Great River Energy (GRE), Minnesota Power and Otter Tail Power Company (OTP).

David Moeller, Minnesota Power, represents Minnesota Power Company.

James R. Denniston, Assistant General Counsel, represents Northern States Power Company, d/b/a Xcel Energy (Xcel).

Marc Al, and Andrew Moratzka, Stoel Rives, LLP, represent the Minnesota Large Industrial Group (MLIG).

Benjamin L. Gerber, Attorney at Law, represents the Minnesota Chamber of Commerce (Chamber).

Kevin P. Lee, Attorney at Law, represents Doctors for a Healthy Environment (Doctors).

Bradley Klein, Environmental Law & Policy Center, represents the Clean Energy Business Coalition (CEB).

On Thursday, September 3, 2015, the MLIG filed a Motion to strike the testimony of Dr. Michael Hanemann, Dr. Stephen Polasky and parts of the testimony of Nicholas Martin. On the same date, Peabody also filed a Motion to exclude the direct and rebuttal testimony of Drs. Hanemann and Polasky in their entirety, and certain parts of Mr. Martin's testimony.

On Friday, September 11, 2015, the Agencies, the CEOs and Xcel filed Response(s) to MLIG's and Peabody's Motions.

Based upon the all of the records and the proceedings in this matter, and for the reasons discussed in the Memorandum that follows, the undersigned Administrative Law Judge makes the following:

ORDER:

1. The motions brought by MLIG and Peabody to exclude the testimony of Drs. Hanemann and Polasky are DENIED.
2. The motions brought by MLIG and Peabody to exclude certain parts of Mr. Martin's testimony are DENIED.
3. The following changes have been made to the schedule for the proceedings in this matter: All unaffected provisions of the earlier Prehearing Orders remain in effect.

Dated: September 15, 2015

s/LauraSue Schlatter

LAURASUE SCHLATTER
Administrative Law Judge

MEMORANDUM

Introduction

In its October 15, 2014 Notice and Order for Hearing, the Commission ordered the parties to specifically and thoroughly address “whether the Federal Social Cost of Carbon is reasonable and the best available measure to determine the environmental cost of CO₂ under Minn. Stat. § 216B.2422 and, if not, what measure is better supported by the evidence.”¹ The Commission also directed the parties to address the appropriate values for particulate matter, sodium dioxide and nitrogen oxides (collectively, the Criteria Pollutants). The evidentiary hearing scheduled to start on September 24, 2015 will focus solely on questions relating to CO₂, with a separate evidentiary hearing to address the Criteria Pollutants.

Peabody and MLIG Arguments

The MLIG and Peabody seek to completely exclude the economists whose testimonies are offered by the parties urging the Commission adoption of the Federal Social Cost of Carbon (SCC) as the cost of CO₂ pursuant to Minn. Stat. § 216B.2422, subd. 3 (2014). Dr. Hanemann is the Agencies’ witness and Dr. Polasky is testifying on behalf of the CEOs. In addition, Peabody and the MLIG seek to exclude those portions of Xcel’s witness Nicholas Martin which are related to his alternative statistical approach to determining the SCC.²

Evidentiary Standards

The MLIG and Peabody argue that the testimony of Drs. Hanemann and Polasky should be excluded because, as experts, their opinions rest on the work and conclusions of other experts whose testimony is not available in this proceeding. This, the MLIG and Peabody insist, violates the standards for admissibility in administrative hearings under Minn. Stat. § 14.60, subd. 1 (2014) and of Minn. R. Evid. 702 regarding expert witness testimony.³

Peabody and the MLIG cite cases for the propositions that: a) the requirements of Minn. R. Evid. 702 have been applied in the context of administrative hearings,⁴ although the Minnesota rules of evidence are not mandated to apply directly in

¹ *In the Matter of the Further Investigation into Environmental and Socioeconomic Costs Under Minn. Stat. § 216B.2422, Subd. 3*, Docket No. E-999/CI-14-643 (CI-14-643), NOTICE AND ORDER FOR HEARING (October 15, 2014) (ORDER FOR HEARING).

