

AUSTIN ENERGY'S TARIFF PACKAGE: §  
2015 COST OF SERVICE § BEFORE THE CITY OF AUSTIN  
STUDY AND PROPOSAL TO CHANGE § IMPARTIAL HEARING EXAMINER  
BASE ELECTRIC RATES §

**AUSTIN ENERGY'S RESPONSE TO PUBLIC CITIZEN AND SIERRA CLUB'S  
SECOND REQUEST FOR INFORMATION**

Austin Energy ("AE") files this Response to Public Citizen and Sierra Club's ("Public Citizen/Sierra Club") Second Request for Information submitted on April 19, 2016. Pursuant to the City of Austin Procedural Rules for the Initial Review of Austin Energy's Rates §7.3 (c)(1), this Response is timely filed.

Respectfully submitted,

**LLOYD GOSSELINK ROCHELLE &  
TOWNSEND, P.C.**

816 Congress Avenue, Suite 1900

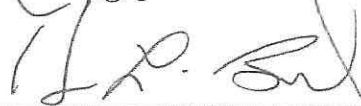
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THOMAS L. BROCATO

State Bar No. 03039030

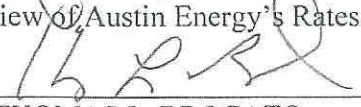
HANNAH M. WILCHAR

State Bar No. 24088631

**ATTORNEYS FOR AUSTIN ENERGY**

**CERTIFICATE OF SERVICE**

I hereby certify that a true and correct copy of this pleading has been served on all parties and the Impartial Hearing Examiner on this 29th day of April, 2016, in accordance with the City of Austin Procedural Rules for the Initial Review of Austin Energy's Rates.



THOMAS L. BROCATO

AUSTIN ENERGY  
2016 APR 32 AM 7:48

## Austin Energy's Response to Public Citizen/Sierra Club's 2nd RFI

Public Citizen/Sierra Club 2-1      On December 4, 2014, Austin Energy gave a presentation to the Council Committee on Austin Energy titled "Investing in a Clean Future - Austin Energy's Resource, Generation and Climate Protection Plan to 2020 Updates." Please provide the numbers used to create the graph on slide 11 of that presentation, including the amount of money assumed to pay off debt per year on the Fayette Power Plant.

### ANSWER:

The table below shows the numbers that are used to create the graph on Slide 11 of the presentation that Austin Energy gave a presentation to the Council Committee on Austin Energy titled "Investing in a Clean Future - Austin Energy's Resource, Generation and Climate Protection Plan to 2020 Updates."

| Year | Limit of Affordability - 2% | 500+ Scenario (\$Million) | 100MW Local (\$Million) | 200MW Local (\$Million) |
|------|-----------------------------|---------------------------|-------------------------|-------------------------|
| 2016 | 0                           | 7.3                       | 9.1                     | 11.4                    |
| 2017 | 0                           | 11.0                      | 20.4                    | 29.6                    |
| 2018 | 0                           | -12.7                     | -4.3                    | 9.8                     |
| 2019 | 0                           | -41.1                     | 34.9                    | 58.9                    |
| 2020 | 0                           | -64.5                     | -0.7                    | 20.7                    |
| 2021 | 0                           | -34.7                     | -19.4                   | -0.3                    |
| 2022 | 0                           | -48.9                     | -20.6                   | -0.5                    |
| 2023 | 0                           | -52.0                     | -97.2                   | -76.2                   |
| 2024 | 0                           | -95.5                     | -62.5                   | -41.5                   |
| 2025 | 0                           | -144.6                    | -89.9                   | -66.0                   |
| 2026 | 0                           | -120.7                    | -118.1                  | -95.4                   |

For the period FY 2015 – CY 2022, total FPP debt service and defeasement payments that was included in the above numbers are:

| Year  | FY Debt Service Totals | Debt Defeasement | Total FPP Payments |
|-------|------------------------|------------------|--------------------|
| 2015  | \$9,868,398            |                  | \$9,868,398        |
| 2016  | \$9,745,488            |                  | \$9,745,488        |
| 2017  | \$11,640,977           |                  | \$11,640,977       |
| 2018  | \$11,925,794           |                  | \$11,925,794       |
| 2019  | \$11,902,098           | \$47,250,000     | \$59,152,098       |
| 2020  | \$11,537,048           | \$47,250,000     | \$58,787,048       |
| 2021  | \$11,505,292           | \$47,250,000     | \$58,755,292       |
| 2022  | \$10,356,905           | \$47,250,000     | \$57,606,905       |
| 2023  | \$7,280,874            |                  | \$7,280,874        |
| Total | \$95,762,875           | \$189,000,000    | \$284,762,875      |

