Gary,

I am disappointed by your uncritical acceptance in the March 19, 2021 Friday Burrito (p. 9) of "Good Ol'Dave's" breathtaking assertion that Bill Hogan's wholesale market design was "robustly supported by" Enron.

Having worked extensively with Bill Hogan during the 1990s, I know that in fact Enron was adverse to Bill Hogan in almost every market design forum across the US from the early 1990s until Enron removed itself from the gene pool of American business in December 2001. Not only did Enron fight nodal locational marginal price (LMP) pricing and the introduction of financial transmission rights at every step, Enron vigorously opposed the mere concept of the ISO dispatching generation in the pool to balance congestion, a function that is absolutely fundamental to Bill Hogan's market design. It is hard to think of how Enron's views could have been more diametrically opposed to the market designs that Bill Hogan developed and supported.

Everyone who was involved in the 1990s market design disputes knows that "Good Ol'Dave's" comment that Enron robustly supported Bill Hogan's wholesale market design concepts is completely inaccurate. But when these remarks are uncritically repeated in the Burrito, younger people in the industry will read it and think those remarks are fact rather than a fairy tale.

The actual history is that Enron robustly, unending, bitterly opposed and resisted Bill Hogan's market design concepts in market after market across the US in the 1990's.

California 1994-1998

Bill Hogan's client in the early California restructuring was San Diego Gas and Electric (SDG&E), not Enron. While San Diego participated in the joint April 29, 1996 ISO[1] and PX filings.[2] SDG&E did not agree with some elements of the design as it set forth in Appendix G to the ISO filing, in Appendix D to the PX filing, and elaborated upon in San Diego's June 28, 1996 explanatory statement. [3] SDG&E supported a LMP-based CAISO market, with a dispatch coordinated by the ISO and congestion hedges provided by financial transmission rights. SDG&E's June 28, 1996 filing defined the road not taken in the CAISO electricity markets until 2009.

Enron supported many elements of the joint filing, including zonal pricing and the separation of the ISO and PX [4] but strongly disagreed with the alternatives proposed by San Diego. Enron's "robust support" for Bill Hogan's wholesale market design does not come through very clearly in the heading for Enron's discussion of the San Diego proposal "SDG&E's unilateral proposal to change the WEPEC scheduling protocols is highly discriminatory and should be rejected by FERC." Enron's rant against centralized least

[1] FERC Docket No. EC96-19-000.

[2] FERC Docket No. ER96-1663-000.

[3] See Explanatory Statement of San Diego Gas & Electric Company, Docket Nos. EC96-19-000; ER96-1663-000, June 28, 1996.

[4] See Joint Comments and Protest of the Coalition for a Competitive Electricity Market, MOCK Energy Services, Agricultural Energy consumers Association, Electricity Consumer Resource Council, American Iron and Steel Institute, July 13, 1996 Docket Nos. EC96-19-000 and ER96-1663-000, pp. 7-12

cost dispatch concludes on page 26 with Enron's statement that "In order to preserve the competitive gains the customers, generators, aggregators and marketers have achieve by their participation in the WEPEX process, the Commission must unambiguously reject SDG&E's unilateral revisions to the PG&E/SCE filing." [5]

You can fact check my description of the events in California with Don Garber who spearheaded SDG&E's opposition to Enron and can talk to you in detail but Enron's alleged "robust support" for Bill Hogan's wholesale market design.

PJM 1994-1998

In PJM Bill Hogan's client was the PJM Supporting Companies, consisting of the GPU companies (Jersey Central Power & Light, Metropolitan Edison Company and Pennsylvania Electric Company), PSE&G, Baltimore Gas & Electric, PP&L, Pepco, Atlantic City Electric and Delmarva Power and Light. They made an initial open access filing proposing an LMP based market on July 24, 1996, then a second filing on December 31, 1996. Bill Hogan filed testimony that accompanied their December 31, 1996 filing in docket ER97-1082-000 and OA97-261-000. [6] FERC approved the implementation of the PECO Pricing design, a uniform pricing design, on an interim basis beginning April 1997 in A February 28, 1997 Order. This was not the LMP market design proposed by the supporting companies or by Bill Hogan.

Rather than "robustly supporting" the wholesale market design concepts of Bill Hogan, Enron was robustly supporting the market design concepts of Richard Tabors, based on zonal pricing, "physical rights," and a role for the ISO that did not include economic dispatch. [7]

The Supporting Companies made another filing based on LMP pricing on June 2, 1997 in Dockets ER97-3189 and EC97-38-000 that followed up on the December 31, 1996 filing with some modifications reflecting discussions with stakeholders and to satisfy commission criteria for the ISO. This filing was not "robustly supported" by Enron. Instead, Enron and the Coalition for a Competitive Electric Market filed a protest that contested almost every element of the Supporting Companies design, including the role of the ISO in dispatching the energy market pp. 8-13; LMP pricing p. 13-16, 22-26 financial transmission rights pp. 16-22. [8]

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5 See Joint Comments and Protest of the Coalition for a Competitive Electricity Market, MOCK Energy Services, Agricultural Energy consumers Association, Electricity Consumer Resource Council, American Iron and Steel Institute, July 13, 1996 Docket Nos. EC96-19-000 and ER96-1663-000, pp. 24-26.

