

EIM Governance Review Committee
Letter of Intent and Statement of Qualifications
DOUGLAS J. HOWE

July 25, 2019

I am pleased to provide this letter of intent and statement of qualifications for a seat in the EIM Governance Review Committee (GRC). This review, mandated by the EIM Charter, comes at an important inflection point in the evolution of the EIM and the western grid in general: the potential evolution of the EIM into the EIM + EDAM, SPP's EIS offering in the west, a move to (at least) two RC's in the west and, importantly, the enactment of statutes in a number of western states to implement 100% clean energy by mid-century and the changes in western grid infrastructure and operation that will require. While the EIM Governing Body and the CAISO Board of Governors may not necessarily occupy a role in all of those activities, I believe they will occupy roles of influence and governance in a great many of them. The task of the GRC is especially important to ensure that the standards and structure of the governance model are adequate to undertake the accelerating evolution of the western grid.

Professional Experience

I hold a B.S. degree from Kansas State University and M.S. and Ph.D. degrees from the University of Pennsylvania. I currently work as an independent consultant for a number of entities involved in western electricity issues, including: as expert witness for Western Resources Advocates in a New Mexico Public Regulatory Commission (PRC) case to retire the San Juan Generating Station and securitize its unrecovered investment; as a member director of the Western Grid Group, a collaborative project of CEERT with the objective of coordinating clean energy objectives of more than 40 member public interest organizations throughout the west; as a regulatory consultant to the Energy Foundation with an emphasis on New Mexico initiatives; and to a generation equipment provider on how these western initiatives are changing the demand for certain types of generating equipment. In addition, I currently participate on the IRP Technical Advisory Committee for the Public Service Company of New Mexico, which has committed to a 100% clean energy portfolio by 2040, and to a rate design commission for a large municipal water utility.

In 2011, I was appointed commissioner on the New Mexico PRC. Prior to that, I was the Senior Director of the IHS Cambridge Energy Research Associates¹ global power consulting group. Prior to that, I held various positions over nearly 20 years with electric utilities Jersey Central

¹ A global energy sector consulting firm, based in Cambridge, MA, Englewood, CO and Paris, France

Power & Light, Metropolitan Edison Company and Pennsylvania Electric Company, as well as their parent company, GPU Inc. The last position I held was Vice President of Regulatory Policy.

EIM Governing Body Member

From July 2016 through June 2018, I was a member of the initial EIM Governing Body. In 2016-2017 I was Vice Chair and in 2017-2018 held the position of Chair. As such, I believe, and hope, that my colleagues on the Governing Body and Board of Governors viewed me as fair and open-minded, but willing to stand my ground when necessary. As a member of the EIM Governing Body, I believe I developed a thorough understanding of the important relationships between the EIM Governing Body and the CAISO Board of Governors, the CAISO Staff, the EIM Entities, the BOSR and the RIF. These relationships are vitally important to the smooth operation of the market and its continued success and expansion.

The EIM, as a “delegated authority” construct with shared governance of the EIM, is a unique and somewhat complicated entity in the world of electricity markets. While nothing that I see in the near horizon calls for radical change of the Governing Body, the evolution of the western grid is going to pose certain challenges for the existing structure and charter. This makes the work of the GRC, to recommend necessary changes while protecting what has been achieved, all the more important at this critical juncture.

I appreciate the consideration for this important task.

Sincerely,

A handwritten signature in black ink that reads "Douglas J. Howe". The signature is written in a cursive style with a long, sweeping tail on the letter 'e'.

Douglas Howe
1100 Piedra Alto
Santa Fe, New Mexico 87501
505-795-9193
dhowe@highrocknm.com

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CAREER HIGHLIGHTS

Dr. Howe is a Director with the Western Grid Group and has over 36 years of experience as a consultant and advisor to the global utilities industry, has on the board of a wholesale electricity markets, has served as a state utility regulator, as a senior executive officer of a major U.S. utility company and as a college professor. His work has focused on utility regulation, energy market regulation and regulatory strategy and policy. He has performed work for a diverse set of US, European, Asian, Middle Eastern and African electric utility companies, energy marketing companies, NGOs, government regulatory.

Based on his career achievements and experience, Dr. Howe was appointed by the governor of New Mexico to serve as commissioner on that state's public utility regulation commission.

As a utility executive, he was responsible for regulatory policy in the US and UK, as well as customer services and information technology, leading an organization of over 1200 employees with an annual budget of over \$100 million.

Today, Dr. Howe resides in Santa Fe, New Mexico and provides consulting services and expert witness testimony, principally in the area of environmental policy, retail rate structures, and wholesale electricity markets in utility regulatory cases.