Prepared by: BC/JHO  
Sponsored by: Elaina Ball

Public Citizen/Sierra Club 2-2      Provide documentation of the nature (including where they originate) and amount (per kilowatt-hour) of the T&D expenses that would be realized for a community solar installation, such as the proposed Kingsbery installation, that would not be realized for customer-sited behind the meter solar installations.

ANSWER:

By agreement of the parties, Austin Energy is providing its current policy regarding transmission costs in the value of solar and value of community solar tariffs.

The Value of Solar (VOS) is calculated annually based on the following components:

- Energy Value – an avoided cost of energy to meet electric loads as well as transmission and distribution losses, based on the solar production profile. This is inferred from ERCOT wholesale market price data and future natural gas prices.
- Plant O&M Value – an avoided cost associated with natural gas plant operations and maintenance by meeting peak load through customer-sited renewable resources.
- Generation Capacity Value – an avoided cost of capital by meeting peak load through customer-sited renewable resources, inferred from ERCOT market price data.
- Transmission and Distribution Capacity Value – savings in transmission costs resulting from the reduction in the peak load by locally-sited renewable resources.
- Environmental Compliance Value – an avoided cost to comply with environmental regulations and local policy objectives.

Austin Energy is in the process of developing its community solar program and has deliberated internally the relative value of community solar as compared to customer-sited, behind the meter distributed solar. If AE were to use the VOS methodology to calculate a value of community solar, several adjustments would be needed. First, the Transmission and Distribution Capacity Value would be lowered because current plans project that the generation from prospective community solar projects will not lower Austin Energy Load Zone net consumption due to ERCOT registration and reporting requirements. Therefore, community solar plants are not likely to reduce AE's contribution to the ERCOT 4CP, the metric used to determine AE's annual Transmission Cost of Service payments to other Transmission Service Providers in the ERCOT region.

Second, a percentage of the Energy Value, plant O&M Value and Generation Capacity Value components of the VOS would have to be factored out for community solar. The avoided cost of distribution line losses attributed to customer-sited, behind the meter generation in the VOS calculation would not apply to community solar projects because the community solar generation would be supplied to customers using the distribution grid, and be subject to distribution line losses at approximately 2 percent from the distribution substation to the retail customer.

The community solar program, its underlying cost components and its rate structure are still in development and are not considered in this base rate review.

Prepared by:            BE  
Sponsored by:        Debbie Kimberly

Austin Energy's Response to Public Citizen/Sierra Club's 2nd RFI

Public Citizen/Sierra Club 2-3 Please provide any available documents or communications used to justify implementing different Energy Efficiency Service fees to different customer classes.

ANSWER:

Austin Energy has not proposed implementing different Energy Efficiency Service ("EES") rates to different customer classes during this proceeding. At no time during the current rate process did Austin Energy consider implementing different EES rates to different customer classes. Austin Energy did propose a system-wide EES rate, which was then adjusted based on the voltage that the customer was served; slightly higher for secondary customers. This treatment is similar to the PSA rate.

Prepared by: JHO  
Sponsored by: Mark Dombroski

Public Citizen/Sierra Club 2-4      Please provide any information that indicates how much it costs Austin Energy to provide interconnection for a typical single family home in Austin and how much it costs to provide interconnection for a typical apartment or condo building.

ANSWER:

Typical single family homes in Austin are 1,500-2,000 sqft and are served with mixed fuel (electric and gas). In a residential subdivision, 8 homes of this size can typically be served by a 75 kVA padmount transformer, which averages out to about \$1,900 per home to interconnect (primary riser, primary cable, transformer, secondary wire, service wire, and meters).<sup>\*</sup> Per the current City Council line extension policy, 100 percent of these costs are paid upfront by the customer (or developer) requesting the service.

