# **AUSTIN ENERGY 2016 RATE REVIEW**

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AUSTIN ENERGY'S TARIFF PACKAGE UPDATE OF THE 2009 COST OF SERVICE STUDY AND PROPOSAL TO CHANGE BASE ELECTRIC RATES

BEFORE THE CITY OF AUSTIN IMPARTIAL HEARING EXAMINER

# CROSS REBUTTAL TESTIMONY AND EXHIBITS OF

# MARILYN J. FOX

ON BEHALF OF

NXP SEMICONDUCTOR, INC.

AND

SAMSUNG AUSTIN SEMICONDUCTOR, INC.

MAY 10, 2016

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# CROSS REBUTTAL TESTIMONY OF MARILYN J. FOX

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Exhibit MJF - 4	Austin Energy Resource, Generation and Climate Protection Plan to 2025: An Update for the 2020 Plan (December 11, 2014)				
Exhibit MJF - 5	Excerpts from City of Austin, Texas May 13, 2015 Official Statement relating to the Electric Utility System Revenue Refunding Bonds, Series 2015A and the Electric Utility System Revenue Refunding Bonds, Taxable Series 2015B				

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1		I. <u>INTRODUCTION</u>
2	Q.	PLEASE STATE THE PURPOSE OF THIS CROSS REBUTTAL
3		TESTIMONY.
4	A.	I am offering cross rebuttal testimony to rebut the recommendation of Public Citizen
5		and Sierra Club to include in Austin Energy's ("AE's") revenue requirement, money
6		allocated for the early retirement of debt associated with Units 1 and 2 of the Fayette
7		Power Plant ("FPP"). In their Position Statement/Presentation on the Issues, Public
8		Citizen and Sierra Club jointly recommended AE be allowed to recover an additional
9		\$31,500,000 <sup>1</sup> in revenue requirement for this retirement, which I recommend should
10		not be adopted because it does not meet the definition of known and measureable at
11		this time.
12		II. BACKGROUND
13	Q.	WHAT IS PURPOSE OF PUBLIC CITIZEN AND SIERRA CLUBS'
14	C	<b>RECOMMENDATION TO INCLUDE RECOVERY FOR FPP UNITS 1 &amp; 2 IN</b>
15		THIS RATE REVIEW?
16	A.	Public Citizen and the Sierra Club seek to establish a debt defeasance fund to retire the
17		outstanding debt associated with the FPP by the end of 2022. They recommend that a
18		reserve be established and funded each year during the budget process using the \$31.5
19		million collected from ratepayers over the next 6 years. <sup>2</sup> Public Citizen and Sierra

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<sup>&</sup>lt;sup>1</sup> Austin Energy's Tariff Package: 2015 Cost of Service Study and Proposal to Change Base Electric Rates, Public Citizen's and Sierra Club's Position Statement/Presentation on the Issues at 24 (May 3, 2016) ("Public Citizen and Sierra Club Position Statement").

Club rely upon the Austin Energy Resource Generation and Climate Protection Plan
 to 2025: An Update for the 2020 Plan, ("Resource Plan" attached as Exhibit MJF 4)<sup>3</sup> as the basis for their recommendation. The Austin City Council authorized the
 development of the Plan in Resolution No. 20140828-157.
 DID AE MAKE ANY OBSERVATIONS CONCERNING THE COSTS

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# 6 ASSOCIATED WITH THE ADOPTION OF RESOLUTION 20140828-157?

A. Yes, AE staff presented a preliminary affordability analysis in October 2014 for the
implementation of Resolution 20140828-157. During this presentation, AE indicated
the implementation of Resolution 20140828-157 would cause AE to exceed the
affordability goals by \$550 million from 2014-2024.<sup>4</sup> Due to this cost, the
affordability constraints make it unlikely that the Resource Plan will be implemented
as previously developed.

# 13 The following excerpt from the Resource Plan describes the non-binding 14 nature of the Resource Plan and that the implementation of the steps in the Resource 15 Plan will be subject to Council's approval.

The recommendations are designed to be flexible and dynamic. As 16 the circumstances change, the City and Austin Energy will maintain 17 18 flexibility to modify elements to respond to a range of factors, including economic conditions, customer load, fuel prices and power 19 infrastructure build-out. technological 20 supply availability, development, law and regulations, policy direction, rate structures and 21 customer needs. Therefore, the Plan will need to be adapted and 22 modified to manage risk, maintain system and service reliability, 23 achieve policy goals and meet customer demand for excellence in all 24

<sup>3</sup> Austin Energy Resource, Generation and Climate Protection Plan to 2025: An Update of the 2020 Plan (Dec. 11, 2014) ("Resource Plan") (attached as Exhibit MJF – 4).

<sup>&</sup>lt;sup>4</sup> *Id.* at 1 ("[i]t showed it would likely result in exceeding council's affordability metrics and could cost utility customers \$550 million above a business-as-usual case over the next ten years").

