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APPLICATION OF THE ELECTRIC RELIABILITY COUNCIL OF TEXAS, INC. FOR A DEBT OBLIGATION ORDER UNDER PURA CHAPTER 39, SUBCHAPTER M, AND REQUEST FOR A GOOD CAUSE EXCEPTION	**§**	**PUBLIC UTILITY COMMISSION OF TEXAS**

AMENDED DIRECT TESTIMONY

OF

BILL BARNES

TABLE OF CONTENTS

I. IDENTIFICATION AND QUALIFICATIONS 3

II. PURPOSE OF TESTIMONY 4

III. REVIEW OF APPLICATION AND PROPOSED DEBT OBLIGATION ORDER 6

IV. USE OF DEFAULT BALANCE PROCEEDS FOR COOPERATIVE SHORT-PAY AMOUNTS 8

V. FREQUENCY OF TRUE-UP PROCESS 10

VI. CONCLUSION 11

EXHIBIT

Attachment NRG-1 - Resume of Bill Barnes 12

DIRECT TESTIMONY OF
BILL BARNES

I. IDENTIFICATION AND QUALIFICATIONS

Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.

A. My name is Bill Barnes. My business mailing address is 1005 Congress Avenue, Suite 950, Austin, Texas 78701.

Q. BY WHOM ARE YOU EMPLOYED AND IN WHAT CAPACITY?

A. I am employed by NRG Energy, Inc. ("NRG") as Senior Director, Regulatory Affairs.

Q. WHAT ARE YOUR EDUCATIONAL AND PROFESSIONAL QUALIFICATIONS?

A. I received a Masters of Electrical Engineering degree from the University of Texas at Austin and a Bachelors of Chemical Engineering degree from the University of Dayton.

Q. PLEASE STATE YOUR WORK EXPERIENCE.

A. In my present capacity at NRG, I am responsible for covering Electric Reliability Council of Texas ("ERCOT") market design issues for the retail and wholesale markets, providing analysis, commercial advice, and regulatory advocacy at the Public Utility Commission of Texas ("Commission"). I also serve as an elected member of the ERCOT Technical Advisory Committee, Wholesale Market Subcommittee, and Protocol Revision Subcommittee in the ERCOT stakeholder process.

Prior to joining NRG, I was a Vice President in US Power Trading at J Aron & Company, the commodities trading subsidiary of Goldman Sachs. During my 5 years at Goldman Sachs, I was responsible for commodity trading strategies, managing various power generation assets, conducting power market design and policy research, and providing strategic commercial advice on power deals.

Before joining Goldman Sachs, I was the Manager of Market Settlements at ERCOT. While at ERCOT, I spent over 7 years managing, designing, and maintaining the commercial aspects of the ERCOT nodal power market. I began my career at Accenture working on competitive retail markets and ISO market development.

My resume is attached as Attachment NRG-1.

II. PURPOSE OF TESTIMONY

Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?

A. In my testimony I discuss ERCOT's Application[1] and the proposed Debt Obligation Order.[2] In general, NRG believes that the Debt Obligation Order and the securitization process it proposes are appropriate and the securitization of the default amounts will be beneficial to the ERCOT market. NRG believes that the Default Balance[3] allocation and payment process described in the proposed Debt Obligation Order will provide for an efficient and equitable distribution of the funds raised through the securitization of Default Charges.[4]

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[1] Application of Electric Reliability Council of Texas, Inc. for a Debt Obligation Order Pursuant to Chapter 39, Subchapter M, of the Public Utility Regulatory Act, Docket No. 52321, *Application of Electric Reliability Council of Texas, Inc. for a Debt Obligation Order to Finance Default Balances under PURA Chapter 39, Subchapter M and Request for Good Cause Exception* (July 16, 2021) (hereinafter "ERCOT Application").

[2] ERCOT Application at pp. 203-293 (Attachment 4 – Draft Debt Obligation Order).