Typical apartment/condo buildings in Austin include thirty 1,000-1,500 sqft units served with electricity (and not gas). A single 167 kVA padmount transformer can typically serve 30 units of this size which averages out to about \$900 per unit to interconnect (riser, primary cable, transformer, secondary wire, and meters).<sup>\*</sup> Per the current City Council line extension policy, 100 percent of these costs are paid upfront by the customer (or developer) requesting the service.

<sup>\*</sup>The typical cost per residence (whether single family or multifamily) excludes major up-line electrical infrastructure required to bring power to the site and then to distribute within the site. Both costs can vary significantly depending on proximity of the site to the nearest AE source as well the terrain within the site. Civil infrastructure is also not included in the above estimates because typically customers are responsible to plan and pay for this.

Prepared by:            DT  
Sponsored by:        Elaina Ball

Public Citizen/Sierra Club 2-5      How many typical Austin single family homes are served per transformer? How many typical Austin apartments or condominiums are served per transformer? Are there differences in the size and cost of the transformers for these two scenarios? Please provide typical cost for transformers per single family and multifamily residence and any other information pertinent to these questions.

ANSWER:

Please see AE's Response to Public Citizen/Sierra Club's RFI No. 2-4.

75 kVA transformers cost \$5,800 per transformer. 167 kVA transformers cost \$7,100 per transformer.

Typical Austin apartments/condos have more dwelling units per square foot compared with the typical single family home in Austin, which leads to lower electrical infrastructure cost on a per unit basis.

Prepared by:            DT  
Sponsored by:        Elaina Ball

Public Citizen/Sierra Club 2-6 Does Austin Energy intend to offer the performance based incentive (PBI) for commercial solar installations until at least after the conclusion of the next rate case following this one? If so, what will the minimum PBI be for small, medium and large installations, as currently defined by Austin Energy?

ANSWER:

Whether or not Austin Energy's performance based incentive ("PBI") remains in effect until the next rate review depends on two factors:

1. According to the *Austin Energy Resource, Generation and Climate Protection Plan to 2025: An Update of the 2020 Plan (Resource Plan to 2025)*, Austin Energy's solar incentive program is expected to remain in place until the earlier of 2020 or the date by when local solar goals are met. The *Resource Plan to 2025* requires Austin Energy to achieve 110 MW of local solar installations by 2020, including 70 MW of customer-sited capacity. (This amount is part of the total 200 MW local solar goal to be installed by 2025.) At the end of December 2015, there were approximately 29 MW of customer-sited, local solar installations in AE's service territory.
2. Current City Council policy requires Austin Energy to review its retail rates and cost of service study at least once every five years. To remain compliant with this policy, Austin Energy must conduct its next cost of service study update no later than 2021 using FY 2019 financial data. Austin Energy may choose or City Council may direct Austin Energy to conduct a review on an earlier timeline.

Incentives — including the PBI — will be lowered as more capacity is installed between now and when the program is completed. The rate at which the incentives are lowered is determined by how quickly capacity is added. Once the capacity allotment for an incentive level has been achieved, the incentive will reduce to the next level in the program ramp-down schedules.

The amount of solar capacity and incentive levels remaining for commercial solar installations under the PBI program can be found on the Austin Energy website at: [www.austinenergy.com/go/currentsolar](http://www.austinenergy.com/go/currentsolar).

Prepared by: DM  
Sponsored by: Debbie Kimberly

Austin Energy's Response to Public Citizen/Sierra Club's 2nd RFI

Public Citizen/Sierra Club 2-7 Please provide any emails, analysis, or discussion by Austin Energy staff related to the request made by the Electric Utility Commission for an analysis of an hourly dispatch cost allocation method also referred to in discussions as the Jim Lazar suggested method.

ANSWER:

Please see Attachment 1.

Prepared by: BE  
Sponsored by: Mark Dreyfus

**From:** [Dreyfus, Mark](#)  
**To:** [Vice, Jeffrey \(Jeff\)](#)  
**Cc:** [English, Philip \(Barksdale\)](#)  
**Subject:** Re: EUC Posting Language  
**Date:** Tuesday, February 16, 2016 6:35:44 PM

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Shannon told me today that Smitty told her that Lazar might do a call in to the meeting.