1aspects of service. As each significant implementation step is2undertaken, Austin Energy's recommendations to the City Council3must be supported by assessment of impact on all customers and by4charting the progress each step will make toward achieving the goals5outlined in this Plan.

6 Austin energy will review its progress and issue a report on 7 performance against the Plan. Austin Energy should continue to 8 reassess the Plan is a public forum every two years. Every major 9 resource decision will be taken before the City Council for review 10 and authorization.<sup>5</sup> (Emphasis added)

11 Q. HAS THE CITY COUNCIL APPROVED THE RETIREMENT OF UNITS 1 &

# 12 2 OF FPP OR THE ESTABLISHMENT OF A NEW RESERVE FOR THE

13 **DEBT RETIREMENT OF FPP?** 

No. The Austin City Council has not approved a decommissioning schedule for FPP, 14 Α. however, the retirement date of either 2022 or 2023 was included in the Resource 15 The targeted dates "were established based on other generation resource 16 Plan. additions outlined in the Resource Plan, market forecasts, and potential changes 17 caused by ERCOT reliability analyses and requirements."6 These were targeted dates 18 and not approved dates. Further, during discovery, AE stated that the retirement dates 19 for Units 1 & 2 are subject to affordability goals, reliability requirements, and overall 20 management needs.<sup>7</sup> 21

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<sup>&</sup>lt;sup>5</sup> *Id*, at 1-2.

<sup>&</sup>lt;sup>6</sup> See, Austin Energy's Tariff Package: 2015 Cost of Service Study and Proposal to Change Base Electric Rates, Austin Energy's Response to NXP Semiconductors' and Samsung Austin Semiconductor, LLC's Fourth Request for Information at 4-3 (Mar. 28, 2016).

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1		III. <u>Recommendation</u>						
2	Q.	WHAT IS YOUR RECOMMENDATION CONCERNING INCREASING THE						
3		REVENUE REQUIREMENT BY \$31.5 MILLION FOR THE NEXT 6 YEARS						
4		FOR THE RETIREMENT OF UNITS 1 & 2?						
5	А.	I am recommending that this increase to revenue requirement for early debt retirement						
6		be denied as the dates these units will be retired is not known and measurable, instead						
7		they are predicted dates that have not been approved by the Austin City Council. In						
8		addition, approval is not a foregone conclusion considering that the current City						
9		Council bears almost no resemblance to the one that approved the Resource Plan in						
10		2014.						
11	Q.	WHAT ARE YOUR REASONS FOR RECOMMENDING A						
12		DISALLOWANCE?						
13	А.	The inclusion of amounts in rates to retire the outstanding debt on FPP is premature						
14		and therefore, not known and measurable. Before the retirement of FPP, several						
15		decisions and steps must be taken:						
16		1. Because AE participates in the Electric Reliability Council of Texas						
17		("ERCOT"), the retirements must comply with the ERCOT protocols.						
18		Before any retirement is allowed, ERCOT performs a reliability-must-						
19		run study to determine if the plant is required for transmission						

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stability.<sup>8</sup> The Austin City Council must approve the retirement and the establishment of the reserve.

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2. Because the City of Austin shares an equal ownership interest in Units 1 & 2 with the Lower Colorado River Authority ("LCRA"), the ownership agreement between the City of Austin and the LCRA must be renegotiated to allow for the City to exit the project and the LCRA must consent to a retirement of the units. Assistant City Attorney Andrew Perny sent a memo to the City Council in 2014 stating the obstacles facing the City of Austin should it want to close FPP. He identified a major obstacle is the 1974 Participation Agreement between the City of Austin and the LCRA, which prohibits Austin from unilaterally closing down a portion of the plant. The City could reduce its share of power from the plant but would still have to pay its share of the cost.<sup>9</sup>

153.The Resource Plan presented in December 2014 mentioned above16concluded that the retirement and the other recommendations included17in the Resource Plan would not allow AE to stay within the18affordability goals established by City Council, which is required by19Resolution 20140828-157.

<sup>&</sup>lt;sup>8</sup> Electric Reliability Council of Texas Protocol: Section 3-14-1, available at http://www.ercot.com/mktrules/nprotocols/current.

<sup>&</sup>lt;sup>9</sup> Bill McCann, *Memo Cites Legal Hurdles for City to Get Out of Coal Plant* (Jan. 9, 2014) (http://kut.org/post/memo-cites-legal-hurdles-city-get-out-coal-plant).

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#### IV. CONCLUSION

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Q.