[3] Public Utility Regulatory Act ("PURA"), Tex. Util. Code § 39.602(1) ("Default balance" means an amount of money of not more than $800 million that includes only:

> (A) amounts owed to the independent organization by competitive wholesale market participants from the period of emergency that otherwise would be or have been uplifted to other wholesale market participants;
>
> (B) financial revenue auction receipts used by the independent organization to temporarily reduce amounts short-paid to wholesale market participants related to the period of emergency; and
>
> (C) reasonable costs incurred by a state agency or the independent organization to implement a debt obligation order under Sections 39.603 and 39.604, including the cost of retiring or refunding existing debt.").

[4] PURA § 39.602(2) ("Default charges" means charges assessed to wholesale market participants to repay amounts financed under this subchapter to pay the default balance.").

However, NRG does have some recommendations and questions regarding ERCOT's proposed Debt Obligation Order:

- First, NRG recommends that ERCOT provide additional details regarding its proposal to set aside $50 million for the potential refinance or retirement of debt. The $800 million of funding in the Debt Obligation Order will be borrowed from the Economic Stability Fund ("ESF") and thus should minimize financing cost. Moreover, the Debt Obligation Order calls for a Special Purpose Entity to incur the debt, not ERCOT. ERCOT's Application provides limited explanation for the need to retire $45 million[5] of ERCOT's existing debt unrelated to the Default Balance. Before the Commission approves that amount, ERCOT should provide additional details regarding the need to refinance or retire ERCOT's unrelated debt and how ERCOT would address those costs if they are not included in the securitization.

- Second, it is my understanding that ERCOT proposes to use Default Charges to replenish a portion of the approximately $679 million in financial revenue auction proceeds that were used to cover defaults by Brazos Electric Power Cooperative ("Brazos") and Rayburn Electric Cooperative ("Rayburn"). In Senate Bill ("SB") 1580, Electric Cooperative Securitization,[6] the Legislature gave electric cooperatives a separate securitization mechanism, independent of the mechanism used in this proceeding, to finance the repayment of amounts they owed. The Commission should require ERCOT to apply any funds received from Brazos and Rayburn to the cooperatives' share of financial revenue auction receipts to pay down the related bonds and reduce Default Charges collected from other market participants. Alternatively, ERCOT could reduce the total Default Balance to be securitized in this proceeding by the amount of financial revenue auction receipts allocated to Brazos and Rayburn.

[5] ERCOT Application at pp. 156-159 (Direct Testimony of Sean Taylor on Behalf of ERCOT ("Taylor Direct").

[6] Act of June 18, 2021, 87th Leg., R.S., SB 1580 (Relating to the use of securitization by electric cooperatives to address certain weather-related extraordinary costs and expenses and to the duty of electric utility market participants to pay certain amounts owed).

- Finally, ERCOT's proposed true-up process could result in additional costs based on the number of true-ups ERCOT conducts. NRG recommends that Default Charge true-ups occur no more than once per year.

III. REVIEW OF APPLICATION AND PROPOSED DEBT OBLIGATION ORDER

Q. WHAT GIVES RISE TO THIS PROCEEDING?

A. This proceeding is precipitated by legislation passed in response to the events surrounding Winter Storm Uri (the "Storm"). The Storm had a significant impact on the electric wholesale market including an extended period of exceptionally high prices.

Q. WHAT WAS THE FINANCIAL IMPACT OF THE HIGH PRICES?

A. There remains nearly $3 billion in outstanding amounts unpaid by market participants for market activity during the Storm. Competitive wholesale market participants that have subsequently exited the market owe ERCOT approximately $418 million. ERCOT covered a portion of that through financial auction revenue receipt borrowings, but $318 million remains outstanding and is owed to short-paid wholesale market participants. This amount, along with approximately $432 million in financial revenue auction receipts used by ERCOT to temporarily reduce amounts short-paid to wholesale market participants and approximately $50 million in debt servicing cost, constitutes the "Default Balance."