² According to the MLIG Motion, the challenged portions of Mr. Martin’s testimony are at pages 51-70 of his June 1, 2015 Direct Testimony and “the related portions” of his Rebuttal Testimony are at pages 50:18-51:3 and 54:3-56:5. MINNESOTA LARGE INDUSTRIAL GROUP’S MOTION TO STRIKE at 4 (September 3, 2015) (MLIG Motion).

³ PEABODY ENERGY CORPORATION MOTION TO EXCLUDE DR. MICHAEL HANEMANN AND DR. STEPHEN POLASKY AND CERTAIN OPINIONS OF NICHOLAS F. MARTIN at 4 (September 3, 2015) (Peabody Motion 1) and MLIG Motion at 2.

⁴ *Chang v. Alliant Techsystems, Inc.*, 2000 WL 33321188 at *2 (Minn. Off. Admin. Hrgs.) (June 2000).

administrative proceedings;⁵ b) expert testimony that simply adopts double hearsay should be excluded;⁶ c) claims fail when supporting evidence does not identify an author;⁷ and d) testimony can be overcome by contrary testimony offered in court and subject to cross-examination.⁸ Based on this case law, and because the challenged testimony falls outside the witnesses' areas of expertise, relies on opinions of other experts who are not themselves witnesses in this proceeding, and relies on data that is not the type of evidence on which reasonable, prudent persons are accustomed to relying in the conduct of their serious affairs, Peabody and the MLIG assert that the testimony does not meet the required evidentiary standards for a contested case proceeding.

Testimony of Drs. Hanemann and Polasky and Mr. Martin

Peabody asserts that the federal Interagency Working Group (IWG) that developed the SCC "made numerous subjective judgments that directly influence how the numbers come out" in a process that suffered from a lack of transparency.⁹ Peabody quotes from a Government Accounting Office (GAO) audit of the SCC development which stated that "[m]any participants told [the GAO] that the working group spent most of its meeting time reviewing and discussing academic literature to help decide on values for three key modeling inputs to run in each model" which were ultimately decided by the IWG's subjective judgments.¹⁰ Peabody notes that, according to the GAO Audit, the use of those inputs in running the models for calculating the SCC estimates was supervised by EPA officials.¹¹ Peabody characterizes the IWG as "a black box out of which the Federal SCC values were drawn."¹² Peabody insists that testimony from witnesses "who simply claim 'the IWG got it right' should be excluded as unreliable double hearsay."¹³

Peabody and the MLIG argue that Drs. Hanemann and Polasky, and Mr. Martin lack the requisite experience, personal knowledge and expert background to be permitted to testify because they have no first-hand experience operating the integrated assessment models (IAMs) which are the basis for the SCC numbers, they did not participate in the IWG or participate in the scientific work involved in the IPCC's underlying calculations on which the cost of carbon is based. Peabody and the MLIG insist these witnesses are asking the Administrative Law Judge to "take it on faith that

⁵ *In re Dairy Dozens-Thief River Falls, LLP*, 2010 WL 2161781 at *17 (Minn. Ct. App.) (June 1, 2010).

⁶ *In re Saint Cloud Wastewater Treatment Plant NPDES Permit*, 2004 WL 5138987 at *5-6 (Minn. Pol. Control Agency) (Dec. 17, 2003); *In re Order to Forfeit a Fine Against the Child Foster Care License of Delmar and Manila Wiebe*, 2010 WL 71077 at *5 (Minn. Off. Admin. Hearings) (Feb. 3, 2010).

⁷ *In re Teaching License of Julia O. Lund*, 2009 WL 1219459 at *9-10 (Minn. Off. Admin. Hrgs.) (April 9, 2009).

⁸ *In re Resident Agency License of Northwest Title Agency, Inc.*, 2013 WL 1781053 at *13 (Minn. Off. Admin. Hrgs.) (Apr. 16, 2013).

⁹ Peabody Motion 1 at 2.

¹⁰ *Id.* at 2-3 quoting GAO, *Regulatory Impact Analysis: Development of Social Cost of Carbon Estimates* at 13-14 (July 2014) (GAO Audit).

¹¹ Peabody Motion 1 at 3, GAO Audit at 15.

¹² Peabody Motion 1 at 3.