#### WHAT IS YOUR CONCLUSION?

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I am of the opinion that any costs associated with retiring the debt associated with 3 Α. FPP Units 1 & 2, should not be included in rates until such time as the retirement is 4 5 known and AE has obtained all of the required authorizations. The early retirement of the debt will not achieve the goals expressed in the Resource Plan. Further, Unit 1 6 was completed in 1979 and Unit 2 in 1980 and are both approaching the end of the 7 service lives. This means that some of the debt associated the scrubbers added to these 8 units in 2011 will extend beyond the end of their useful life. Therefore, because the 9 units are likely to remain functioning until 2022, it is not equitable to accelerate the 10 debt payments. It is important to remember as well that even if AE renegotiates 11 ownership with LCRA, there is no guarantee that LCRA will close the units. 12

AE and LCRA in 2011, installed scrubbers to the units to bring them into compliance with federal rules and regulations. "With scrubbers in place at FPP, Austin energy owns a large surplus of S02 allowances that have the potential to generate revenue if sold to other utilities."<sup>10</sup> Therefore, AE's continued ownership has the potential to earn revenue from the sale of S02 allowances to other utilities.<sup>11</sup> If the

<sup>&</sup>lt;sup>10</sup> City of Austin, Texas, May 13, 2015 Official Statement relating to Electric Utility System Revenue Refunding Bonds Series 2015A and Electric Utility System Revenue Refunding Bonds, Taxable Series 2015B at 38, *available at* https://assets.austintexas.gov/financeonline/finance/downloads/2015\_AE\_Refunding\_FOS.pdf (May 13, 2015).

<sup>&</sup>lt;sup>11</sup> Id. ("Austin Energy holds more allowances relative to expected emissions for all [Cross-State Air Pollution Rule ("CSAPR")] trading programs (annual and seasonal NO<sub>x</sub> and annual SO2) for the first Phase of CSAPR (2015, 2016). With scrubbers in place at FPP, Austin Energy owns a large surplus of SO2 allowances that have the potential to generate revenue is fold to other utilities. Allowance allocations associated with future phases of CSAPR have not yet been determined by EPA. Some remaining legal challenges are in progress at the D.C. Circuit, and it is possible that a final resolution of the litigation could remove or reduce compliance risk for Texas utilities.").

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4	Q.	DOES THIS CONCLUDE YOUR TESTIMONY?
3		benefit of the revenue and the installed scrubbers.
2		have paid for the early defeasance of the debt without an extended period to realize the
1		recommendation of Public Citizen and Sierra Club is adopted, AE's ratepayers will

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5 A. Yes.

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Austin Energy Resource, Generation and Climate Protection Plan to 2025: An Update of the 2020 Plan

# **INTRODUCTION**

The Austin City Council adopted the Austin Climate Protection Plan (ACPP) in 2007 to build a more sustainable community. Every City department was subsequently tasked to create action plans intended to ensure that departmental operations were consistent with the ACPP. Austin Energy developed a Resource, Generation and Climate Protection Plan to 2020 to meet these objectives, which was approved by City Council in 2010 and further refined in 2011 by Council by adding affordability metrics. As part of that plan, Austin Energy committed to update it every two years.

In April of 2014, City Council passed Resolution No. 20140410-024 (2014 ACPP) that recognized the need to further accelerate the reduction of greenhouse gas emissions beyond the 2007 ACPP standards and set a goal of reaching net zero community-wide greenhouse gas emissions by 2050 preferring to achieve this goal sooner if feasible. Moreover, in April of 2014, the City Council appointed the 2014 Austin Generation Resource Planning Task Force to make recommendations on the utility's generation mix to 2025 and to further set the energy sector of the City of Austin on a glide path to achieve the emissions standards set forth in the 2014 ACPP. On July 9, 2014, the Task Force approved recommendations for updating the Plan. In August of 2014, City Council approved Resolution No. 20140828-157 and Resolution No. 20140828-158, which placed several Task Force recommendations into policy, subject to affordability metrics. Subsequently, based upon the same modeling used for resource planning analysis, Austin Energy performed an affordability analysis of implementing Resolution 157. It showed it would likely result in exceeding Council's affordability metrics and could cost utility customers \$550 million above a business-as-usual case over the next 10 years.

On October 9, 2014, Austin Energy presented the results of its resource planning update, as scheduled, recommending the 500+ Plan, which included many of the Task Force recommendations, expanded renewable generation and replaced the Decker Creek Power Station's steam units with a highly efficient combined cycle gas turbine unit by 2018. The 500+ Plan showed that local generation is critical to maintaining affordability by providing revenues back to the utility and by moderating local electric market prices.

This document represents recommendations for a resource plan that makes further refinements to the 500+ Plan presented in October and brings together generation and energy demand management options over the planning horizon to the year 2025. Developing the Plan involved extensive analysis by Austin Energy of the expected costs, risks and opportunities to meet the future demand for electricity services by a highly skilled and experienced staff with the help of a calibrated and tested production cost model. The Plan outlined in this document is based on the current understanding of technology and of national, state and local energy policies. The recommendations developed by Austin Energy staff benefited from substantial input from citizens, customer groups, representatives of private industry, utility advisory commissions and the members of the Task Force.

The recommendations are designed to be flexible and dynamic. As the circumstances change, the City and Austin Energy will maintain flexibility to modify elements to respond to a range of factors, including economic conditions, customer load, fuel prices and power supply availability, infrastructure build-out, technological development, law and regulations, policy direction, rate structures and customer needs. Therefore, the Plan will need to be adapted and modified to manage risk, maintain system and service reliability, achieve policy goals and meet customer demand for excellence in all aspects of service. As each significant implementation step is undertaken, Austin Energy's recommendations to the City Council must be supported by assessment of impacts on all customers and by charting the progress each step will make toward achieving the goals outlined in this Plan.