Q. HAS THE LEGISLATURE ADDRESSED THIS ISSUE?

A. Yes. The Legislature passed, and the Governor signed, House Bill ("HB") 4492[7] which creates a process to address default amounts, and is the basis for ERCOT's Application in this docket. ERCOT has applied to the Commission for a Debt Obligation Order that will finance $800 million of the Default Balance. The bill, codified in part as Subchapter M of the PURA Chapter 39, requires ERCOT to impose Default Charges on ERCOT market participants to repay amounts financed through Subchapter M.

[7] Act of May 30, 2021, 87th Leg., R.S., HB 4492 (Relating to financing certain costs associated with electric markets; granting authority to issue bonds; authorizing fees).

Q. DOES NRG SUPPORT THE ISSUANCE OF A DEBT OBLIGATION ORDER PURUSANT TO SUBCHAPTER M OF PURA CHAPTER 39?

A. Yes. This process will allow for ERCOT to obtain up to $800 million in funds from the Comptroller at a low interest rate in order to repay short paid market participants and replenish the financial revenue auction receipts over a period of 30 years. This process allows market participants who were short paid to receive funds now instead of over a period of many decades as would be required under the ERCOT default uplift process and restores needed liquidity to the market. ERCOT's Application meets the requirements of the law and is a good option to address the financial crisis this part of PURA was intended to address.

Q. HAVE YOU REVIEWED THE PROPOSED DEBT OBLIGATION ORDER?

A. Yes.

Q. DOES NRG HAVE ANY QUESTIONS REGARDING THE USE OF DEFAULT BALANCE PROCEEDS?

A. Yes. ERCOT's estimate of $50 million to potentially refinance or retire debt deserves further scrutiny.[8] ERCOT's Application indicates that its lender may require the retirement or refinancing of $45 million in debt, with prepayment costs of an additional $5 million if it retires the debt early.[9] In its Application, ERCOT provides little explanation for the need to refinance or retire $45 million in ERCOT debt to facilitate the issuance of new debt. Because the debt will initially be borrowed from the ESF by a separate special purpose entity, it is not clear why retiring or refinancing ERCOT debt would facilitate better financing terms.[10] While PURA § 39.602(1)(C) states that "reasonable costs incurred by a state agency or the independent organization to implement a debt obligation order under

[8] ERCOT Application at pp. 156-159 (Direct Testimony of Sean Taylor on Behalf of ERCOT ("Taylor Direct").

[9] Taylor Direct at 156-157.

[10] *See* Taylor Direct at 156 ("ERCOT will use Default Balance funds to retire or refinance existing ERCOT debt if so required by the lender.").

Sections 39.603 and 39.604, including the cost of retiring or refunding existing debt" are part of the Default Balance, such costs must meet the test that they be "reasonable" for inclusion. NRG requests that ERCOT provide additional detail regarding why the refinance or retirement of ERCOT debt is appropriate to this securitization process and meets that test.

In addition, as set out in the following section, NRG has questions and recommendations concerning the allocation of securitized amounts to replenish financial revenue auction proceeds used for short pays attributed to Brazos and Rayburn.

IV. USE OF DEFAULT BALANCE PROCEEDS FOR COOPERATIVE SHORT-PAY AMOUNTS

Q. PLEASE EXPLAIN YOUR RECOMMENDATIONS CONCERNING ERCOT'S PROPOSED ALLOCATION OF DEFAULT BALANCE PROCEEDS.

A. ERCOT states in its Application that "ERCOT initially used $800 million of financial revenue auction proceeds to temporarily reduce the short-paid amounts to wholesale market participants, but some of that amount has been replenished. As of June 30, 2021, the amount of financial revenue auction receipts that remains to be replenished was approximately $766 million."[11]

It is my understanding that of that $766 million, approximately $679 million of financial revenue auction proceeds was used to cover a portion of the $1,879,466,498 in ERCOT invoice defaults incurred by Brazos, and the $640,510,035 in defaults incurred by Rayburn.[12] ERCOT proposes to use Default Charges collected from all Qualified Scheduling Entities and Congestion Revenue Rights account holders to replenish financial revenue auction proceeds that were used to partially cover defaults including those by

[11] Taylor Direct at 155, Lines 17-20.