¹³ *Id.* at 3 (no internal citation provided).

the IWG is correct” but “fail to produce probative affirmative evidence that would guide the Commission in rendering its decision.”¹⁴

Peabody specifically challenges the ways in which Drs. Hanemann and Polasky and Mr. Martin accept and then use the work product of the IWG.¹⁵ To allow the challenged testimony, argues Peabody, is to effectively reverse the burden of proof by assuming the correctness of the IWG’s SCC.¹⁶ Peabody contends that this problem is compounded because the IWG relied on the IPCC’s scientific findings. The challenged testimony’s reliance on the IWG’s conclusions without analysis of the IPCC’s science amounts to double hearsay, according to Peabody.¹⁷ Peabody makes a number of arguments challenging the credibility of the IPCC and its role “as an engine for scientific consensus,”¹⁸ ultimately concluding that the reliability of the IPCC’s work product is a contested issue.¹⁹

Peabody separately attacks Mr. Martin’s statistical testimony, claiming he failed to use reliable statistical methods in his analysis.²⁰ Peabody also attacks the analysis because it was performed by a third party, the Brattle Group, whose testimony Xcel has not proffered in this docket.²¹

Responsive Arguments Evidentiary Standards

All three parties whose witnesses are challenged in these two motions dispute the MLIG and Peabody’s characterization of the applicable legal standard involved. The Agencies, CEOs and Xcel all focus initially on the discretion of the Administrative Law Judge to “admit all evidence which possesses probative value, including hearsay, if it is the type of evidence on which reasonable, prudent persons are accustomed to rely in the conduct of their serious affairs.”²²

The Agencies also note that, to the extent the contested case proceeding rules are silent, when ruling on a motion, the Administrative Law Judge shall apply the Minnesota Rules of Civil Procedure for the District Courts “to the extent it is determined

¹⁴ Peabody Motion 1 at 6-7.

¹⁵ *Id.* at 8-9.

¹⁶ *Id.* at 9.

¹⁷ *Id.* at 10.

¹⁸ *Id.* at 13.

¹⁹ *Id.* at 16.

²⁰ *Id.* at 16.

²¹ *Id.* at 17; see MLIG Motion at 3-4.

²² Minn. R.1400.7300, subp. 1 (2015). See Minn. Stat. § 14.60, subd. 1. RESPONSE OF AGENCIES TO PEABODY AND MLIG MOTIONS IN LIMINE TO EXCLUDE EXPERT WITNESS DIRECT AND REBUTTAL TESTIMONY at 2 (September 11, 2015) (Agencies’ Response); CLEAN ENERGY ORGANIZATIONS’ RESPONSE TO MLIG’S MOTION TO STRIKE THE TESTIMONY OF DR. STEPHEN POLASKY at 2 (September 11, 2015) (CEO’s Response to MLIG); CLEAN ENERGY ORGANIZATIONS’ RESPONSE TO PEABODY ENERGY’S MOTION TO STRIKE THE TESTIMONY OF DR. STEPHEN POLASKY at 2 (September 11, 2015) (CEO’s Response to Peabody); XCEL ENERGY’S RESPONSE TO MOTIONS FILED BY PEABODY ENERGY AND MLIG TO STRIKE CERTAIN DIRECT AND REBUTTAL TESTIMONY OF NICHOLAS MARTIN at 1-2 (September 11, 2015) (Xcel’s Response).

appropriate in order to provide a fair and expeditious proceeding.”²³ The Agencies point out the language in Minn. R. Evid. 702 which provides “[i]f scientific, technical, or other specialized knowledge will assist the trier of fact to understand the evidence or to determine a fact in issue, a witness qualified as an expert by knowledge, skill, experience, training, or education, may testify thereto in the form of an opinion or otherwise.”²⁴ In addition, the Agencies note Minn. R. Evid. 703(a) which permits experts, in forming opinions or inferences, to rely upon facts or data that need themselves not be admissible in evidence “[i]f of a type reasonably relied upon by experts in the particular field”²⁵

The Agencies quote *Chang v. Alliant Techsystems*,²⁶ one of the cases cited by the MLIG and Peabody, asserting that the Administrative Law Judge in that case largely incorporated the standards in Rules 702 and 703 when she found that expert testimony is “generally admissible if: (1) it assists the trier of fact, (2) it has a reasonable basis, (3) it is relevant, and (4) its probative value outweighs its potential for unfair prejudice.”²⁷