Sent from my iPhone

On Feb 16, 2016, at 5:13 PM, Vice, Jeffrey (Jeff) <[Jeff.Vice@austinenergy.com](mailto:Jeff.Vice@austinenergy.com)> wrote:

Mark,

I would assume there will be a Working Group report out as well. Plus, at the end of the last EUC meeting, Hadden requested a future item along the lines of "Types of modeling for cost of service." I need to check with Barksdale, as I recall he spoke to her post in attempt to clarify...but currently I don't have that on the agenda.

JV

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**Jeff Vice** | Director, Local Government Relations | Austin Energy  
721 Barton Springs Rd. | Austin, TX 78704-1145 | (512) 322-6087 (office)

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**From:** Dreyfus, Mark  
**Sent:** Tuesday, February 16, 2016 3:31 PM  
**To:** Vice, Jeffrey (Jeff)  
**Subject:** RE: EUC Posting Language

Sounds fine. My briefing items will be very short.

**Mark Dreyfus** | Vice President, Regulatory Affairs & Corporate  
Communications | Austin Energy  
721 Barton Springs Rd. | Austin, TX 78704-1145 | (512) 322-6544 (office)

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**From:** Vice, Jeffrey (Jeff)  
**Sent:** Tuesday, February 16, 2016 3:19 PM  
**To:** Dreyfus, Mark  
**Cc:** English, Philip (Barksdale)  
**Subject:** EUC Posting Language

Mark,

Right now, under "Briefings," I have an item that reads "Update regarding rate review." Please let me know if you'd like different posting language.

Thanks,  
Jeff

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**Jeff Vice** | Director, Local Government Relations | Austin Energy  
721 Barton Springs Rd. | Austin, TX 78704-1145 | (512) 322-6087 (office)

**From:** [Dreyfus, Mark](#)  
**To:** [Rose, Andrea](#); [Dombroski, Mark](#); [Maenius, Russell \(Rusty\)](#); [tbrocato@lglawfirm.com](mailto:tbrocato@lglawfirm.com)  
**Cc:** [English, Philip \(Barksdale\)](#); [Vice, Jeffrey \(Jeff\)](#)  
**Subject:** FW: regulatory assistance project  
**Date:** Friday, February 19, 2016 11:51:30 AM  
**Attachments:** [Observations on Austin Energy Cost of Service and Rate Design Report.docx](#)  
[ATT00001.htm](#)

The EUC has invited Jim Lazar of the Regulatory Assistance Project to participate in the EUC meeting on Monday. He provided this critique of our filing package. At the EUC, we will not respond to his comments, sticking strictly to the observation that the EUC is not the appropriate forum for us to engage in this type of dialogue.

Nevertheless, these are arguments that we should be prepared for down the road.

Thanks

**Mark Dreyfus** | Vice President, Regulatory Affairs & Corporate Communications | Austin Energy  
 721 Barton Springs Rd. | Austin, TX 78704-1145 | (512) 322-6544 (office)

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**From:** Vice, Jeffrey (Jeff)  
**Sent:** Friday, February 19, 2016 10:42 AM  
**To:** Dreyfus, Mark; English, Philip (Barksdale)  
**Cc:** Goodson-Collins, Toyne  
**Subject:** Fwd: regulatory assistance project

Mark,  
 As you'd heard, please see below/attached.  
 JV

Sent from my iPhone

Begin forwarded message:

**From:** Michael Osborne <[michaeljosborne@gmail.com](mailto:michaeljosborne@gmail.com)>  
**Date:** February 19, 2016 at 10:10:00 AM CST  
**To:** Jeff Vice <[Jeff.Vice@austinenergy.com](mailto:Jeff.Vice@austinenergy.com)>  
**Cc:** Michael - BC Osborne <[bc-Michael.Osborne@austintexas.gov](mailto:bc-Michael.Osborne@austintexas.gov)>, Karen Hadden <[karendhadden@gmail.com](mailto:karendhadden@gmail.com)>, Karen - BC Hadden <[bc-Karen.Hadden@austintexas.gov](mailto:bc-Karen.Hadden@austintexas.gov)>  
**Subject:** Fwd: regulatory assistance project

Jeff if you can, please include the attached word document in our packets.

I'm going to include Jim in our conversation about the cost of service agenda item on Monday night.

We will need to connect the meeting computer into a "go to meeting" website.

And we will need a phone line with a speakerphone to handle the audio.

Can you arrange that?