Austin Energy will review its progress and issue a report on performance against the Plan. Austin Energy should continue to reassess the Plan in a public forum every two years. Every major resource decision and Plan change will, as always, be taken before the City Council for review and authorization.

#### AUSTIN ENERGY'S MISSION

Outlined below is a description of how the Plan meets each element of Austin Energy's mission to deliver clean, affordable, reliable energy and excellent customer service. This Plan demonstrates that customers and the Greater Austin community can indeed expect equitable, economic and environmentally responsible electric services.

**Clean.** Austin Energy recommends significant actions to promote its clean energy goals by the beginning of 2025. The initial implementation strategy to achieve these goals involves retiring the older, natural gas-fired Decker steam units, replacing them with a new and highly efficient gas plant, along with further investments in local storage, demand response, wind and solar. This new asset will provide the revenue required to escalate the use of renewables, increase energy efficiency, shift load, and begin further investments in energy storage. The Plan also establishes a process for ending the use of coal by starting the retirement of Austin Energy's share of the Fayette Power Project by the end of 2022, contingent upon setting aside a fund to pay off the outstanding debt. The recommended plan will reduce emission rates of nitrogen oxides (NOx), sulfur dioxide (SO<sub>2</sub>) and volatile organic compound (VOC) emissions, and contribute positively to compliance with national ambient clean air standards. Finally, by shifting demand, investing in energy efficiency and storage and increasing the use of renewable resources, water use is also reduced, which is of particular importance given climatic change and the availability of water in the Central Texas region.

Affordable. Austin Energy will strive to optimize rates and services in a responsible manner. A fundamental benchmark that will guide implementation of the Plan is affordability. Austin Energy must be financially sound, the cost of electric service must be affordable for all classes of customers (with particular attention to the low income and underserved customers), and rates must be competitive to ensure the retention and attraction of businesses for a strong local economy. As Austin Energy moves forward with implementation of the Plan, customer bills will be compared to those for similar customers in other major metropolitan areas, including, Houston, San Antonio, Dallas-Fort Worth and other areas within the Austin Metropolitan Statistical Area (MSA). The Plan will be subject to keeping overall rates from rising more than 2 percent per year and maintaining a competitive posture. Available data (rates, average monthly bills for residential, commercial and industrial, and other affordability/competitive benchmarks) will be included in Austin Energy's Annual Performance Report.

**Reliable.** Implementation of the Plan will be guided by power quality and reliability requirements to meet the needs of Austin Energy's current and prospective customers. In serving as a road map, the Plan will respond to system needs, changing technologies and market conditions to ensure consistent power quality and reliability. Transmission and distribution reliability goals will be targeted to meet or exceed

current goals. Power quality and reliability will continue to be detailed in the Annual Performance Report.

**Excellent Customer Service.** The implementation and ongoing review of the Resource, Generation and Climate Protection Plan to 2025 will be transparent. Through the Annual Performance Report, biennial Plan reassessment and an informed decision making process, the City Council and Austin Energy customers will be provided vital information detailing progress toward goals and any necessary Plan adjustments. The goal in implementing this Plan is to consistently demonstrate, to the highest degree possible, that proposed actions further Austin Energy's mission of providing clean, affordable and reliable energy. Individual programs that help meet those goals—including demand reduction programs and local solar programs—must have easily accessible information available to all Austin residents.

# Austin Energy Resource, Generation and Climate Protection Plan to 2025: An Update of the 2020 Plan

#### PLAN SUMMARY

The following is a summary of the recommended 2025 Generation Plan which provides a path forward for the next 10 years.

The 2025 Generation Plan balances affordability and risk management by using revenues and capacity created by a new 500 MW highly efficient combined cycle plant investment to allow for the retirement of older fossil fuel generation and to support an increase in the amount of renewable energy to 55 percent of customer demand, as well as, investments in local storage and demand response by 2025. This combination offers the potential to provide additional headroom within the affordability metrics to expand other important programs if desired.

The Plan adopts and acts immediately on:

- 1- Commencing a third party economic and environmental review to replace the Decker steam units and Fayette Power Plant as described in Appendix A.
- 2- Supporting creation of a cash reserve fund for Fayette Power Project retirement. Reserves would be approved through the budgeting process and targeted to retire Austin's share of the plant beginning in 2022. Retiring Austin's portion of Fayette is contingent upon cash available to pay off debts and other costs associated with retirement while maintaining affordability.
- 3- Issuing a Request for Proposal for up to 600MW of utility scale solar to commence the process towards a generation portfolio consisting of 55 percent renewable energy.
- 4- Maintaining the current goal of 800 MW of energy efficiency and Demand Response by 2020, and adding an incremental 100 MW of Demand Response to achieve a total of at least 900 MW of Demand Side Management (DSM) by 2025.
- 5- Developing an implementation plan for distribution connected local storage of at least 10 MW complemented by as much as 20 MW of thermal storage.