[12] ERCOT Application at 129 (Attachment CNA-5, Moody's Investors Service, *Sector Comment: Securitization will be a shock absorber for ERCOT defaults from February storm*, (June 7, 2021))

Brazos and Rayburn. This may be unnecessary because Brazos and Rayburn will have another source of funds to replenish these specific financial revenue auction proceeds.

Q. WHAT SOURCE OF FUNDS IS THAT?

During the 2021 Regular Session, the Legislature passed SB 1580, which authorizes electric cooperatives to use securitization financing to recover costs and expenses they incurred during the Storm.

Q. HOW DO YOU PROPOSE TO REPLENISH FINANCIAL REVENUE AUCTION PROCEEDS THAT WERE USED TO COVER DEFAULTS BY BRAZOS AND RAYBURN?

A. ERCOT should prioritize the replenishment of financial revenue auction receipts through funds received from Brazos and/or Rayburn, presumably secured through SB 1580. Therefore, if the Commission decides to adopt an order to finance a Default Balance of $800 million that includes financial revenue auction receipts attributable to Brazos and Rayburn, the Commission should require ERCOT to apply funds from Brazos and Rayburn to the share of financial revenue auction receipts attributable to the cooperatives' short pays, to reduce Default Charges to be collected from other Market Participants.

Q. IS THERE AN ALTERNATIVE SOLUTION?

Alternatively, ERCOT could reduce the total Default Balance to be securitized in this proceeding from $800 million to $368 million which represents only the unpaid invoices from competitive entities.

Q. DOES ERCOT'S APPLICATION CONSIDER SB 1580?

A. Yes, ERCOT's Application states that "ERCOT has made no assumptions regarding whether electric cooperatives eligible for such funding under SB 1580 will avail themselves of that financing option," but that "ERCOT does assume that the Default

Balance does not provide financing for short payments by electric cooperatives that are eligible for securitization under SB 1580."[13]

Q. WHAT IS YOUR RESPONSE TO THAT?

A. To the extent that the Default Balance is used to replenish all financial revenue auction receipts including receipts used to cover cooperative short payments, ERCOT will be indirectly securitizing a portion of electric cooperative short payments that are eligible for securitization under SB 1580. NRG is concerned that ERCOT market participants will incur additional costs, such as interest costs, related to short payments attributable to Brazos and Rayburn by including their portion of financial revenue auction receipts in the Default Balance.

V. FREQUENCY OF TRUE-UP PROCESS

Q. WILL THE ALLOCATION AND COLLECTION OF DEFAULT CHARGES BE SUBJECT TO A TRUE-UP PROCESS?

A. Yes.

Q. PLEASE DESCRIBE IT.

A. ERCOT proposes that, in accordance with PURA § 39.606, the Default Charges be adjusted pursuant to regular true-ups to correct any under-collections or over-collections during the preceding period and ensure the expected recovery of amounts sufficient to timely provide all payments of principal and interest.

Q. HOW FREQUENTLY WOULD THERE BE A TRUE-UP PROCESS?

A. ERCOT proposes to use an annual true-up mechanism to correct any over or under collections during the preceding twelve months. However, ERCOT also proposes to

[13] ERCOT Application at 25 lines 12-15 and fn. 7 (Direct Testimony of Kenan Ogelman on behalf of ERCOT).

conduct a true-up six months following the closing of a series of bonds, as well as a quarterly true-up calculation.

Q. DO YOU HAVE CONCERNS WITH ERCOT'S PROPOSAL?

A. Yes. With the true-ups proposed by ERCOT and the adjustments that could be made to the allocation of Default Charges, it may be difficult for market participants to forecast future costs and adjust for them in the course of their business operations and planning.