Thanks

Feb. 2, 2016

Mr. Michael Osbourne, Chairman  
Electric Utility Commission  
City of Austin  
Austin, TX

Dear Mr. Osbourne and members of the Commission:

I appreciate the invitation to participate as an expert advisor to the Commission. I regret that I am not able to appear in person before the Commission; this Feb. 22 meeting conflicts with an American Council for an Energy Efficient Economy conference at which I am a speaker.

RAP is a global non-profit that provides training and technical assistance to utility regulators. For a municipal utility, that role is vested in the City Council, and for Austin, shared with the Commission. We normally do not advise utilities or intervenor parties. We consider your invitation to be in the role of regulator, and our advice is available to you on that basis.

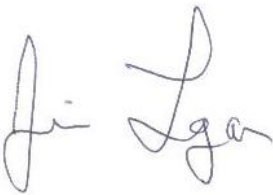
In lieu of an appearance and presentation, I have prepared a brief written report, based on only a few hours of review of the AE cost of service study and rate design report. I hope it is useful to you.

It should be possible for me to join the meeting remotely, by telephone, Skype, or GoToMeeting if that is desirable. We can discuss that option once you have reviewed this brief written report. We can use the RAP GoToMeeting platform, leaving the Commission only to connect to a website if that is of interest.

Should Austin's utility regulators desire a deeper involvement of RAP as advisors, we can discuss how that activity can be arranged and funded.

I look forward to discussing this with you in any way it is helpful.

Sincerely,

A handwritten signature in blue ink, appearing to read "Jim Lazar". The signature is fluid and cursive, with the first name "Jim" and last name "Lazar" clearly distinguishable.

Jim Lazar, Senior Advisor  
Regulatory Assistance Project

## **Observations on Austin Energy Cost of Service and Rate Design Report.**

The following observations are the result of a few hours examining the cost of service and rate design reports to the EUC and the City Council. They should not be considered an exhaustive review, and there may be errors in my interpretation of the methodology that AE has employed that can be corrected.

Based on this limited review, I do not think that the AE cost of service study represents a reasonable basis for allocation of costs between customer classes or the design of rates within classes.

Customer-related costs and demand-related costs appear to be significantly overstated. Energy-related costs seem to be significantly understated. Smart Rate Design for a Smart Future, and particularly Appendix A to that report, provide a more detailed discussion of a modern approach to cost allocation and rate design.

I recommend that, ideally, the EUC and City Council convene a multi-day set of workshops to allow presentation of modern rate design principles that could guide policy makers in directing the utility how to move ahead with a modern cost allocation study. I have done this on several occasions with utility regulators. In my experience, when I have worked with policy makers in these types of workshops, a more logical classification and allocation of costs results.

### **Cost of Service Study**

A brief series of observations on the cost of service study, divided by the types of costs evaluated. In the simplest of terms, this cost of service study uses some obsolete methods, and probably should not be relied on for either cost allocation between classes or rate design within classes. Our industry has evolved rapidly, and new methods are needed.

This study is what is known as an “embedded cost” study – one that looks at current costs and apportions them based on customer and usage factors. Many utility regulators also consider “marginal cost” studies that look at the cost of replicating the utility system at today’s costs; these can produce very different results. And within the “embedded cost” and “marginal cost” categories, there are literally hundreds of different methods used.

There is no “correct” method for apportioning utility costs. The role of the regulator is normally to consider multiple methods, and make a reasoned judgement based on what they learn.

It is in that context that I make some specific observations on the AE staff study, and recommend consideration of alternative approaches.

## Customer-Related Costs

The study appears to classify all metering and billing costs as customer-related. Customer related costs should include only those costs that vary with the number of customers served. This approach appears to be inconsistent with the discussion in the Austin Energy Rates Policy Statement in at least two ways, and inconsistent with sound practice for at least two additional reasons:

- a) As the Rates Policy document states at page 188, Austin Energy operates the **3-1-1 system** for Austin, which the Rates Policy Document states handles more than 1 million calls and 170,000 service requests; some of these costs should not be considered electric utility costs, and if they are electric utility costs, many are not related to the incremental cost of serving an additional electric consumers. These costs should not be classified as customer-related. I was unable to find in the workpapers where these costs are apportioned between utility-related and non-utility, and within the utility, between costs associated with incremental numbers of customers served.
- b) Austin energy has installed extensive **smart grid** components, including smart meters. As the Rates Policy document states at page 187:

*Smart Grid/Advanced Metering Infrastructure – Austin Energy began building its smart grid system in 2003 and its service territory is now completely served by advanced meters. This advanced system will improve system security, allow for greater system control by the utility and its customers, lower the number and length of outages, and provide new opportunities for customer management of energy use and new electricity pricing models.*

This clearly recognizes the benefits of smart meters and smart grid components in reducing peak loads (demand-related), improving reliability of service, and reducing line losses and providing time-varying energy benefits (energy-related).