The Plan also recommends the following contingent upon further study, technological development, progress towards goals and rate adjustments or restructuring:

- 1- An additional 100 MW of Demand Response or energy efficiency to increase the DSM achieved to 1000 MW by 2025.
- 2- Issuing an RFI for 170 MW of large scale storage such as Compressed Air Energy Storage.

The table below shows the projected resource mix and timing of the recommended 2025 Generation Plan.

Year	Coal	Nuclear	Gas	Local Storage	Demand Response	Demand Side Management	Biomass	Solar	Local Solar	Wind	% Renewables
2015	602	436	1,497				112		63.0 <sup>5</sup>	1041	28%
2016								200 <sup>4</sup>	13.0 <sup>6</sup>	754 <sup>7</sup>	51%
2017				1				150	6.0 <sup>€</sup>	(91.5) <sup>8</sup>	54%
2018			(235) <sup>3</sup>	1					7.0 <sup>6</sup>	(34.5) <sup>8</sup>	53%
2019				1					9.0 <sup>6</sup>		53%
2020	(235)1			1	100 (cumulative)	700 (cumulative)		2004	12.0 <sup>6</sup>		57%
2021				1	20				14.0 <sup>6</sup>		56%
2022				1	20				16.0 <sup>6</sup>		55%
2023	(367) <sup>2</sup>			1	20				18.0 <sup>6</sup>	(165.6) <sup>8</sup>	56%
2024				1	20				20.0 <sup>6</sup>		52%
2025				2	20			2004	22.0 <sup>6</sup>		56%
Total Resources	o	436	1262	10	200	700	112	750	200 <sup>9</sup>	1503	

#### Note:

1) Equivalent MW reduction of AE's share of Fayette to achieve 20% below 2005  $\mathrm{CO}_2$  levels

2) Retirement of AE's share of Fayette at the end of 2023

3) Net of Retirement of Decker Steam Units and addition of 500 MW Combined Cycle

New utility scale solar additions

Existing and new local solar additions

6) Total local solar additions including community solar

7) Net of committed wind and new additional wind

B) Expirations of existing wind contracts

9) Additional 90 MWs of Local Solar by 2025 contingent upon affordability evaluation

#### **Fossil Fuel Retirements**

This Plan establishes an expectation to reduce carbon dioxide emissions by retiring inefficient fossil fuel plants, beginning with the steam units at the Decker Creek Power Station, and then Austin Energy's share of the Fayette coal-powered plant.

Subject to ERCOT processes, and needed transmission upgrades, this Plan establishes the expected retirement date for the 735 MW of steam units at Decker by the end of 2018.

It is important to note that the analysis shows that it is not feasible to retire the Decker units and Austin Energy's share of the Fayette units without a replacement source within the Austin Energy load zone, which is critical to remaining within the Council's affordability metrics. Decker does not produce a lot of energy or revenue on an annual basis, but it provides a hedge against high prices and has a dampening effect on local energy prices, thus reducing customer bills.

The Fayette Power Project provides roughly 25 percent of Austin Energy's current energy routinely at costs below market prices which produce revenues that reduce customer bills. Reducing and ending Austin Energy's use of coal is contingent on paying off the debt associated with environmental investments that Austin Energy has made in the plant. The 2025 Generation Plan continues to establish a ramp down in production in 2020 to achieve established carbon goals, and anticipates the retirement process in 2022, if funds are available. The recommended Plan will require the establishment of a cash reserve retirement account in advance of the retirement to be funded with available cash as part of the annual budgeting process.

#### **Fossil Fuel Additions**

The Plan would add 500 MW of additional gas units by the beginning of 2018 at the Sand Hill Energy Center or Decker. Austin Energy will issue an RFP to select a consultant with the expertise to analyze the ERCOT nodal market using a production cost model to perform an independent review of the 500 MW investment to fully report benefits and risks of this strategy.

## Solar

Under the Plan, installed solar capacity would increase to at least 950 MW by 2025, including 200 MW of local solar. To ensure affordability, the Plan recommends implementing a phase down of the residential and commercial incentive programs to achieve the first 110 MW of the local solar goal by 2020, including at least 70 MW of customer-sited solar. Current projected cost declines of solar, technology improvements and financing alternatives and the implementation of supportive solar policies shall be utilized to enable the City to reach the 200 MW goal—including at least 100 MW of customer-sited local solar—by 2025 absent further incentives.

In February 2009, the Council approved a 25-year contract under which Austin Energy purchases the annual output of a 30 MW solar farm built near Webberville on utility property, which went into operation in 2012. In addition, the Plan assumes full build-out of the announced 150 MW of solar power currently contracted with Recurrent Energy that is expected to be online by 2016.