Q. PLEASE DESCRIBE ANY SUGGESTED CHANGES YOU HAVE TO THE ERCOT TRUE-UP PROCESS.

A. NRG recommends implementing the statutorily required annual true-up process. So long as the Default Charge incorporates a reasonable margin to protect against unexpected under-collections, an annual true-up process should provide sufficient coverage for bond holders.

VI. CONCLUSION

Q. DOES THIS CONCLUDE YOUR DIRECT TESTIMONY?

A. Yes.

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William F. Barnes

Current Address:
6709 Blissfield Dr.
Austin, Texas
78739

EDUCATION

Graduate

University of Texas – Austin, Texas

Master of Science in Computer and Electrical Engineering with a concentration in Software Engineering: December, 2004

- Cumulative GPA: 3.86/4.00

Masters Report Topic: Independent System Operator/Regional Transmission Organization Software Systems and Service-Oriented Software Architecture.

Undergraduate

University of Dayton – Dayton, Ohio

Bachelor of Chemical Engineering: May, 1998

Magna Cum Laude

- Cumulative GPA: 3.87/4.00
- Major GPA: 4.00/4.00

WORK EXPERIENCE

NRG Energy Inc. – Austin, Texas *04/13 to current*

Senior Director, Regulatory Affairs

- Act as ERCOT market design expert and regulatory affairs liaison.
- Participate in PUCT proceedings and ERCOT stakeholder process.
- Act as advocate in stakeholder processes to promote efficient and competitive markets.
- Author and submit comments at the PUCT and ERCOT stakeholder process.
- Review and advise commercial contracts and structures.
- Provide regular updates to NRG retail customers on regulatory matters of interest.

Goldman Sachs & Co./J Aron – New York, NY *04/08 to 03/13*

Vice President, US Power Trading

- Develop and execute commercial strategies for power trading and sales franchise focusing on ERCOT.
- Experience trading the following markets: ERCOT short-term bilateral markets, ERCOT Day Ahead Market (DAM), ERCOT Congestion Revenue Rights (CRRs), PJM financial market, PJM Day Ahead Market (DAM), PJM Up-to-congestion, and SERC physical market (Entergy and TVA).
- Asset manager for 500 MW Combined Cycle Power Plant in SERC (Entergy/TVA).
    - Responsible for short-term and long-term marketing of the plant output.
    - Perform daily economic analysis of spark spreads and direct plant operational decisions.
    - Expand commercial utilization of the asset by executing novel strategies and accessing adjacent markets such as PJM and MISO.
    - Manage plant maintenance outage schedules.
    - Reserve, purchase, and manage transmission products.
- Asset manager for 200 MW wind farm in West zone of ERCOT.
    - Evaluate and direct daily operation of the wind farm.
    - Optimize commercial results of the asset by trading around the daily wind forecast.
    - Analyze historical dispatch and curtailment patterns to inform commercial decisions.
    - Manage portfolio of Renewable Energy Credits (RECs), monetize REC inventory based on market conditions.
    - Improve performance of the asset through ramp-rate changes and SCADA response adjustments.
    - Manage compliance with wind resource protocol changes.
- Develop congestion trading and hedging strategies and implement in CRR auctions and DAM.
- Act as ERCOT market design expert and regulatory affairs liaison.
- Draft language to capture complex business concepts for power purchase agreements and trade confirmations (structuring).
- Support the sales/origination desk and equity research department through market analysis and client visits and discussions.
- Facilitate the development and execution of a power market database to collect and quickly analyze real-time market data to inform trading and commercial decisions.