The costs of the smart grid components should be allocated between the customer, energy, and demand classifications in the COSS. Absent other detailed analysis of benefits, there is no basis for other than equal one-third classification to each category.

- c) It appears that 100% of **billing and collection** costs have been classified as customer-related. Utilities bill customers monthly or bimonthly because their usage is significant, and less frequent billings would result in high (and potentially unmanageable) bills, higher uncollectible expenses, higher working capital requirements, and other costs. If customers used only a few kilowatt-hours per month, it would not make economic sense to bill customers more frequently than annually (as most magazines do). The cost of more frequent billing and collection than is required by law should be classified as usage-related costs because they are incurred do to the level of energy usage, not the presence of customers.
- d) **Uncollectible expense** has apparently been classified as customer-related. The majority of uncollectible expense is due to the accumulation of usage-related costs (power supply

and distribution), not the accumulation of customer-related costs. Uncollectibles should be classified as usage-related.

It appears that customer-related costs have been overstated by a factor of two or more by the inclusion of usage-related costs for smart grid, billing, collection, uncollectibles, and perhaps the costs associated with the 3-1-1 system. There are two different issues here. First, are these primarily “residential” costs (as opposed to commercial and industrial). The second is whether these costs are “customer-related” even if attributable to the residential class. These are separate issues, and this needs to be considered in the cost classification and allocation process.

One important issue is the choice of customer classifications. The utility cost of service for multi-family dwellings is significantly lower (on both a per-customer and a per-kilowatt-hour basis) than the cost of serving single-family residents. Multi-family dwellings have less distribution investment, better transformer utilization, and lower line losses than single-family dwellings, simply because primary-voltage power is normally delivered to the premises, rather than at remote line transformers. In addition, where manual meter reading is used, these costs are lower for grouped meters. AE has consolidated all of these into a single “residential” class. This has the effect of overcharging multi-family dwellings relative to single-family dwellings; depending on the purpose of the inclining block rate design, it may (inadvertently) tend to offset this equity issue.

## **Power Supply Costs**

Power supply costs have been divided into fixed and variable components, and the fixed costs classified almost entirely as demand-related as shown in Workpaper F-2. This was a common practice many decades ago, but evolution in the industry makes this no longer a logical or appropriate approach.

Within ERCOT, all power supply costs are ultimately manifest as time-varying energy charges. In my opinion, since AE has smart meter data available, it should be able to apportion all power supply costs to the classes based on the usage by each class in each hour. This may or may not result in a material change in the ultimate cost allocation, but it is a cost-based approach that more accurately tracks how the mix of baseload, intermediate, and peaking power supply costs are associated with different periods of usage. This would be a significant improvement on the current, somewhat subjective, demand and energy classification scheme.

I have performed several rate studies that use this approach, apportioning all power supply (fixed and variable generation and transmission costs) based on nodal time-varying energy costs. I recommend that AE be requested to divide all class usage into hourly periods, and price that usage based on ERCOT market clearing prices for the most recent 12 months. That result should provide a “proportion” of the power supply (generation and transmission) revenue requirement applicable to each class.

My experience in both California and New England is that this generally results in lower costs to residential customers (who have significant night and weekend usage) and higher costs to commercial (particularly office) customers, whose usage is concentrated in the higher-cost hours of the year due to lighting and air-conditioning loads dominating usage.