The CEOs and Xcel both emphasize that, even where technical questions are involved, the Administrative Law Judge need not look to the evidentiary rules governing expert testimony because the evidentiary standards are designed for jury trials but that a skilled trier of fact reviews the evidence in contested cases.²⁸ Xcel argues that it is not necessary to comply with formal evidentiary rules “to ensure the probative value of the prefiled testimony” which is proposed as evidence in a proceeding such as this.²⁹ In addition, Xcel asserts that a witness can adopt the testimony of another witness if the person’s training and experience “appears to qualify the person to adopt the objective portions of the testimony,” while still allowing the depth of the witness’ knowledge to be the subject of cross-examination at the hearing.³⁰

The CEOs note that Administrative Law Judge Klein came to the same conclusion in *In the Matter of the Quantification of Environmental Costs Pursuant to Laws of Minnesota 1993, Ch. 356, Section 3*.³¹ In that docket, argue the CEOs, Judge Klein stated “it must always be kept in mind that the strict Rules of Evidence, designed to keep evidence away from juries, do not apply to this proceeding” and that “[i]t is neither necessary nor appropriate to use stricter evidentiary standards, many of which

²³ Minn. R. 1400.6600 (2015). Agencies’ Response at 2.

²⁴ See Agencies’ Response at 2.

²⁵ Minn. R. Evid. 703(a). Agencies’ Response at 2.

²⁶ *Chang v. Alliant Techsystems, Inc.*, 2000 WL 33321188 at *2 (Minn. Off. Admin. Hrgs.) (June 2000).

²⁷ *Chang* at *3, citing *State v. Jensen*, 482 N.W.2d 238, 239 (Minn. Ct. App. 1992), rev. denied (Minn. May 15, 1992), citing *State v. Schwartz*, 447 N.W.2d 422, 424 (Minn. 1989).

²⁸ See *Padilla v. Minn. State Bd. of Med. Exam’rs.*, 382 N.W. 2d 876, 882 (Minn. Ct. App. 1986); *Lee v. Lee*, 459 N.W. 2d 365, 369 (Minn. Ct. App. 1990).

²⁹ Xcel’s Response at 2, citing *In the Matter of US West Communications to Grandparent CENTRON Services*, PUC Docket No. P-421/EM-96-471, FINDINGS OF FACT, CONCLUSIONS OF LAW AND RECOMMENDED ORDER at 5 (December 23, 1996).

³⁰ Xcel’s Response at 2, citing *In re Saint Cloud Wastewater Treatment Plant NPDES Permit*, 2004 WL 5138987 at *6 (Minn. Pol. Control Agency) (Feb. 2004);

³¹ *In the Matter of the Quantification of Environmental Costs Pursuant to Laws of Minnesota 1993, Ch. 356, Section 3*, POST-HEARING RULING ON EVIDENTIARY MOTIONS (Nov. 16, 1995).

were devised to protect parties from juries who were thought to be unable to deal with complex matters.”³² Furthermore, the CEOs maintain, Judge Klein found that it was better to err on the side of admitting evidence in order to create as complete a record as possible to allow both the Administrative Law Judge and the Commission to make accurate, reliable decisions. Both the Administrative Law Judge and the Commission could weigh the admitted evidence at the end of the proceeding rather than excluding it before the hearing began.³³ The CEOs observe that Judge Klein’s reasoning and results were affirmed by the Commission as well as the Court of Appeals.³⁴

Dr. Hanemann

The Agencies argue that Dr. Hanemann’s knowledge, skill, experience and education qualify him as an expert on the topics on which he testifies.³⁵ Moreover, the Agencies contend that Dr. Hanemann’s lack of personal experience “running” the IAMs and the fact that he did not personally participate in the IWG process do not disqualify him from testifying as an expert on the topics on which he testifies.³⁶ The Agencies review Dr. Hanemann’s qualifications in general, as well as his specific familiarity with IAMs, the social cost of carbon, and damages caused by climate change.³⁷ There is no special skill required, the Agencies contend, to running an integrated assessment model. The Agencies assert that expertise and skill are essential to interpret and assess the underlying equations, and that they have demonstrated Dr. Hanemann possesses the requisite expertise and skills as well as experience to perform that interpretation and assessment.³⁸