Vice President, Commodities Operations

- Managed team responsible for providing market intelligence and analysis in the power industry to trading and sales desks.
- Led an analysis effort for the Investment Banking Division to advise a MISO generation portfolio sale.
    - Estimated the impact of increased renewable resource development in MISO.
    - Studied the potential for further Utility migration between MISO and PJM.
- Produced research on ERCOT power market fundamentals such as supply stack and demand behavior, transmission constraints, dispatch patterns and impacts of reserves, Competitive Renewable Energy Zones (CREZ), and impacts of pending EPA rules and market rule changes.
- Acted as project manager and subject matter expert for ERCOT Nodal Market transition.
    - Drafted requirements for nodal functionality and tested system changes to accommodate nodal rules for the following systems: Power scheduling and bid/offer submission system, Trade capture and risk system (delivery point and price marking), Trade and deal settlement system, Trade confirmation system, and Trade reporting system (FERC filing).
    - Converted legacy trade portfolio to new nodal pricing locations.
    - Facilitated resolution of non-standard delivery point trades with clients.
    - Contributed to industry standard ISDA/EEI Nodal Protocol amendment to accommodate nodal scheduling rule changes.
    - Developed Three-Part Offer and Current Operating Plan submission process for wind asset.
    - Led business process preparation including training and review of procedure updates for credit, settlements, regulatory reporting, trade confirm processing, ISO settlement & invoicing, and value-at-risk assessment.
- Assisted conversion of CinHub to Indiana Hub in MISO as a result of Duke migration to PJM.
    - Analyzed Indiana Hub electrical bus composition compared to CinHub.
    - Evaluated legacy trade portfolio and trade confirm language to determine proper pricing locations post-migration.
    - Facilitated resolution of final delivery points with clients.
- Managed portfolio of complex power transactions and developed settlement processes for them.
- Reviewed and drafted non-standard trade confirmations and power purchase agreements.
- Supported back office functions including standard trade and deal settlement, invoice processing, credit and collateral management, and regulatory compliance.

Electric Reliability Council of Texas (ERCOT) – Austin/Taylor, Texas *11/00 to 09/01, 04/02 to 03/08*

Manager, Settlements and Billing

- Directly responsible for the financial settlement of $1.5 Billion zonal-based electric power market and the implementation of complex nodal market design.
- Managed team of 31 direct reports – 22 FTEs and 9 Contractors.
- Prepared and administered $2.3 Million annual team budget and financial goals.
- Served as an expert witness at hearings with Public Utility Commission of Texas.
    Deposition - Docket #32686: Application of the Electric Reliability Council of Texas for approval of a Nodal Market Implementation Surcharge and Request for Interim Relief
    Expert analysis - Docket #32992: Compliance Proceeding to Final Order in Docket 31243 (Complaint of TXU Portfolio Management Company LP and TXU Energy Retail Company LP against the Electric Reliability Council of Texas)
    Direct testimony - Docket #33416: Constellation NewEnergy, Inc's Appeal and Compliant of ERCOT decision to approve PRR676, PRR674 and Request for Expedited Relief
    Affidavit - Docket #33500: Complaint of Constellation Energy Commodities Group, Inc. against the Electric Reliability Council of Texas
- Participated in ERCOT stakeholder process to create and implement wholesale power market rules.
- Conducted and reported market studies and analysis to guide and facilitate market design decisions.
- Led a team through nodal market implementation; business requirements and use case creation, software design, software test planning/preparation and execution, and market trial design.
- Directed the day-to-day operation of zonal market settlements, Transmission Congestion Rights (TCR) auctions, and the accurate and timely billing of both functions.
- Managed vendors during nodal implementation by setting detailed work objectives, providing analysis to assist development of software, and outlining implementation plans.
- Created and executed nodal transition plan for Settlements and Billing team: Re-organized team structure, developed appropriate business processes, focused team on long term goals, and outsourced zonal market settlement operations.

- Presented regularly at ERCOT market meetings and worked with Market Participants to resolve issues.
- Developed a detailed level of understanding of competitive electric power markets.
- Mentored employees, conducted performance reviews, and assisted in their professional development.

