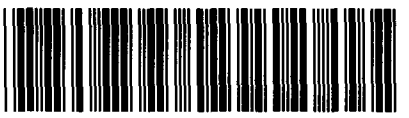

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PROJECT NO. 48539

REVIEW OF THE INCLUSION OF MARGINAL LOSSES IN SECURITY-CONSTRAINED ECONOMIC DISPATCH	**§ § §**	**BEFORE THE PUBLIC UTILITY COMMISSION OF TEXAS**

CPS ENERGY'S COMMENTS REGARDING STAFF'S QUESTIONS ON MARGINAL LOSSES IN SECURITY-CONSTAINED ECONOMIC DISPATCH

I. INTRODUCTION

CPS Energy appreciates the opportunity to comment on the cost and benefits of adding marginal losses to price formation. Marginal losses, like congestion, is simplified using nodal pricing.[1] Should the commission adopt the marginal losses proposal, we believe that modifying the nodal price formation mechanism is the best means of implementation. CPS Energy recognizes that the benefits of this change need to be balanced against the costs, and we applaud the Commission for the deliberate and transparent evaluation of the proposal. While a cost-benefit analysis is a prudent exercise, the Commission should carefully consider whether this proposal will correct a real and defined problem in the market. After carefully considering ERCOT's model results, we are challenged to identify a significant tangible issue that marginal losses resolves. In fact, the ERCOT analysis reveals that this proposal will result in implementation costs that will outweigh the calculated benefits.

ERCOT has estimated that the installation of technology to introduce marginal losses into the wholesale market will result in a reduction in production costs, but this benefit will be counter-balanced by increases in generator make-whole costs and startup costs. It appears that the

[1] Stoft, S. (2002). Power system economics: Designing markets for electricity. Piscataway, NJ: IEEE Press. Stoft posits that of the many options to implement a marginal loss component into energy pricing, directly incorporating into the Locational Marginal Price along with congestion is the simplest resulting in a direct price signal corresponding to relative marginal losses of a pricing node with respect to the electrical system.

increased costs, which will ultimately be paid by consumers, negate the production cost savings. We are also concerned that changing pricing methodologies will result in other unintended consequences, such as altering power purchase agreement (PPA) valuations, which will result in additional costs borne by consumers.

It should be noted that marginal losses methodologies do not match well with the socialization of the transmission system costs. The Transmission Cost of Service (TCOS) methodology adopted by the Commission is based on a socialized construct whereby the costs of transmission system projects from around the state are averaged into a single postage-stamp transmission cost. This results in the subsidization of certain regional higher-cost transmission projects by all consumers across ERCOT, but in return everyone benefits from a more reliable and resilient transmission system. Utilizing the current average electrical-losses methodology more closely follows the current TCOS cost socialization principles compared to introducing marginal losses into the price formation mechanism. In addition, the marginal losses methodology would not enhance resource adequacy. In fact, the implementation of marginal losses may have a negative impact on resource adequacy of the wholesale market from the potential cancellation of generation projects in zones that are further away from the center of load.[2]

In the event that the Commission were to adopt the marginal losses methodology, it would be prudent to allow a transition period in which parties to PPAs may renegotiate affected contracts. The Commission should affirmatively establish that implementation of this mechanism will result in changing the fundamental structure of the wholesale market as to qualify to invoke

[2] As a new generation resource viability is evaluated, LMPs directly influence the cash flow of the project. The further away the generator is from load, the higher the likelihood that the energy is worth less so the ability to obtain funding is harder resulting in potential project cancellation.

"change in law" contractual clauses. It would also be prudent to combine the implementation of marginal losses methodology with other price formation changes that the Commission may adopt in order to allow for efficiencies in the execution of multiple projects by both ERCOT and market participants.

II. DISCUSSION

1. What are the benefits of implementing the use of marginal transmission losses rather than average transmission losses in the Electric Reliability Council of Texas' (ERCOT's) Security-Constrained Economic Dispatch (SCED) over the long term?