6 "Report On PJM Market Structure and Pricing Rules." A scanned copy of that testimony is posted under LMP at LMPMARKETDESIGN.com

7 See CCEM April 28, 1997 filing in Dockets OA97-261 and ER97-1082-000 that attached a paper by Tabors Caramanis & Associates and Robert Wilson of Stanford for discussion at the upcoming technical conference describing CCEM's proposal for transmission congestion pricing, "Auctionable Capacity Rights and Market-Based Pricing," March 24, 1997.

8 See "Motion to Intervene and Protest of the Coalition for a Competitive Electric Market, Schuylkill Energy Resources Inc. and NJ PIRG Citizen Lobby, July 3, 1997 Docket Nos. EC97-38-000 and ER97-3189-000.

When FERC ordered a shift to an LMP based market in a November 25, 1987 order, Enron opposed this in a December 23 1997 request for rehearing.

You do not have to take my word for this version of events in PJM over 1996-1998, you can ask your test kitchen chef Laura Manz to fact check my version of events. Laura was intimately involved in PJM's market design when she was an executive at PSEG in this period. As a former dispatcher, Laura also informed the Supporting Companies positions. Marji Philips and Roy Shanker were also involved and can fact check my description of events.

NYISO 1994-1999

The situation was similar in NYISO where Bill Hogan was an expert witness for the member systems of the New York Power pool, filing testimony supporting the LMP based market design on January 31, 1997 and December 2, 1997 in Docket ER97-1523. Richard Tabors was the expert for Enron and its Coalition for a Competitive Electric Market, that opposed the LMP market design proposed by the Member Systems of the New York Power Pool and their expert, William Hogan.[9]

A representative example of Enron's not remotely "robust support" for Bill Hogan's wholesale market design is their March 26, 1997 motion to intervene and protest that opposed every element of the NYPP proposal, including the role of the ISO in coordinating dispatch. Enron's view of wholesale markets was in fact diametrically opposite to almost every element of what Bill Hogan proposed. Enron asserted in the March 26, 1996 FERC filing that "insofar as wholesale market participants need the services of a spot pool to clear their energy market transactions at the margin, market demand will cause such services to be offered. Optimally they will be offered competitively by two or more pools, independent of the transmission system operator, each competing within a regional market."[10] This is directly contrary to Bill Hogan's design in which economic dispatch, and congestion management, is carried out by the system operator.

The Enron filing of course also opposed LMP pricing and pages 27-54 of the CCEM filing are an attack on LMP pricing, financial transmission rights (TCCs in New York) and Dr. Hogan's testimony in the New York Power Pool filing. Rather than "robustly supporting" Dr. Hogan's view of efficiency wholesale electricity markets, Enron proposed a completely different model, developed by Tabors Caramanis & Associates, not by Bill Hogan.[11]

The Member Systems market design was finally conditionally approved by FERC in January 1999 over Enron's not yet dead body. The January 27 FERC order specifically addresses and rejects CCEM's

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[9] William Hogan's "Report on the Proposal to Restructure the New York Electricity Market,: January 31, 1997 was included in the filing January 31, 1997 of the member systems.

[10] Coalition for a Competitive Electric Market (with members including Enron Power Marketing), Motion to Intervene and Protest, Dockets ER97-1523-000 and OA97-470-000, March 26, 1997 p. 14. Enron and the Coalition for a Competitive Electric Market also filed a Protest in these dockets in Feb 6, 1998, responding to the December 19, 1997 Supplemented filing of the member systems of the New York Power Pool. Virtually the entire protest is an attack on LMP pricing and financial transmission rights.

[11] See Tabors Caramanis & Associates, "Energy Markets Supported by a Truly Independent System Operator," prepared for The Coalition for a Competitive Electric Market, March 25, 1997.

arguments. [12] Enron continued to oppose the NYISO LMP design in filings on February 26 and June 11, 1999. [13] The NYISO design developed by William Hogan was implemented, on November 19, 1999, not with Enron's "robust support," but over Enron's bitter unending opposition. Roy Shanker can fact check my description of the events in New York.