The Plan recommends a new RFP be issued by Austin Energy for up to 600 MW of utility-scale solar in 2015. Austin Energy will contract for up to this amount by 2017, if available and affordable. If not, Austin Energy will continue to pursue the 600 MW of additional utility-scale solar within the 2025 Generation Plan. These additions bring a combined total of 750 MW of utility-scale solar.

#### Nuclear

The proposed scenario recognizes current ownership levels in the South Texas Project and assumes the

December 11, 2014

plant continues to provide power through 2025 at Austin Energy's current ownership level.

#### **Biomass**

No additional biomass is anticipated in later years. A total of 100 MW of existing biomass-fueled generation is included. The Council has approved a 20-year contract through which Austin Energy purchases the annual output of a 100 MW wood chip-fueled biomass plant northwest of Nacogdoches, Texas.

### **Demand Response and Energy Efficiency**

The projected peak demand takes into account an increase from 800 MW of energy efficiency and load shifting proposed by 2020 to 900 MW by 2025, including 100 MW of additional demand response. However, if affordable and available, Austin Energy would attempt to obtain more energy efficiency and demand reduction and obtain at least 800 MW of energy efficiency and 200 MW of demand response—for a total of 1000 MW—by 2025. Any demand response that is contracted by other parties in Austin Energy's service territory will also count towards the goals established by this plan.

#### Wind

Austin Energy will continue to be a leader in contracting and using wind energy. Under the 2025 Plan, Austin Energy will pursue additional wind energy PPAs and ownership opportunities. Austin Energy expects to contract a minimum of 450 MW of additional coastal and western wind resources to reach at least 55 percent renewable energy goal by 2025.

#### Storage

With the recommended Plan, Austin Energy sets in place a comprehensive strategy to become a leader in energy storage. The Plan contemplates Austin Energy will obtain at least 30 MW of local thermal and electrical storage by 2025. In addition, Austin Energy will review additional local and utility-scale storage opportunities.

### **Additional Objectives and Initiatives**

Both the Resource and Climate Protection Plan to 2020 and the 2025 Plan update benefited from review by customers, the Electric Utility Commission, the Resource Management Commission and a Council-appointed Generation Resource Planning Task Force in 2009 and 2014.

#### Affordability & Due Diligence

- 1. Austin Energy and this updated Plan will continue to adhere to the affordability goal for rates and services for all classes of customers as approved by City Council in February of 2011.
- 2. Prior to taking action to acquire a generation resource of 10 MW or more, or an aggregate of 10 MW from a single program, and to the extent practicable and consistent with sound management and financial responsibility, Austin Energy will present such action for approval at least once to each applicable commission and twice to City Council.
- 3. Promote robust community involvement in revisions to the Austin Energy business model.
- 4. Ensure that future resource planning advisory or stakeholder groups include representatives of residential and low-income customer advocacy organizations.

#### Customer Assistance

5. Evaluate the potential to expand energy efficiency and weatherization programs for low income citizens.

#### **Energy** Efficiency

- 6. Continue to evaluate energy efficiency and demand response potential and, if viable and costeffective, increase the energy efficiency and demand response goal to 1200 MW by 2025.
- 7. Continue to evaluate the potential for demand response and if viable and cost-effective, increase the demand response goal from 100 MW to 300 MW.

#### Renewables

- 8. Study the feasibility to achieve a 65 percent renewable energy goal by 2025.
- 9. Develop a comprehensive strategy for the deployment and use of local energy storage technologies, including assessment of compressed air energy storage.

#### Coal

10. Austin Energy will strive to retire its share of the Fayette Power Project as soon as legally, economically and technologically possible. While Austin Energy should continue to talk with LCRA about retiring Units 1 and 2 as soon as economically and technologically feasible, Austin Energy will explore negotiation with LCRA for control of one unit to chart a path toward an early retirement of Austin Energy's share of Fayette starting in 2022.

#### Natural Gas

- 11. Continually assess the long-term risk of natural gas price fluctuations.
- 12. Austin Energy should study methane emissions associated with gas production and delivery and best practices to prevent methane and hydrocarbon leaks in the gas fields.
- 13. Austin Energy and the City Council should support further regulations in gas fields to prevent leaks and vents of methane because of its severe impacts on climate disruption.
- 14. Conduct an analysis of the community economic development impact of Austin Energy generation facilities and planned replacements.
- **15.** Conduct an analysis of the use of water by Austin Energy's generation facilities and its impact on the community.

### Complementary Strategies

- 16. Continue work to transform Austin Energy's basic business model to address and integrate increased deployment of distributed energy resources, including distributed energy generation. Among the issues that Austin Energy will address on an on-going basis are unbundled rate structures, service offerings that rely less on volumetric pricing structures, rationalization of fuel charge-related costs, modifications to GreenChoice® product offerings and products and services demonstrated in the Pecan Street Project Energy Internet Demonstration Project. Work to reflect business model changes and opportunities in upcoming reviews of electric rates.
- 17. Continue active participation in the development and deployment of smart grid technologies, and continue with an active and leadership role in the Pecan Street Project and other partnerships.
- **18.** Continue, and as appropriate, expand efforts to increase electric vehicle utilization and facilitate integration of electric vehicles in the utility service area, and, as able, utilize these vehicles as a valid distributéd storage technology.