Losses are incurred in the flow of power and are most simply characterized as energy that is lost due to the heating of the wires. The implementation of marginal losses into the wholesale market would introduce losses as an input into price formation, creating an economic incentive to take system losses into account when siting a new generation resource. Marginal losses would ultimately result in a reduction in the overall losses on the system and a corresponding reduction in the overall cost to the system. The reduction would be realized because price formation under a marginal losses mechanism would utilize generators closest to the center of load before utilizing generation further away from the center of load. This is a stark contrast from the current average loss treatment where losses are not included in price formation. Pricing under the existing average energy loss methodology is based purely on system needs and congestion.

While marginal losses implementation is an accepted method of increasing efficiencies on the grid, we question of the need for this policy change. ERCOT's analysis of the impact on total annual generation attributed to the implementation of marginal losses, [3] reveals that total

[3] ERCOT, Study of the Benefits of Marginal Losses (ERCOT Study).

generation reduction in the range of 800 GWh and 1,200 GWh in a system with volumes of just over 431,000 GWh. This equates to change of less than 0.002% and no more than 0.003% in total ERCOT generation and raises the concern whether marginal losses is truly an *effective* way to enhance the market?

2. **Are the benefits identified in response to Question 1 sufficient to justify the near term costs to the market as a whole? Please consider individual stakeholder implementation costs as well as the costs to ERCOT identified in its study.**

ERCOT has estimated its cost to implement marginal losses to be at a minimum $10 million. Two other costs for the Commission to consider are the market participant technical implementation costs as well as the financial impact to market participant contracts and resource planning. Since marginal losses are accounted and paid for in the LMPs, the workflows of participants to operate and participate in the market will not be directly impacted. All existing Day-Ahead (DA) and Real-Time (RT) operational data flows are expected to remain largely unaffected. A large portion of the implementation costs experienced by market participants are expected to be from the settlement systems of load serving entities. Assuming that the over-collected revenues are distributed back to loads in an equitable way, the settlement system implementation cost is expected to be primarily the addition to the utility accounting systems for the change in revenue streams as there will now be an extra settlement dataset for the loss refund to loads.

The non-technical costs to consider are the financial costs to assets, namely the change in value of the energy produced by those assets and its impact on financing new generation build. When asset developers evaluate a project, the locational energy values are taken into account. These locational energy values used to evaluate investments have not contemplated losses, and adding losses now will likely change the feasibility of new generation located further away from

the center of load. The change in energy value will also have an impact to existing PPAs. It stands to reason that if the value of energy in remote generation is worth less to the market, that the financial hurdle to secure funding of the project will be harder to overcome. CPS Energy encourages the Commission to affirmatively establish that implementation of a marginal losses mechanism will result in fundamental changes to the structure of the wholesale market as to trigger "change in law" contractual provisions in PPAs.

In its study, ERCOT noted a unit revenue shortfall increase. These shortfalls correspond to additional costs that consumers would have to pay to the market to keep generators whole. This could be as little as $21 million or as much as $66 million annually.[4] CPS Energy believes that the risk associated with this measure outweighs the production cost benefit.

We feel that the benefits of added efficiency and production cost savings are not great enough to justify the costs of implementation, coupled with the consumer costs related to revenue shortfalls. The efforts of the Commission and market participants would be better spent working on rules for Ancillary Services, non-traditional technologies, Real-Time Co-Optimization and Resource Adequacy, which will create additional value to consumers by improving reliability and providing greater market efficiencies.

3. What are the effects on retail customers and the retail market from the implementation of marginal transmission losses?

CPS Energy invests in renewable generation, some located in the West Zone, on behalf of its retail customers, and would expect to see a significant impact to the value of the energy from those resources as a result of the implementation of marginal losses. The impact will result in an increase in the cost of power because the purchase price for the power does not change, but the

[4] *Id.*

price at which the power is settled in the Day Ahead and Real-Time markets is expected to be greatly reduced with the implementation of marginal losses. This reduction in price will result in an increase in the net cost of the energy from the effected resources.