ISO NE 1998-2000

The next battle ground was ISO New England starting in late 1998. Enron's consultant was not Bill Hogan, but Tabors Caramanis, which proposed a zonal design with zonal physical transmission rights, as in New York and PJM.[14] Bill Hogan's client was Westbrook Power, a project under development to build a modern gas-fired generator in Maine that would displace some of the high emitting generation then in operation and Bill Hogan, Susan Pope and I advocated an LMP pricing design with financial transmission rights supported by economic dispatch carried out by the ISO. [15] My recollection is that Enron won the first vote by 67-2. One of the voting against the Enron supported design was Westbrook Power, the second was Sithe which owned 4000+ megawatts of generation in ISO NE. By the time it was spring in New England, however, the LMP market design had such broad support that Enron's opposition was irrelevant.

Once again you do not have to take my word for it, Marji Philips, then with the PECO Power Team, was deeply involved in this, as was Harvey Reed, then with Baltimore Gas & Electric. Marji Philips and Harvey Reed would be a great people to fact check whether Enron "robustly supported" Bill Hogan in New England.

CAISO 1999-2000

This brings us to 1999 when Bill Hogan and I were experts for a coalition of SDG&E and two consumer groups, TURN and UCAN that opposed the CAISO's Amendment 19. Calpine also opposed Amendment 19 but was not part of the coalition that filed Bill Hogan's testimony. Much like in New England, this amendment would have imposed barriers to entry on new generation in order to prop up the existing zonal pricing design. The zonal design required constrained off payments to manage excess generation in constrained regions within the zones during low demand periods. The proposed solution to the flaws of the zonal market design was to create large barriers to the entry of new generation that might create

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12 See January 27, 1999 order in Dockets Nos. ER97-1523-000; OA97-470-000; and ER97-4234-000, p. 40.

13 See June 11, 1999 Enron Power Marketing and Coral Power, Motion to Intervene and Protest; Feb 26, 1999 Request of Enron Power Marketing Inc. for Clarification and Rehearing.

14 See for example Tabors Caramanis & Associates, "NEPOOL CMS: The Enron Straw Proposal, January 14, 1999, and Richard Tabors, "A Transmission Congestion Management System for New England: A Zonal Proposal," NEPPOL CMS Subcommittee, November 18, 1998. Enron Power Marketing Inc and Tabors, Caramanis & Associates, "Why Zonal Pricing Rather than Nodal Pricing in NEPOOL: Some of the Reasons," no date.

15 See William W. Hogan and Scott M. Harvey, "A Congestion Management System for NEPOOL, December 21, 1998; Scott M. Harvey and Susan L. Pole, "Locational Pricing," NEPOOL Regional Transmission Planning Committee, Westborough MA, September 8, 1998.

intra-zonal congestion in some low demand scenario. This of course did not ask whether that generation might be needed in high demand scenarios. Not a concern in 1999 going into 2000, right?

Once again, Enron was on the other side, along with the CAISO and many others.[16] Rather than "robustly supporting" Bill Hogan's views, Enron opposed the San Diego protest and dismissed Bill's Hogan's comments and San Diego's protest them as "nothing more than a collateral attack on zonal pricing and a reargument of the nodal pricing mantra."[17] Bill Hogan and I filed several rounds of testimony in this proceeding at FERC, and the coalition ultimately prevailed in early 2000. [18] You can fact check Enron's opposition with Don Garber, as well as with Eric Woychik and Mike Florio.

San Diego Gas & Electric, TURN and UCAN then joined with the merchant generators Williams, Southern Co/Mirant and Reliant to form the Reform Coalition, with Bill Hogan as the expert, to argue for the implementation of an LMP based market in California. Enron was not just opposed to this effort, my understanding is that Enron was foaming at the mouth, chewing the rug opposed and there were industry meetings that I was not at in which Enron representatives reportedly went berserk at Williams, Southern and Reliant for getting involved with Hogan.[19]

Finally, it should be noted that Enron's support for Bill Hogan's view was so "robust" that when conflicts arising from the Hagler Bailly acquisition of Putnam, Hayes & Bartlett caused Bill Hogan, Susan Pope and I to leave Putnam, Hayes & Bartlett; an important factor in our decision to shift to LECG was that LECG did no business with Enron.

Scott Harvey

March 24, 2021

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16 See for example "Response of Enron Power Marketing Inc. to Protests of Amendment 19 and Affidavit of David J. Parquet," Docket No. ER99-3339-000, August 12, 1999.

17 "Response of Enron Power Marketing Inc. to Protests of Amendment 19 and Affidavit of David J. Parquet," Docket No. ER99-3339-000, August 12, 1999, p. 9

18 See Order Denying Rehearing, Docket No ER99-3339-001, January 31, 2000.

19 Since I was not at these meetings I am not entirely sure who might be able to fact check this. This could be fact checked with Rob Lamkin and Anne Cleary, then with Mirant, Curtis Keebler of Reliant, and Dennis Elliot and Sam Kwong of Williams.