#### OFFICIAL STATEMENT Dated May 13, 2015

#### NEW ISSUES - Book-Entry-Only

Ratings: Moody's: "A1" Standard & Poor's: "AA-" Fitch: "AA-" (See "OTHER RELEVANT INFORMATION – Ratings")

Delivery of the Series 2015A Bonds is subject to the receipt of the opinion of Norton Rose Fulbright US LLP, Bond Counsel, to the effect that, assuming continuing compliance by the City of Austin, Texas (the "City") with certain covenants contained in the Thirteenth Supplement described in this document, interest on the Series 2015A Bonds will be excludable from gross income for purposes of federal income taxation under existing law, subject to the matters described under "TAX MATTERS – Series 2015A Bonds" in this document, including the alternative minimum tax on corporations. Interest on the Taxable Series 2015B Bonds will be included in gross income for federal income tax purposes. See "TAX MATTERS – TAXABLE SERIES 2015B BONDS" in this document.



#### CITY OF AUSTIN, TEXAS (Travis, Williamson and Hays Counties)

\$327,845,000 Electric Utility System Revenue Refunding Bonds, Series 2015A \$81,045,000 Electric Utility System Revenue Refunding Bonds, Taxable Series 2015B

#### Dated: May 1, 2015, Interest to accrue from Date of Initial Delivery

Due: As shown on pages (i) and (ii)

The bonds offered in this document are the \$327,845,000 City of Austin, Texas Electric Utility System Revenue Refunding Bonds, Series 2015A (the "Series 2015A Bonds") and the \$81,045,000 City of Austin, Texas Electric Utility System Revenue Refunding Bonds, Taxable Series 2015B (the "Taxable Series 2015B Bonds"). The Series 2015A Bonds and the Taxable Series 2015B Bonds are collectively referred to as the "Bonds". The Bonds are the thirteenth and fourteenth series, respectively, of "Parity Electric Utility Obligations" issued pursuant to the master ordinance governing the issuance of electric utility system indebtedness (the "Master Ordinance") and are authorized and being issued in accordance with two supplemental ordinances pertaining to the Series 2015A Bonds (the "Thirteenth Supplement") and the Taxable Series 2015B Bonds (the "Fourteenth Supplement"). The Master Ordinance provides the terms for the issuance of Parity Electric Utility Obligations and the related covenants and security provisions. The City must comply with the covenants and security provisions relating to the Prior First Lien Obligations (defined in this document) and Prior Subordinate Lien Obligations (defined in this document) while they remain outstanding. The Master Ordinance provides that no additional revenue obligations shall be issued on a parity with the Prior First Lien Obligations or Prior Subordinate Lien Obligations. Commercial Paper Obligations (defined in this document) currently authorized, having a combined pledge of Electric Light and Power System and Water and Wastewater System revenues, may continue to be issued on a subordinate lien basis to the Parity Electric Utility Obligations. The Bonds are special obligations of the City, payable as to both principal and interest solely from, and together with the outstanding Parity Electric Utility Obligations and Prior Subordinate Lien Bonds, equally and ratably secured only by a lien on and pledge of the Net Revenues of the City's Electric Utility System as provided in the Master Ordinance, the Thirteenth Supplement and the Fourteenth Supplement. The taxing powers of the City and the State of Texas are not pledged as security for the Bonds. See "Security for the Bonds" in this document.

The definitive Bonds will be issued in fully registered form in denominations of \$5,000 or any integral multiple thereof within a maturity. Interest on the Bonds will accrue from the date of initial delivery and shall be payable on November 15, 2015 and each May 15 and November 15 thereafter until maturity or prior redemption. The Bonds will be registered in the name Cede & Co., as nominee of The Depository Trust Company, New York, New York ("DTC"). The City reserves the right to discontinue such book-entry system. See "Description of the Bonds" in this document. Wilmington Trust, National Association, Dallas, Texas, will serve as the initial paying agent/ registrar (the "Paying Agent/Registrar") for the Bonds.

#### MATURITY SCHEDULE

#### See "Maturity Schedule" on the Inside Cover Page

The City reserves the right, at its option, to redeem the Bonds prior to their scheduled maturity. (See "DESCRIPTION OF THE BONDS - Optional Redemption of the Series 2015A Bonds" and "- Optional Redemption of the Taxable Series 2015B Bonds".) Certain of the bonds are subject to mandatory sinking fund redemption prior to their scheduled maturities. (See "DESCRIPTION OF THE BONDS - Mandatory Sinking Fund Redemption of the Series 2015A Bonds" and "-Mandatory Sinking Fund Redemption of the Taxable Series 2015B Bonds".)