There is a noticeable trend in ERCOT whereby an increasing amount of renewable energy resources is being built on behalf of individual consumers.[5] These resources are naturally sited where the fuel source is readily available, which historically have not been near the center of load in ERCOT. We estimate that marginal losses will have a negative impact on these *new* resources. The effect of marginal losses implementation will be to decrease the value of energy resources located further away from the center of load. This decrease in energy value could result in an incentive to site new generation projects in locations which are less suitable for renewable resources. Such renewable resources are likely to experience lower capacity factors sited in less suitable locations, which will raise PPA prices for these customer-driven projects.

ERCOT reported that the production cost savings of marginal losses implementation was nearly $11 million, which will potentially benefit retail customers by lowering the price at which wholesalers purchase energy. However, ERCOT also reported that the retail market has the potential to experience an increase in prices due to increased startup costs and generator make-whole payments resulting from additional generator shortfalls expected to occur driven by decreased generator revenues.[6] The increase in make-whole payments and generator startup costs effectively add to the cost to load, but are outside of project implementation costs. These additional costs, which are allocated to load, should also be considered a real and significant factor in the calculations of cost to retail load. The fact that the expected cost increases outweigh the

[5] *See* https://www.utilitydive.com/news/join-or-die-how-utilities-are-coping-with-100-renewable-energy-goals/512664/

[6] *See* ERCOT Study.

benefit indicates that this change is not warranted.

4. **The ERCOT study of using marginal transmission losses instead of average transmission losses in SCED simulated one year. How would cumulative, multi-year impacts of using marginal transmission losses be different, if at all?**

The cumulative impacts are not expected to change dramatically as time goes on. If adopted, the new pricing would result in a new locational price signal, which in theory, would put loss pricing in the same category with congestion pricing. This additional signal would be factored into the financial models of asset developers and included in their evaluation of new power generation projects. Locational Marginal Prices (LMPs) today result in congestion pricing signals that reveal where to build generation to relieve transmission constraints. Under a marginal losses pricing methodology, pricing would reveal an increased value to building generation near the center of load. It should be noted that solely basing a generator siting decision on the proximity to the center of load is an incomplete assessment as such decision involves multiple influences including available land, air permitting, and other environmental factors. While marginal losses pricing would be an additional element in the calculus used to site generation, CPS Energy does not expect marginal losses pricing to be a key driver in new generation near the center of load. Instead it would discourage new generation further away from load, where other factors may be signaling generator construction, including wind patterns, inexpensive land costs, and ability to obtain required environmental permits.

5. **What costs would be incurred by market participants if marginal losses were implemented in the ERCOT market? Please provide an estimate of the costs that would be incurred by your company or companies or customers represented by your organization. Please describe the elements of those costs.**

Since marginal losses is a change to the calculation of the LMP, minimal operational

system adjustments (i.e. SCADA, Market Interface systems, etc.) would be required to accommodate the market changes to the implementation of marginal losses. Most settlement systems would need modification to account for the over-collection refund. Further, financial models may need to be modified or replaced to accommodate the new marginal losses component.

Other impacts not associated with technical implementation would include the loss of value in bilateral contracts and PPAs. Market participants would incur costs from PPAs changing in value, most notably from transactions settling in the West and North Zones of the ERCOT system. This change in value of energy revenues has the potential to devalue these contracts in a meaningful manner, but due to the confidential nature of bilateral contracts the magnitude of the impact is unclear. ERCOT calculated that the implementation of marginal losses would result in an annual generator revenue loss in the range of -$153 million to -$190 million in the West Zone.[7] ERCOT also reported that wind generation would not alter its production in response to the pricing signal that marginal losses would provide.[8] This leads to the conclusion that those wind resources, and the contracts that are tied to them, will be most impacted by marginal losses implementation. Under this change in market structure, LMPs for wind resources will be reduced, but not sufficiently to overcome their marginal costs. As a result, a marginal losses mechanism will not alter energy production from these wind resources. The burden of this cost will be felt directly by consumers rather than generators.

6. How would a decision to use marginal transmission losses affect your company's market systems?

CPS Energy estimates a minimal impact to market systems. We believe that the only

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[7] *Id.*

[8] *See* http://ercot.com/content/wcm/key_documents_lists/160763/Questions_on_ERCOT_ML_study_09052018a.docx

market system changes will be to the settlement process.