The Agencies maintain that the fact that there are no witnesses who personally participated in the IWG process is immaterial to the issues in this docket, and to Dr. Hanemann’s ability to testify.³⁹ The Agencies dispute Peabody’s characterization of the IWG as a “black box,” pointing out that the IWG issued technical support documents in 2010 and 2013, and that the Electric Power Research Institute issued its own report on the IWG’s procedures. The Agencies cite to the prefiled testimony where all of these reports can be found in the prehearing record in this proceeding.⁴⁰ In addition, the Agencies note, Dr. Hanemann stated in his direct prefiled testimony that three people who participated in the IWG published a peer-reviewed journal article in which they

³² *Id.* at 4 and 6. CEOs Response to MLIG at 3.

³³ CEOs Response to MLIG at 3-4, *citing* EVIDENTIARY ORDER at 5.

³⁴ CEO’s Response to MLIG at 4, *citing In the Matter of the Quantification of Environmental Costs Pursuant to Laws of Minnesota 1993, Ch. 356, Section 3*, 1997 WL 34658085 (Minn. P.U.C. 1997) (*Environmental Costs 1997*) and *In the Matter of the Quantification of Environmental Costs*, 578, N.W.2d 794, 800-01 (Minn. Ct. App. 1998).

³⁵ Agencies’ Response at 3.

³⁶ *Id.* at 9.

³⁷ *Id.* at 4-7.

³⁸ *Id.* at 7-8.

³⁹ *Id.* at 10.

⁴⁰ *Id.* at 10-11; See f.n. 15, *citing* Agencies Ex. ___ at WMH-2 (Hanemann Direct) (IWG Report 2010); Agencies Ex. ___ at WMH-3 (Hanemann Direct) (IWG Report 2013); Agencies Ex. ___ at WMH-5 (EPRI Report).

described the process of developing the SCC.⁴¹ The Agencies strongly dispute Peabody's assertion that Dr. Hanemann is unable to explain why certain IAM parameters were chosen or changed by the IWG, and provide brief summaries of Dr. Hanemann's explanations.⁴² The Agencies assert that Dr. Hanemann is very familiar with the most recent IPCC Report, released in four parts between September 2013 and November 2014, because he was instrumental in preparing it.⁴³

Overall, the Agencies assert that Dr. Hanemann's testimony is relevant and reasonable, and that its probative value outweighs its potential for unfair prejudice. The Agencies insist Dr. Hanemann is well-qualified and that his testimony will assist the Administrative Law Judge in this proceeding.

Dr. Polasky

The CEOs contend that Dr. Polasky is well-qualified to provide expert testimony on the central question at issue in the CO₂ portion of this docket.⁴⁴ The CEOs maintain that his lack of expertise as a scientist does not disqualify him as an expert economist. The CEOs observe that they have two other witnesses who are experts in the field of climate sensitivity and who have offered rebuttal and surrebuttal testimony.⁴⁵ Furthermore, the CEOs assert, Dr. Polasky's reliance on the underlying data from the IPCC does not diminish his competence or the admissibility of his testimony.⁴⁶ The CEOs submit that Dr. Polasky's testimony is probative evidence because it analyzes the SCC values developed by the IWG, including the process by which they were developed, to determine whether they are reasonable.⁴⁷

The CEOs also defend Dr. Polasky's reliance on the IWG process, and the information provided from that process, even given his personal lack of participation in the process. The CEOs point out that independent, expert review of the IWG process and decisions is probative, helpful evidence to answer the question asked by the Commission: whether the IWG's SCC is reasonable.⁴⁸ The CEOs refute Peabody's characterization of the GAO's audit of the IWG process, and claim that the process was one on which a reasonably prudent person could rely.⁴⁹

Mr. Martin

Xcel maintains that Mr. Martin's testimony meets the legal standards for admissibility because it has "probative value . . . commonly accepted by reasonable prudent persons in the conduct of their affairs" based on Mr. Martin's understanding of

⁴¹ Agencies' Response at 11, *citing* Agencies Ex. ___ at 5 and WMH-4 (Hanemann Direct).

⁴² Agencies' Response at 11.

⁴³ *Id.* at 16.