The Bonds are offered for delivery when, as, and if issued and subject, among other things, to the opinions of the Attorney General of the State of Texas and Norton Rose Fulbright US LLP, Bond Counsel for the City, as to the validity of the issuance of the Bonds under the Constitution and laws of the State of Texas. The opinion of Bond Counsel will be printed on or attached to the Bonds. (See APPENDIX E – "Forms of Bond Counsel's Opinions"). Certain legal matters will be passed on for the Underwriters by their counsel, Haynes and Boone, LLP, Houston, Texas.

It is expected that the Bonds will be delivered through the facilities of DTC on or about June 2, 2015.

	<b>Goldman Sachs</b>	
J.P. Morgan	<b>Raymond James</b>	Jefferies
Mesirow Financial, Inc.	Ramirez & Co., Inc.	Stifel, Nicolaus & Company, Inc.

additional activated carbon injection will be necessary to enhance the removal of mercury in existing emissions control equipment to below the new limit. Austin Energy and co-owner LCRA have installed the activated carbon injection equipment and are currently testing and commissioning this equipment for the MATS rule. Similar to many coal plants, LCRA also applied for and received a one-year extension of the compliance deadline to April 2016 for mercury to reduce the tisk of non-compliance and allow more time, as needed, to optimize the new equipment. Austin Energy anticipates its share of that associated capital expense will be approximately \$5 million. With the scrubbers already in operation, Austin Energy and LCRA are well-positioned to comply with the MATS rule.

#### Cross-State Air Pollution Rule and Clean Air Interstate Rule

Austin Energy's large facilities have been complying with the Clean Air Interstate Rule ("CAIR"), a cap-and-trade program for annual NOx and SO2 emissions, since 2009. The USEPA finalized a court-mandated replacement for CAIR in 2011, called the Cross-State Air Pollution Rule ("CSAPR"), with compliance to begin in 2012 for annual NOx, annual SO2 and ozone season NOx emissions in 23 eastern- and mid-U.S. states including Texas. A federal court stayed CSAPR in late 2011 pending judicial review of the rule and in August 2012, the court vacated CSAPR holding that the USEPA had exceeded its authority in the way it apportioned cleanup responsibilities among the affected states. The USEPA had exceeded its authority in the way it apportioned cleanup responsibilities among the affected states. The USEPA has reinstated CSAPR beginning 2015 and officially removed CAIR requirements. Austin Energy holds more allowances relative to expected emissions for all CSAPR trading programs (annual and seasonal NOx and annual SO2) for the first Phase of CSAPR (2015, 2016). With scrubbers in place at FPP, Austin Energy owns a large surplus of SO2 allowances that have the potential to generate revenue if sold to other utilities. Allowance allocations associated with future phases of CSAPR have not yet been determined by EPA. Some remaining legal challenges are in progress at the D.C. Circuit, and it is possible that a final resolution of the litigation could remove or reduce compliance risk for Texas utilities.

#### Proposed revisions to the federal ozone National Ambient Air Quality Standard

In November 2014, the USEPA proposed to lower the national ambient air quality standards (NAAQS) for ozone from 75 ppb to a value between 65 and 70 ppb, and is expected to finalize a new standard in October 2015. As of the end of 2014, the City's ozone levels were at 69 ppb, and the City could potentially become an ozone non-attainment area depending on whether the final level of the standard is below the City's ozone level. Official non-attainment designations are expected to be final in 2017; if at this point the City is non-attainment, the major risk to Austin Energy would be additional requirements and potential costs for permitting any new local power plants. All Texas power plants including FPP could also be subject to some level of NOx control if widespread non-attainment occurs in Texas; Austin Energy is similarly positioned to most other generator owners in the state.

#### Environmental Regulation Related to Water Discharges

Section 316(b) of the Clean Water Act establishes requirements to minimize the impact of cooling water intake structures on aquatic organisms. The USEPA promulgated revised standards in 2014 that require cooling water intake structures to be designed to limit organism impingement and entrainment. All major power plants with once-through cooling will be required to complete studies over the next four years assessing impacts to aquatic organisms and appropriate mitigation measures, and plants with potential impacts could be required to upgrade intake structures to meet the new criteria. The rule applies to Decker Creek Power Station and FPP. However both facilities were built on reservoirs specifically made for cooling, which the rule effectively exempts from some of the major requirements. Overall risk associated with this rule is believed to be low at this time and would likely not be realized until four years from now.

#### Environmental Regulation Related to Hazardous Wastes and Remediation

In January 2015, the USEPA promulgated a rule that sets new requirements for the storage of Coal Combustion Residuals ("CCRs") and potentially reclassifies those CCRs as a hazardous waste when stored in a landfill. FPP, like all coal burning plants, generates CCRs such as fly ash, bottom ash and gypsum. FPP currently recycles the majority of its CCR for beneficial use, such as for road base or as cement substitutes, with the remaining fractions stored onsite in a landfill for possible future use (recycle rates depend on market demand for the product). In 2011, Austin Energy and LCRA completed a project to permanently close a "wet" ash pond where ash slurry had previously been sent for dewatering before recycle, and converted ash handling to a dry system. The final rule does not designate CCRs as