7. How would a decision to use marginal transmission losses affect your company's internal operations?

CPS Energy estimates that using marginal losses would not have a material impact to its internal operations. However, we would note an effect to Load Serving Entities (LSEs) in general. Currently, LSEs that are allocated losses based on the average loss methodology effectively experience an increase in their settled load to account for the losses included in the settlement.[9] It is prudent for LSEs to participate in the Day Ahead market to hedge their loads. Due to the settlement treatment of average losses, these LSEs find that they need to hedge their loads plus losses. Adopting marginal losses would eliminate the need to hedge the average losses as part of the LSEs daily market activities.

8. What are the effects on reliability on the ERCOT grid of using marginal transmission losses instead of average transmission losses in SCED?

The ERCOT report listed minimal reliability benefits.[10] The only reliability benefit quantified was a reduction in congestion in the range of $130 and $242 million. It should also be noted that according to the ERCOT report, a reduction in generator revenues will result in an increase in production costs. This would indicate a reduction in generator commitment leading to more instances of Reliability Unit Commitment (RUC). The revenue shortfalls, which would be made whole by the consumers, was estimated in the range of $120 and $269 million. This range in revenue shortfall is on the order of the congestion benefit, which would negate the benefit to consumers.

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[9] See ERCOT Nodal Protocol Section 13 Transmission and Distribution Losses
[10] *See* ERCOT Study.

9. What effects, if any, would marginal transmission losses have on grid hardening and resilience?

CPS Energy does not anticipate that marginal losses will have any positive effects on either grid hardening or resilience and in fact marginal losses implementation, if successful, could have negative impacts to grid resilience. The implementation of marginal losses could have a negative effect on grid hardening by encouraging generation to be more concentrated toward the center of load, thereby making it more susceptible to localized weather and other catastrophic events near the center of load.

10. What effects would the use of marginal transmission losses in SCED have on grid reliability in regions of the ERCOT grid where non-synchronous generation is more prevalent?

CPS Energy does not anticipate that using marginal transmission losses in SCED will have any positive effect on non-synchronous areas. In fact, the opposite would be expected. The new price signal produced by marginal losses, would effectively reduce the value of energy in areas of the grid located further away from the center of load. Consequently, we expect that thermal generation would be priced out of the market reducing output from such generation resources. This is expected to result in an increase in RUC for various reliability reasons including voltage support and congestion resolution. While the thermal plants will likely reduce their output, the wind and solar farms will continue to produce energy based on their fuel source. In fact, there will be a disincentive to build new synchronous generation near renewable energy resources so there may be an increase in voltage and synchronous inertia concerns due to the lack of synchronous generation in the local area.

11. How would a decision to implement marginal transmission losses affect investment in new generation resources in ERCOT over the next five years, the next 10 years, and in the years beyond 10 years?

The most direct effect of marginal losses would come from the changes in locational pricing relative to the distance from the center of load. Marginal losses pricing is not expected to be the lone influence in determining the location of the new generation. Instead, it will directly influence the financial viability of new generation build. If a generator is built closer to load, its prices will be higher and its ability to secure financing may be more favorable than a generator located further away from load. This has no obvious influence on the number of generators that will be built, and we do not expect that it will incent any new generation construction. In fact, there is a risk that the pricing will have the opposite effect. Given the inability to build new resources in and around Houston, it is expected that construction of new generation will slow until scarcity pricing elevates to the point of overcoming the hurdle of the effects of marginal losses. In addition, the dynamic nature of load in ERCOT could cause a shift in the center of load in the future. This uncertainty may make it more difficult to build generation in the long-term.

12. How would the implementation of marginal transmission losses affect the composition of the generation fleet in ERCOT?

The changes that would result from implementing marginal losses are not clear. The new pricing signal is expected to shift new resources to locate near the center of load, without any prejudice to the type of resource. Since the center of load is located near Houston, the most likely new resource types to be built would be thermal and possibly solar, with very little opportunity for wind resources. The likelihood of new thermal resources being built solely based on the new pricing signals would be very low given the need for air, water and land use

permits.