Texas Nodal Market Redesign Program
Transition from Zonal market model to Nodal

Nodal Technical Lead, Commercial Systems
- Conducted ISO Settlement System Research.
- Designed Nodal Settlement System Architectures.
- Prepared and planned Nodal Settlement System Prototype.
- Drafted Settlements & Billing System Upgrade Plan.
- Provided input for vendor strategy, hardware estimation, Nodal System architecture.

Nodal Project Management Office (PMO) Evaluation Committee Member
- Tasked with evaluating the creation of an independent Program Management Office for the ERCOT Nodal Market Redesign effort.
- Worked with a team to analyze benefits and risks of a Nodal PMO.
- Studied various organizational structures for a PMO.
- Assisted in the creation of an RFP to outsource varying portions of the Nodal PMO.
- Reviewed vendor proposals and acted as decision maker in vendor evaluation and selection.

Rational Implementation Team
- Analyzed ERCOT procedures for business and software requirements management.
- Evaluated IBM Rational Tool Set for requirements analysis.
- Helped develop a requirements management plan that integrated the Rational Tool set.

Wholesale Market Development - Business Project Manager;
Market Operations and Settlements Systems
- Evaluated and analyzed market participant project requests from market working group subcommittees.
- Estimated market project software impacts and costs – submit project request to Directors for approval.
- Solicited and acquired system requirements from stakeholders and business users.
- Modeled and refined system requirements; created software requirements specifications and designs.
- Communicated software requirements to IT development teams.
- Created software test plan, test scripts, test conditions, and test data; Unit, Product, and Integration testing.
- Facilitated software development and testing by acting as liaison between business users and developers.
- Directed software projects from inception to production migration.
- Led new software vendor solicitation, evaluation, and selection processes.
- *Projects*: Mismatched Inter-QSE Schedule Settlement, EMMS Release 4 – Replacement Reserve and Resource Plan changes, Generate Settlement Statement Re-engineering, Ancillary Service Obligation Settlement Calculations, Market Total Determinants, Ancillary Service Multiple Markets, DCTie Automation, OOM tool enhancements, Lodestar 3.7 Upgrade, Service-Oriented Architecture TIBCO implementation, Zero charges – Settlement Architecture review, Batch Scheduling Software Replacement, RAID 5 Storage.

Commercial Systems Wholesale Testing Team Lead
- Managed wholesale testing team (2 FTEs) responsible for Settlements, Data Aggregation, Data Acquisition, and critical interface system quality assurance.
- Led merger of Wholesale Product Test and Integration Test teams (FTEs and infrastructure); efficiencies gained from single testing unit included testing resource coverage, knowledge transfer, and improved procedures.
- Managed wholesale test pipeline by controlling projects and SIRs which enter the test environments.
- Developed and refined testing procedures and controls for the team using input from all stakeholders.
- Assured team followed the documented procedures for SAS70 compliance.
- Logged and resolved software defects and database issues; communicated to IT development and business teams.
- Planned environment maintenance and expansion to meet testing needs.
- Assisted procurement of new hardware and configured servers accordingly.
- Balanced project and SIR testing efforts with special business analysis efforts such as Load Profiling Annual Validation, UFE analysis for 10-day settlement, and Back-dated QSE analysis.

Technical skills obtained at ERCOT: Lodestar, Oracle, PLSQL, XML, EDI, Perl, Tivoli Maestro, AppWorx, Siebel, SeeBeyond, TIBCO, HTML, Web-Portal. Software versioning tools; VSS, CVS.

Accenture LTD (formerly Andersen Consulting) – St. Petersburg, Florida *6/98 to 04/02*
Clients served: ERCOT (11/00 – 09/01), Niagara Mohawk (01/00 – 10/00; 09/01 – 04/02), Orange & Rockland (10/00 – 11/00), Ameren (09/98 – 01/00)
Energy Software and Information Technology Consultant - Energy and Utility Information and Business Software Solutions.