⁴⁴ CEOs' Response to MLIG at 5.

⁴⁵ CEOs' Response to Peabody at 5.

⁴⁶ *Id.* at 5.

⁴⁷ CEOs' Response to MLIG at 6.

⁴⁸ CEOs' Response to Peabody at 5.

⁴⁹ CEOs' Response to MLIG at 6.

the process by which the SCC was derived, ability to explain that process and to discuss its strengths and weaknesses as demonstrated in his direct testimony. Furthermore, Xcel contends that the value of Mr. Martin's testimony is demonstrated by his descriptions of how Xcel used the IWG data to derive its recommended costs range.⁵⁰ Xcel asserts that Mr. Martin's competence is demonstrated both through his testimony and his resume; and that his testimony is relevant and material to the issues in the CO₂ portion of this proceeding. Xcel notes that Mr. Martin's testimony cannot be considered repetitious because Xcel's recommended approach to the question of the SCC is unique among the parties.⁵¹

Xcel offers Mr. Martin as a policy witness, not as a climate scientist or a statistician.⁵² Xcel reviews Mr. Martin's qualifications to testify as a policy witness and explains that the issues confronting the Administrative Law Judge and the Commission "requires balancing multiple criteria" making this proceeding "inherently a public policy matter," and, thus, "a policy witness's testimony relevant."⁵³ Furthermore, Xcel asserts, "[m]ost of the decisions with the greatest impact [on] the value of the SCC are in fact policy judgments rather than matters of objective scientific fact."⁵⁴

Xcel reiterates the decision criteria Mr. Martin proposed in his direct testimony, asserting that he is the witness in this proceeding who has offered detailed standards the Administrative Law Judge and the Commission can apply to differentiate the various proposals on the environmental cost of CO₂.⁵⁵ Xcel maintains that Mr. Martin has explicitly declined to comment on questions outside his areas of expertise.⁵⁶

Xcel does not claim that Mr. Martin is either a climate scientist or a statistician.⁵⁷ However, Xcel argues that Mr. Martin is able to offer probative, competent and relevant testimony regarding the work of the IWG, its strengths and weaknesses, and to support Xcel's approach to calculating the external cost of CO₂ without such expertise, by applying the policy criteria he proposed in his direct testimony.⁵⁸

Xcel points out that the calculations underlying Xcel's proposal were performed by principals at the Brattle Group (Brattle) and their qualifications were part of Mr. Martin's prefiled testimony.⁵⁹ In addition, Xcel states Mr. Martin provided all parties with the raw data Brattle used to perform the relevant statistical calculations, as well as the software code and a live Excel file detailing Brattle's results, so that any party could validate, replicate or revise Xcel's methods, "or create their own range using

⁵⁰ Xcel's Response at 3.

⁵¹ *Id.* at 3.

⁵² *Id.* at 4.

⁵³ *Id.* at 4.

⁵⁴ *Id.* at 4.

⁵⁵ *Id.* at 5-6.

⁵⁶ *Id.* at 6, *citing* Ex. ____ at 34-35 (Martin Rebuttal).

⁵⁷ Xcel's Response at 6-7.

⁵⁸ *Id.* at 6-7.

⁵⁹ *Id.* at 7, *citing* Ex. ____ at 54 and Schedule 9 (Martin Direct).

percentiles, discount rates, or subjective policy judgments they prefer.”⁶⁰ Xcel contends that no party has challenged any of the calculations in Mr. Martin’s testimony. While some have argued that different techniques should be used, none have applied different techniques to the IGW raw data. Xcel claims that, given this level of transparency, and the indicia of the accuracy of the statistical calculations supporting Mr. Martin’s testimony, the probative value of his testimony is established.⁶¹

To the extent that Peabody and the MLIG connect Mr. Martin with Dr. Hanemann and Dr. Polasky as a witness who supports adoption of the Federal SCC, or accepts the IWG’s work without criticism, Xcel rejects this characterization, pointing out that Mr. Martin explicitly opposes adoption of the Federal SCC and that, like Xcel, the MLIG uses the data underlying the IWG’s SCC values.⁶² Xcel points out that, if participation in the IWG is a requirement to qualify a witness, then none of Peabody’s or the MLIG’s witnesses would qualify.⁶³ Xcel similarly argues that the requirement that a witness have personal experience running IAMs would disqualify most of Peabody’s witnesses, and that this is not an appropriate standard for determining whether Mr. Martin’s testimony has probative value.⁶⁴ Xcel concludes that Mr. Martin’s testimony meets the legal standard for admissible testimony.