Another aspect of the composition of the generation fleet is capacity factors. A capacity factor is an indication of the utilization of a plant over the operating year. The higher the capacity factor, the more power the resource is capable of generating. Thermal resources located near the center of load will experience an increase in their capacity factors since SCED will recognize the lower overall cost of the energy generated closest to center of load. The effect of marginal losses in resource pricing would further lead to a reduction in capacity factors for thermal generators located in the West and North Zones, while renewable resources will not experience a change in their capacity factors. This is an interesting revelation reported by ERCOT,[11] namely that thermal generation will be reduced while renewable generation will not. This seems to indicate that adding marginal losses does not have the desired impact of reducing renewable energy production and the losses associated with them. Instead the losses from renewables are unchanged while the energy produced is further devalued. In addition, if these renewable resources are incented to build closer to the Houston area, their capacity factors will be lowered due to the suboptimal nature of the solar and wind resources in the area.

13. Assuming the Commission decided to go forward with implementation of marginal transmission losses, what are the key issues related to determining the appropriate treatment and allocation of the marginal transmission loss surplus revenues?

Surplus revenues should be equitably redistributed among the loads. If the Commission adopts a marginal losses policy as a method of incenting generation siting near loads and resulting

[11] *See* ERCOT Study.

in a minimization of costs associated with losses, then it is prudent that the loads are entitled to the surplus. Refunding the surplus, even in part, to generation resources is not recommended since it would negate the effect of the marginal losses policy as a method of incenting generation siting near loads.

It may be prudent to ensure that, in the implementation of marginal losses, generators located near their native loads have the same marginal loss cost and benefits, so the net impact to the generators is break even. Consideration should be given to generators, owned by utilities, built to serve nearby consumer load, in a similar way consideration is given to congestion pricing and hedging. It stands to reason that when generators are built close to their native loads, they should not be penalized by their location. While we have not identified a specific remedy to address this issue, we raise for further discussion.

14. Does the ERCOT analysis of the benefits of including marginal transmission losses in SCED accurately measure such benefits? Are potential costs to the market or to market participants adequately accounted for?

We do not question the ERCOT analysis on benefits. We recognize that increases to the generator shortfall costs are compelling. The costs of implementation, the loss of value to energy contracts, and ultimately consumer costs should also be considered when accounting for the costs to the market.

15. What ERCOT operational changes would need to be made that are not considered in ERCOT studies?

CPS Energy does not have any operational changes to note.

16. Would the use of marginal transmission losses in SCED change the ERCOT transmission planning process and transmission build-out?

Marginal losses is not expected to have a direct impact on the ERCOT transmission planning process. The current planning process includes losses as part of the design parameters. Shifting from an average losses to a marginal losses methodology will not change anything that transmission planners have to consider. Instead it will change the incentives for generation siting such that there may be a shift in the locations that new generation interconnection requests propose to site their projects.

It is unknown if there will be any significant impact to the build out of the transmission system. If a marginal losses mechanism is adopted, it is expected that the updated price signals would generally incent generation to be built closer to the center of load. What remains unclear is whether the new pricing signals will overcome the contrary forces to siting decisions. Using Houston as an example of a constrained transmission system, the following was reported by ERCOT in the Houston import project,[12] "While the load growth in the region is expected to continue, a significant challenge is also anticipated in developing new resources in the increasingly urban area due to restrictions such as air quality standards and site availability inside the city." It is unknown whether adding marginal losses to the LMP would result in a strong enough price signal to overcome other constraints, such as air permitting and siting availability.

17. Assuming that the implementation of marginal transmission losses results in the location of generation closer to load, what advantages and disadvantages would there be during an emergency event or a market restart to having generation located closer to load?