- Studied various business infrastructures, business systems, and electricity deregulation strategies.
- Gathered business requirements and designed custom software to fulfill these requirements.
- Managed team of business analysts (6 FTEs) to solve billing and revenue issues.
- Applied business integration methodologies to fit client needs; implemented solution.
- Adapted to multiple corporate client cultures; worked with client to implement IT goals.
- Managed teams of software developers and clients by guiding work load and resources.
- Acquired computer-related technical knowledge through training and experience; applied it.

Technologies include: Customer 1, Oracle, DB2, Access, SQL, Lodestar, Siebel, HTML, Web-Portal, XML, EDI, FTP, C+, COBOL, VB Script, SeeBeyond. Software versioning tools; PVCS, VSS.

- Involved in Accenture mentoring program: fostered professional development of new hires.

ACTIVITIES

- Speaking engagements:
  - Panel participant at University of Texas Renewable Energy Institute Conference in Austin, Texas: January 2013
    Presentation Topic: Cost of Energy, Impacts of renewable on wholesale power markets
  - Guest speaker at Platts Texas Power Market Forum in Houston, Texas; July 2011.
    Presentation Topic: Evaluation of the Texas Nodal Market 6-months after implementation, Energy-only Market design and proper price formation
  - Panel participant at Vinson & Elkins Power Market Symposium in Houston, Texas; October 2010.
    Presentation Topic: Launch of the upcoming ERCOT Nodal Market in December 2010, Concerns and market impact
  - Guest speaker at EUCI Conference in Austin, Texas; November 2006.
    Conference Topic: Overcoming Market Settlement Challenges
    Presentation Topic: ERCOT Settlement Data and Timing Challenges
  - Guest speaker at Lodestar Users' Conference in Portland, Maine; August 2005.
    Presentation Topic: Lodestar from an ISO Perspective; ERCOT's use of Lodestar
- Published author of energy-related IT papers (Energy Central, University of Texas).
- Military Family Readiness Group (FRG).
- American Institute of Chemical Engineering (AIChE) – U of Dayton student chapter Vice President.
- University of Dayton Engineers Supporting Peers – engineering, physics, and chemistry tutor.

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52322 Bill Barnes Affidavit.DOCX

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E-Signature Summary

E-Signature 1: Bill Barnes (BB)
August 13, 2021 12:58:40 -8:00 [96D060A6DA17] [66.28.21.206]
Bill.Barnes@nrg.com (Principal)

E-Signature Notary: Lauren Ivey (LIV)
August 13, 2021 12:58:40 -8:00 [35B811C24966] [66.28.21.206]
lauren.ivey@bakerbotts.com
I, Lauren Ivey, did witness the participants named above electronically sign this document.

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STATE OF TEXAS §
§
COUNTY OF HARRIS §

AFFIDAVIT OF BILL BARNES

BEFORE ME, the undersigned authority, on this day personally appeared Bill Barnes, who being by me first duly sworn, on oath, deposed and said the following:

1. "My name is Bill Barnes. I am of sound mind and capable of making this affidavit. The facts stated herein are true and correct based on my personal knowledge. My current position is Senior Director, Regulatory Affairs for NRG Energy, Inc.

2. The foregoing direct testimony and the attached exhibit have been prepared by me or under my direct supervision and are true and correct to the best of my knowledge."

Further affiant sayeth not.

Bill Barnes
Signed on 2021/08/13 12:58:40 -8:00

Bill Barnes

SUBSCRIBED AND SWORN TO BEFORE ME ON THIS 13th of August, 2021

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NOTARY PUBLIC
STATE OF TEXAS
Lauren Elizabeth Ivey
Commission # 124906959
Notary Public
STATE OF TEXAS
My Comm Exp. Jul 05, 2022
Notary Stamp 2021/08/13 12:58:40 PST 35BB11C24966

Notary Public for the State of Texas
Signed on 2021/08/13 12:58:40 -8:00

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Page 1 of 2 | 1B92A73879D01