IPCC Evidence

The Agencies disputed Peabody’s challenge to the credibility and authority of the IPCC Assessment Reports (IPCC Reports), arguing that the IPCC Reports are internationally regarded as authoritative. The Agencies quoted the IPCC’s website describing the organization:

The assessment reports involve thousands of scientists with expertise in climate science.

....

The IPCC is a scientific body under the auspices of the United Nations (UN). It reviews and assesses the most recent scientific, technical and socio-economic information produced worldwide relevant to the understanding of climate change. It does not conduct any research nor does it monitor climate related data or parameters.

Thousands of scientists from all over the world contribute to the work of the IPCC on a voluntary basis. Review is an essential part of the IPCC process, to ensure an objective and complete assessment of current information. IPCC aims to reflect a range of views and expertise.

....

⁶⁰ Xcel’s Response at 7-8, *citing* Ex. ____ Schedules 10 and 11 (Martin Direct); Ex. ____ Schedule 4 (Martin Rebuttal).

⁶¹ Xcel’s Response at 8.

⁶² Xcel’s Response at 9, *citing* Ex. ____ at 3-4, 50 (Martin Direct) at 3-4, 50; Ex. ____ at 5 (Martin Rebuttal); Ex. ____ at 3 (Martin Surrebuttal).

⁶³ Xcel’s Response at 10.

⁶⁴ *Id.* at 10-11.

The IPCC is an intergovernmental body. It is open to all member countries of the United Nations (UN) and [World Meteorological Organization] WMO. Currently 195 countries are members of the IPCC. Governments participate in the review process and the plenary Sessions, where main decisions about the IPCC work programme are taken and reports are accepted, adopted and approved. The IPCC Bureau Members, including the Chair, are also elected during the plenary Sessions.

Because of its scientific and intergovernmental nature, the IPCC embodies a unique opportunity to provide rigorous and balanced scientific information to decision makers. By endorsing the IPCC reports, governments acknowledge the authority of their scientific content. The work of the organization is therefore policy-relevant and yet policy-neutral, never policy-prescriptive.⁶⁵

The Agencies quote from the Norwegian Nobel Committee, which awarded the 2007 Nobel Peace Prize to the IPCC, stating, “Through the scientific reports it has issued over the past two decades, the IPCC has created an ever-broader informed consensus about the connection between human activities and global warming.”⁶⁶

The Agencies dispute Peabody’s assertion that a recent comprehensive poll of climate scientists found that only 43 percent of those polled agreed with the entire keystone statement written in the most recent IPCC report, written by Working Group 1.⁶⁷ The Agencies’ state that they are unable to find the source of the quoted statement and their own expert cites to a peer-reviewed paper based on the cited survey that came to the conclusions that “90% of respondents with more than 10 climate-related peer-reviewed publications (about half of all respondents), explicitly agreed with anthropogenic greenhouse gases (GHGs) being the dominant driver of recent global warming.”⁶⁸

The CEOs contend that the Commission has already determined the IPCC reports are competent evidence. The CEOs quote the Commission’s comments in the 1993 Externalities Docket regarding IPCC reports: “IPCC reports are the most authoritative sources available for information on climate change issues. Before publication, IPCC research reports are developed by technical committees composed of experts throughout the international scientific community and are subject to a rigorous multi-level peer-review process.”⁶⁹

⁶⁵ Agencies’ Response at 14-15, *citing* <http://www.ipcc.ch/organization/organization.shtml>

⁶⁶ Agencies’ Response at 16, *citing* http://www.nobelprize.org/nobel_prizes/peace/laureates/2007/press.html

⁶⁷ Agencies’ Response at 17.

⁶⁸ *Id.* at 16, *citing* Agencies Ex. ___ at 9-10 (Gurney Surrebuttal), *citing* Verheggen et al., *Env. Sci. & Tech.*, 48 at 8963-8971 (2014).

