



Control Number: 24770



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Public Utility Commission of Texas

Memorandum

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PUBLIC UTILITY COMMISSION
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TO: Parties of Record

FROM: Commissioner Brett A. Perlman

DATE: September 23, 2002

RE: **Docket No. 24770– Report of the Electric Reliability Council of Texas (ERCOT) to the PUCT Regarding the ERCOT Protocols.**

Please find attached the corrected version of this memo from the one filed on September 11, 2002.

Perlman, Brett

From: Kelly Eakin [kbeakin@lrca.com]
Sent: Wednesday, August 07, 2002 12:23 PM
To: Jaussaud, Danielle; oren@leor.berkeley.edu
Cc: parviz.adib@puc.state.tx.us; brett.perlman@puc.state.tx.us
Subject: RE: Value of Lost Load

Danielle and Shmuel:

Attached is a table that summarizes the findings presented in the literature on outage costs. Studies have not been consistent in the unit of measurement of the outage. Some have been per event, some duration of event, some per hour of outage, and some per unserved kWh. We have presented the summary of estimates of per unserved kWh.

We are providing you this information to help with your need for knowing about reasonable VOLL values. The tables summarizes information from a wide source of published materials, but I don't believe this table appears anywhere in published documents. I think we have assembled this information as our background. Thus, I am not sure how or if you should cite the table as the definitive source. I'll try to find out if there is a published version of this anywhere.

Finally, in the message I sent yesterday, I meant VOLL for many customers (especially large industrials and commercial) may exceed \$10,000/MWh (\$10/kWh) not per \$10,000 kWh.

I hope this helps.

Kelly

-----Original Message-----

From: Kelly Eakin
Sent: Tuesday, August 06, 2002 6:26 PM
To: 'Jaussaud, Danielle'; 'oren@leor.berkeley.edu'
Cc: 'parviz.adib@puc.state.tx.us'; 'brett.perlman@puc.state.tx.us'
Subject: RE: Value of Lost Load

Danielle:

We had received a similar request directly from Professor Oren. I will respond to both the PUC and Professor Oren with this message.

Attached is a somewhat recent bibliography on outage costs and value of lost load. I think the most useful are the Caves et al. and the Woo and Pupp articles. We have also done some recent projects that developed new estimates and summarized existing estimates of VOLL. Unfortunately, those reports are proprietary to the clients. However, I think we might have some general summary of the VOLL estimates which I can pass along to you and Professor Oren. I will send whatever I can tomorrow.

A few quick observations of my own on the VOLL estimates.

Much of this literature is 10 - 15 years old. However, except for inflation, there is no obvious inaccuracy as a result of their age.

VOLL varies by customer. Commercial and Industrial customers may have much higher VOLL than do residential customers.

VOLL increases with outage duration.

9/11/2002

VOLL for many customers (especially large industrials and commercial) may exceed \$10,000/kWh. VOLL may not convey the appropriate *marginal* value of voluntary load curtailment.

I hope this helps. I'll see what sort of summary I can send tomorrow.

Kelly

-----Original Message-----

From: Jaussaud, Danielle [mailto:Danielle.Jaussaud@puc.state.tx.us]

Sent: Tuesday, August 06, 2002 4:02 PM

To: Kelly Eakin

Cc: Archives - Elec Transition

Subject: Value of Lost Load

Kelly:

We need to access information on VOLL calculations for Commissioner Perlman. I was told that LRCA had done work in that area. Is there anything published that you know of related to VOLL calculations? Or does your company have related material that you can share with us at no charge? Please let me know, thanks

Danielle

Danielle Jaussaud
Director of Economic Analysis
Market Oversight Division
Public Utility Commission of Texas
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| Summary of Outage Costs per kWh | |
|---------------------------------|---|
| Residential | Over 90 estimates Average: \$5.92 Median: \$2.55 Empirical 90% Confidence Limit [\$0.009 - \$20.58] |
| Commercial | Over 30 estimates Average: \$78.15 Median: \$19.60 Empirical 90% Confidence Limit [\$7.07 - \$75.51] |
| Industrial | 60 estimates Average: \$15.16 Median: \$11.24 Empirical 90% Confidence Limit [\$2.13 - \$31.64] |

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