Examples of why the AE staff prepared study is not appropriate any longer include:

- a) Nuclear generation has very high capital costs, justified by expected lower fuel costs over time; many regulators have recognized this, and classified the majority of nuclear investment and fixed operating costs as energy-related;
- b) Coal plants have significant pollution control costs, which are incurred to reduce emissions during all operating hours; these costs need to be properly assigned to all operating hours, not classified as demand-related and allocated only to peak period usage;
- c) Peak loads are best managed with a combination of pricing options (TOU, Critical Peak Pricing; Seasonal Pricing) and Demand Response measures (air conditioner, water heater, and other controls). AE recognizes this both through seasonal rates and through operation of the nation's largest chilled water ice storage system, but the costs allocated to peak hours appear to greatly exceed those incurred to serve peak demands with ice storage.
- d) Remote baseload generation, primarily coal and nuclear, require construction of high voltage transmission lines to deliver that power to the load centers. These costs should be considered a part of the baseload power plants, and classified primarily on an energy basis; the COS does not do this.

### **Administrative and General Costs**

AE has allocated most A&G costs based on the underlying subtotals of how production, transmission, and distribution costs are allocated. If the production costs are moved from demand to energy, and the billing, collection, and smart grid costs are reclassified from customer to usage-related classifications, the subtotals upon which these are based will shift.

### **Variable Energy Costs**

Variable energy costs include fuel, economy energy purchases, and long-term purchased power costs such as wind and solar contract costs. These are a mix of on-peak, off-peak, and as-available resources.

AE consolidates all variable energy costs into a single total, and allocates this across all usage, collecting them through a single tariff adder on top of base rates.. This has the effect of averaging peaking, intermediate, and baseload fuel costs. Just as it is important to assign the capital costs and maintenance costs for these different types of resources to the hours when they are relied upon for service, the fuel costs should also follow this same pattern.

The approach suggested earlier, apportioning all power supply costs (fixed and variable) based on time-varying usage by class addresses this issue. Alternatively, if a demand and energy framework is retained (and baseload and intermediate costs classified as primarily energy-related), then these variable costs should be apportioned to seasons and time periods on an as-incurred basis.

The EUC and City Council should consider elimination of the separated energy charge, and incorporate this into seasonal and time-varying rate elements for each class of customers.

## **Rate Design Issues**

The AE staff proposal includes a flattening of the rate blocks by applying the base rate decrease disproportionately to the end blocks of the 5-block rate design.

In the previous rate review, I advised the City Council in favor of a three-block rate design, suggesting that five blocks is more complex than is really understandable by consumers.

There are several justifications for an inclining block rate design, and the AE staff study does not really address the basis for their recommendation within this context. This is addressed in Smart Rate Design in Appendix B.

**Load Factor:** Customers with higher usage consume a larger share of their usage during peak periods as air conditioning is a bigger share of total usage.

**Resource Allocation:** Utilities that own generating resources have a limited supply of older, lower-cost resources, and augment this with higher cost new resources. An inclining block rate fairly apportions the limited low-cost resources to each customer.

**Conservation:** Allowing each customer a limited amount of power at a lower price, with increased usage at a higher price, makes incremental energy efficiency more financially attractive. As long as the initial block is well below the average usage level, the vast majority of customers using the overwhelming majority of electricity will experience the higher block rates.

In addition, because there is a correlation between income and electricity usage, an inclining block rate provides a benefit to most (but not all) low-income consumers.

The Austin Rate Policy reflects all three of these principles, so it is logical that a steeply inclining block rate design is appropriate. The goal to reduce CO2 emissions is consistent with the resource allocation principle, since AE's lowest-cost resources are hydro and nuclear. The cost of service element within the "fairness" principle is supported by both the load factor and resource allocation functions of inclining block rates. The goal of 800 MW of incremental efficiency is supported by the Conservation function of inclining block rates. Simply put, an inclining block rate is entirely consistent with Austin's rate design principles. The issue is

whether the current relatively steep 5-block rate is appropriate. That is a matter well beyond the scope of this limited review.