⁶⁹ CEOs’ Response to Peabody at 5, *citing* Environmental Costs 1997 at 19.

Analysis

Evidentiary Standards

The Administrative Law Judge finds that the contested case rules do not require her to apply the stricter rules of evidence in this proceeding. Minn. R.1400.7300 (2015) sets forth the standards for admissible evidence in a contested case proceeding. While Minn. R. 1400.6600 directs the Administrative Law Judge to turn to the Rules of Civil Procedure for the District Court to the extent the administrative rules are silent, that direction only applies if “it is determined appropriate in order to promote a fair and expeditious proceeding.”

In this case, there is no reason to impose the requirements of the Minnesota Rules of Evidence. The contested case process does not involve a jury. An Administrative Law Judge is always the trier of fact.⁷⁰ As an experienced trier of fact, the Administrative Law Judge can rely on the process of cross-examination to highlight challenges to the credibility of all witnesses, including expert witnesses. In addition, as this case dramatically demonstrates, it serves the Administrative Law Judge as well as the Commission’s purposes to admit evidence into the record in order to create a complete record for thorough review and accurate, reliable decisions. Were the Administrative Law Judge to exclude the testimony of Drs. Hanemann and Polasky, one of the central questions of the Commission’s investigation would not be able to be answered. That would not promote a fair and expeditious proceeding.

Even if Rule 702 were to apply to Drs. Hanemann and Polasky, they would qualify as experts. They are qualified by their knowledge, skill and experience as well as their education to testify regarding the reasonableness of the Federal SCC and their testimony will likely assist the Administrative Law Judge to understand the evidence as well as to determine facts in issue.

While the MLIG and Peabody challenge the reliability of the foundations of their opinions, those are questions that are properly raised on cross-examination in this proceeding. The Advisory Committee Comment to the 2006 Amendments to Rule 702 stated: “The required foundation will vary depending on the context of the opinion, but must lead to an opinion *that will assist the trier of fact.*”⁷¹

The Agencies and the CEOs have demonstrated that Dr. Hanemann’s testimony and Dr. Polasky’s testimony would qualify under Minn. R. Evid. 702. They have demonstrated that the IWG process was reasonably transparent, that the witnesses are familiar with the process and that they have a sufficient knowledge of the IAMs to provide testimony regarding them. Similarly, they have provided ample evidence to demonstrate that the IPCC Reports are more than sufficiently reliable for the witnesses

⁷⁰ Environmental Costs 1997 at 5; *Padilla v. Minn. State Bd. of Med. Exam’rs.*, 382 N.W.2d 876, 882 (Minn. Ct. App. 1986); *Lee v. Lee*, 459 N.W.2d 365, 369 (Minn. Ct. App. 1990).

⁷¹ Minn. R. Evid. 702 (2015), Advisory Committee Comment – 2006 Amendments.

to rely on to form the foundations for their opinions. Their knowledge and opinions are central to a crucial issue in this matter and thus will assist the trier of fact.

More importantly, the Agencies and the CEOs have demonstrated that these witnesses' testimony has probative value, that their testimony is competent, relevant and material and thus admissible under Minn. R. 1400.7300. The Administrative Law Judge finds that exclusion of their testimony would not promote a fair and expeditious proceeding.

Xcel has also demonstrated that Mr. Martin's testimony should be admitted in its entirety. While clarifying that it does not seek to qualify Mr. Martin as an expert statistician, Xcel has shown that Mr. Martin's testimony is probative, competent, relevant and material. The fact that Mr. Martin relies in part on calculations made by Brattle does not make his testimony based on those calculations inadmissible. Xcel provided documentation establishing Brattle's qualifications, the underlying data, applicable software and even a live Excel spreadsheet so the other parties can manipulate the data if they choose. Given this extensive documentation, Brattle's calculations are admitted.

The Administrative Law Judge notes that this Order and Memorandum only go to the admissibility of the testimony, not to its weight. The purpose of the evidentiary hearing is for parties who have questions about any testimony to ask those questions. To the extent that parties wish to continue to challenge any of the testimony, including the foundational elements that are allowed by this Order, those challenges are properly made in the process of cross-examination. Such cross-examination, appropriately executed, is helpful to the trier of fact in ultimately determining the weight to give testimony, including opinion testimony.

L. S.