CAREER EXPERIENCE

Director, Western Grid Group	November 2018-present
Principal, HighRock Consulting LLC. Expert witness testimony and consultation in the areas of power planning, renewable energy and energy markets.	July 1, 2018 - present
Member and Chairman, Western Energy Imbalance Market Governing Body. Elected to the first Governing Body of the Western EIM, the governance board of the realtime electricity market serving much of the electricity supply and load in the US Western Interconnection. Elected chair of the Governing Body on July 1, 2017.	July 2019-July 2017
Senior Consultant, Vanry+Associates, Inc., Vancouver, BC, Canada. Consultation with major New York utility on the New York PSC 'Reforming the Energy Vision'. Consultation with largest utility union on developing strategies for the future of electricity industry.	2015-2017
Senior Energy Consultant, Western Resource Advocates, Santa Fe, NM & Boulder, CO. Consultation on environmental and renewable energy issues. Expert witness testimony in utility filings, including the EPA Clean Power Plan,	2014-2016

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utility merger, rate, integrated resource planning, energy efficiency, renewable energy and power plant abandonment cases. Expert witness testimony before the New Mexico Public Regulation Commission and the Public Utility Commission of Nevada.

Principal, Douglas Howe & Associates. City of New York, Office of Long-Term Planning and Sustainability: work includes technical assistance on the Mayor’s Special Initiative for Rebuilding and Resiliency (Hurricane Sandy post-mortem) and the City’s 80x50 plan to reduce the carbon footprint by 2050. **2013-2014**

Commissioner, New Mexico Public Regulation Commission. Appointed by Governor to Commissioner position. The Public Regulation Commission oversees electricity, gas, water, pipeline and transportation rates and services in the state. It oversees the implementation of the state’s Public Utility Act, the Renewable Energy Act and the Energy Efficiency Act among other statutes. Worked with USAID and Jordanian Energy Regulatory Commission in assistance of newly enacted Jordanian energy efficiency laws. **2011-2012**

Consultant, IHS CERA, Cambridge, MA and Paris, France. Oversaw a team of 5 international consultants working primarily in the fields of fossil and renewable energy, corporate and regulatory strategy. Responsible for \$2-\$4 million annual revenues. Clients included: Con Ed (NYC), Direct Energy, Consumers Power, Detroit Edison, Dayton Power & Light, Eskom (South Africa), Exxon Mobil, Eneco (Netherlands), Allete, AES, US Dept. of Energy, US Nuclear Regulatory Commission, Companhia de Electricidade de Macau, CEZ (Czech Rep.), Dubai Executive Council, General Electricity Company of Libya, TAQA (Abu Dhabi investment fund), Energy Markets Authority of Singapore, State of Lagos-Nigeria, Tanzania National Development Corp. Management of major studies include: European Union 2020 Energy Efficiency Mandate; US Smart Grid Initiatives, US Electricity Deregulation Impacts. Provided written expert witness testimony before the Michigan Public Service Commission. **2002-2011**

Consultant, Energy Trading Company, Williams Company, Tulsa, OK. Consulted with Williams Energy Marketing & Trading, a subsidiary of natural gas company, Williams Co. Worked with C-level staff to create and implement liaisons with U.S. state regulatory commissions and utilities. **2001-2002**

Vice President, Regulatory Policy, GPU Inc., Morristown, NJ. Large public utility holding company with electric utility operations in New York, New Jersey, Pennsylvania, the UK, Australia, and Argentina. Responsible for company positions with respect to FERC orders; worked with UK regulatory staff on RPI-X regulatory scheme. **1999-2001**

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Vice President, Customer Services and IT, GPU Inc., Reading, PA. Responsible for marketing, customer services, information technology during this period. Responsible for 1,250 employees and an annual budget of \$100 million.	1994-1996
Director, Strategy, GPU Inc., Morristown, NJ. Responsible for developing and implementing strategies for deregulation in NJ and PA. Worked closely with state regulators and legislators to guide deregulation initiatives in the electricity sector.	1992-1996
System Planning and IT Divisions, GPU Inc., Reading, PA. Various positions with the company, including manager of IT performance and capacity planning, manager of cogeneration contracts.	1982-1992
Exide Company, Philadelphia, PA. Advanced battery technology software development.	1981-1982
Sun Shipbuilding Company, Chester, PA and Malmo, Sweden. Advanced numerical control hull design software.	1980-1981
Haverford College, Haverford, PA. Assistant Professor of Mathematics	1979-1980

EDUCATION

Duke Advanced Management Program Duke University Fuqua School of Business	1994
Ph.D. Mathematics University of Pennsylvania, Philadelphia, PA	1977
M.S. Mathematics University of Pennsylvania, Philadelphia, PA	1974
B.S. Mathematics Kansas State University, Manhattan, KS (1970-1972) University of Pittsburgh, Pittsburgh, PA (1968-1970)	1972

HONORS AND AWARDS

Summa Cum Laude, Kansas State University	1972
Franklin Scholar, University of Pennsylvania	1976
Appointed Commissioner, New Mexico Public Regulation Commission	2012