### Summary Observations

- 1) The Cost of Service Study prepared by AE is inadequate to support a differential allocation of the base rate changes between customer classes. The shortcomings in classification of costs including smart grid, billing and collection, and administrative & general costs are significant. The fundamental approach to power supply cost allocation merits a bottoms-up review in the context of the ERCOT market pricing design and Austin's growing renewable energy supply.
- 2) An across-the-board decrease is the "normal" response of a utility regulator when faced with an unacceptable cost allocation study. In this case, that would be a uniform percentage adjustment to base rates for all customer classes.
- 3) It is my understanding that a portion of this "base rate decrease" is amortization of an over-collection in the energy tariff rider; if that is the case, that portion should probably be refunded in the manner in which it was collected, and ideally from the customers who paid these excess amounts.
- 4) The current AE customer charge of \$10/month greatly exceeds the cost of periodic billing and collection and other customer-specific costs properly attributable to the customer charge. Once the smart grid, monthly billing, 3-1-1, and administrative costs are properly allocated, my experience has been that these costs approximate about \$6.00/month for urban utilities. One approach for the residential portion of this base rate decrease would be to restore this charge to the previous level. Another approach would be to bifurcate the rate design between multi-family and single-family homes, recognizing the dramatically lower cost of service associated with serving multi-family buildings. Either would allow the preservation of the current block rates, so that large customers do not see an increased incentive to consume, an action that is contrary to the rate principles to encourage conservation.
- 5) I have not reviewed the commercial or industrial rate proposals in any detail. A detailed review would include this.

I will observe, simply, that the energy-constrained demand charge proposed for the commercial demand-metered customers is a simplified way to address a well-recognized problem – that low load-factor customers can "share capacity" with other similar customers, and should not be apportioned a full demand charge. The better way to address this is to eliminate demand charges entirely for recovery of shared distribution facilities, and instead recover these in time-varying energy charges. By that approach, customers like school stadium lights, houses of worship, and public assembly halls that have sporadic usage are charged appropriately for the service they receive, and are no longer required to subsidize customers that use capacity on a continuous basis but pay the same demand charges. Demand charges should be limited to customer-specific capacity, such as distribution line transformers; they should not be used to recover shared capacity now that we have the ability to measure time-varying consumption.

- 6) I recommend that the AE cost of service study not be a foundation for either cost allocation or rate design. The EUC and City Council should convene workshops to consider modern cost allocation methods that recognize time-variation, the difference between dispatchable and as-available resources, and the multiple uses of smart grid assets. A new approach to cost allocation should result from that inquiry.

I hope this brief written report is an acceptable substitute for my inability to attend the February 22 scheduled workshop. I am able to join that meeting by phone or GoToMeeting if that would be helpful. RAP would be receptive to participating on a more detailed basis if the resources are available to support that activity.

**From:** [Basaran, Harika](#)  
**To:** [Maenius, Russell \(Rusty\)](#); [Mirick, Mark](#); [Sweeney, William \(Pat\)](#)  
**Cc:** [Oberwortmann, John](#); [English, Philip \(Barksdale\)](#)  
**Subject:** RE: ERCOT Settlement  
**Date:** Tuesday, March 29, 2016 1:29:04 PM  
**Importance:** High

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3 years and converting to hourly will take lots of time.

**But if only the test year and 15 minute interval (that is how ERCOT settles RTM) without converting to hourly, we may be able to provide earliest by end of Friday.  
I am assuming they want: LMPs and mwh for each unit and PPA and load.**

My group can work with EMO (Wejin's staff) and start gathering the data. Let me know ASAP.

Thanks

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**From:** Maenius, Russell (Rusty)  
**Sent:** Tuesday, March 29, 2016 11:57 AM  
**To:** Mirick, Mark; Sweeney, William (Pat); Basaran, Harika  
**Cc:** Oberwortmann, John; English, Philip (Barksdale)  
**Subject:** RE: ERCOT Settlement  
**Importance:** High

All,

I just want to clarify this request...This request is NOT to gather information but rather to get some sense as to how much effort is required, considering your respective workloads, to get the information and when it might be available.

Thanks

Rusty

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**From:** Mirick, Mark  
**Sent:** Tuesday, March 29, 2016 10:48 AM  
**To:** Sweeney, William (Pat); Basaran, Harika  
**Cc:** Maenius, Russell (Rusty); Oberwortmann, John  
**Subject:** ERCOT Settlement

Pat/Harika

NewGen has asked for some data that they could analyze for development of an allocator for the cost of service. They would like to see our interactions in the RTM and DAM markets (dollars and MWs) on an hourly level. I know Mid-office provides some form of this data for the BusBar report, but is it possible to expand this? They would like to see the RTM and DAM for each generator and

AE Load purchases/sales for a three year period (2013 -2015). Can this data be provided in a week's time?

**Mark Mirick** | Rates & Corporate Finance | Austin Energy  
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