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EXPERT WITNESS TESTIMONY

1. **Michigan Public Service Commission, Case No. U-15290, 2007.** Appeared for Consumers Energy Company in support of an analysis using Markowitz Portfolio Theory for an optimal generating portfolio.
2. **Public Utility Commission of Nevada, Case No. 13-02071, 2013.** Appeared for Nevadans for Clean Affordable Reliable Energy in support of a finding of net positive benefit in a utility merger.
3. **New Mexico Public Regulation Commission, Case No. 13-00390-UT, 2013.** Appeared for Western Resources Advocates in support of the adoption of a renewable portfolio generation portion of a settlement.
4. **New Mexico Public Regulation Commission, Case No. 15-00261-UT, 2015.** Appeared for Western Resources Advocates in support of positions taken on a utility's cost recovery requests and time-of-use-rates.
5. **New Mexico Public Regulation Commission, Case No. 18-00261-UT, 2018.** Appeared for Western Resources Advocates in support of PNM's application for an accounting order in connection with joining the Western Energy Imbalance Market.
6. **Colorado Public Utilities Commission, Case No. 16AL-0048E, 2016.** Appeared for Western Resources Advocates in support of positions taken on a utility's retail rate requests.
7. **Arizona Corporation Commission, Case No. E-01345A-16-0036, 2018.** Appeared for Western Resources Advocates in support of positions regarding a utility's proposed depreciation schedule on environmental upgrades at a power plant.

PUBLICATIONS

1. "Utility M&A: Cyclical increase is not the long-awaited 'Tidal wave'", August 2011, CERA report
2. "Smart Grid: Closing the Gap Between Perception and Reality", August 2010, co-author of CERA multi-client study
3. "The Fuel of Choice for Generation", speech at King & Spaulding seminar on the Future Energy Source for Electric Generation, Houston, May 2010
4. "Strategies for Leaner Europe: Meeting the Challenge of Energy Efficiency", lead-author of CERA multi-client study, March 2009
5. "Data Disclosure in Wholesale Electricity Markets: A White Paper", Singapore Energy Markets Authority, April 2010
6. "Nuclear Generation Options for Dubai: A White Paper", Dubai Executive Council, July 2008

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7. “US and UK Regulation: Capital Attraction vs. Operating Efficiency”, invited presentation to RCI Russian Regulatory Conference, London, April 2008.
8. “Some Sail, Some Fail: Life after the Public Utility Holding Company Act”, CERA Decision Brief, November 2006 (with M. Fagan)
9. “CERA North American Power Survey: The Reality of Perceptions”, CERA Special Report, September 2006 (with D. Borska, S. Carraher, C. Hansen).
10. “Public Utility Holding Company Act Repeal: One Big Obstacle Down – Many Remain”, CERA Decision Brief, September 2005 (with S. Carraher, M. Fagan).
11. “Beyond The Crossroads: The Future Direction of Power Industry Restructuring”, CERA Special Report, June 2005 (with L. Makovich, et al).
12. “Broadband over Powerline: More Information, Questions Remain”, CERA Insight, September 2004 (with D. Perras)
13. “Managing the Growth Dilemma: Utility M&A”, CERA Global Power Forum, October 2004
14. “UK Regulatory Experience”, T&D World Annual Conference, September 2004.
15. “Private Equity in Utilities: The Return of the LBO”, CERA Insight, March 2004.
16. “Will Mergers and Acquisitions Fuel the Utility Growth Engine?”, CERA Private Report, February 2004 (with D. Borska)
17. “Electricity Distribution in the UK: Will the ‘Pure Wires’ Model be an Experiment or a Paradigm?”, CERA Private Report, May 2003
18. “Eye of the Hurricane: Power Distribution in Uncertain Times”, CERA Multi-Client Study, June 2003.
19. “Retail Power Market Structures in the U.S.”, U.S./Russia Joint Conference on Energy Markets (DOE), March 2003
20. “The New Ontario Energy Crisis: California Redux?”, CERA Decision Brief, December 2002 (with D. Perras, W. Dailey).
21. “Power and Risk Management for Regulators in a Post-Enron World”, Western States Conference of Public Service Commissioners, June 2002, Phoenix, Arizona.
22. “The Pure Disco: The Evolution of the UK Electricity Distribution Company”, Center for Advancement of Energy Markets (CAEM), Washington DC, May 2001.
23. “North American Summit on Harmonizing Business Practices in Energy Re-Structuring”, North American Regulatory Utility Commissioners – Department of Energy (NARUC-DOE), invited speaker of EEI, Dallas, November 2000
24. “Future of Distribution Companies”, invited speaker, Thelen, Reid & Priest Utilities Seminar, Washington DC, June 2000.
25. “An SAP Chronicle: Life at the Edge of Chaos”, Software Magazine, June 2000.

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26. “Electricity Deregulation: IT’s New Bonanza”, Information Management Systems Journal, May 2000 (with J. Cuccaro)
27. “The Future of Deregulation of the Electric Distribution Company”, invited speaker, Hudson Institute of Regulatory Policy, Washington, DC (1999)