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[12] *See* http://www.ercot.com/content/meetings/board/keydocs/2014/0408/8_ERCOT_Independent_Review_of_the_Houston_Import_Regional_Pl.pdf

Under the assumption that generation would be sited closer to load, only a minimal advantage would be realized during a black start scenario. Given the lower line losses between generation and load, it is expected that the black start resource will be able to carry some additional load during the black start process. One caveat to note is that the implementation of marginal losses is based on a center of load calculation which would incent generation to be built closer to this center of load, not necessarily load in general. This would result in a migration of generation near Houston, which is the current approximate location of the center of load. This center of load scheme is contrary to the black start process which is based on load centers distributed around the state. Given the assumption that generation would be sited closer to the center of load, the only advantage to the black start process is from those generators located near the center of load near Houston and not the other load centers distributed across the state. It stands to reason that there is an advantage, but it is very minimal and likely not measurable.

18. What effects, if any, would the implementation of marginal transmission losses have on the Congestion Revenue Rights (CRR) market?

Today, a CRR instrument settles in the DA market to hedge congestion risk between a sink node and a source node based on DA prices. Since the DA market is modeled based on DC power flow with no losses, the price formation mechanism in the DA market should not be directly impacted by the implementation of marginal transmission losses. As such, little direct impact on the CRR market is anticipated.

However, there are some secondary effects of marginal losses that will impact the value of CRRs. The primary impact is based on the relationship between a CRR and a corresponding point-to-point (PTP) obligation. The PTP obligation is purchased in the DA

market and is used to hedge RT congestion between two nodes. Implementation of marginal losses will change the price formation mechanism in the RT market as the cost of marginal losses will be imbedded into the LMP. As a result of the marginal losses component that will now be included in the LMP, the PTP obligation will now effectively hedge RT congestion risk as well as the marginal losses cost. The difference in price formation mechanisms between the DA and RT markets will decouple the linkage between the CRR market and the PTP market as these two instruments will effectively hedge different items.

A related consideration is the cost of the PTP obligation compared to the payoff valuation which will be based on two different sets of conditions. The cost of the PTP obligation is based solely on the DA congestion cost between the two nodes while the payoff valuation will be based on the RT congestion cost as well as the marginal losses cost. We do not view this as a problem searching for a solution, but rather a change in market fundamentals that needs to be well understood by market participants.

The other secondary effect is the fact that RT price formation informs the DA market. Since the DA market is a forward-looking market and is used to hedge RT risk, the DA market tends to display bidding behavior that is influenced by RT pricing and risk which will now include marginal losses. This influence will have an indirect impact on price formation in the DA market where CRRs are settled.

19. How should the Commission direct ERCOT to implement marginal transmission losses in a way that mitigates any deleterious effects on the CRR market?

As with any change in the fundamentals of LMP pricing and its impact to the CRR market, a delayed implementation is recommended. It is expected that the CRR market will adjust its

valuation of the CRR instruments in future auctions, but there is no way to update the CRR instruments that have already been purchased. The implementation should be delayed, at a minimum, such that it is coordinated with the most forward-looking CRR auction, currently the Sequence 6, which is used to purchase CCRs three years into the future.

20. Does your assessment of the incorporation of marginal transmission losses change based on the timeline of implementation?

In general, we feel that the anticipated benefits of incorporating marginal losses, such as added efficiency and production cost savings, are not great enough to justify the costs of implementation or offset the consumer costs related to revenue shortfalls. This assessment is independent of the implementation timeline.

We are also concerned about the impact of marginal costs on existing PPAs. A delayed or extended implementation timeline will help to mitigate this concern as impacted contracts will reach, or be closer to, end of life. If the Commission adopts marginal losses, then it may be prudent to set a generous lead time that minimizes the number of resources and contracts effected. If a decision to proceed is made with a clear implementation date, then prospective contracts and projects should be able to adjust accordingly. Utilizing an implementation timeline of 15 to 30 years would be most beneficial as it would allow certainty in contracting activities without a sudden impact to the market.

21. What are the effects of implementing both Real Time Co-optimization (RTC) and marginal transmission losses on reliability and price formation?

We do not expect that RTC or marginal losses will have any complimentary effects on reliability or price formation.

Implementing RTC is expected to improve reliability through more efficient deployment of ancillary services and reductions in overloads. The marginal losses piece is expected to have little to no effect on reliability; however, to the extent that total system losses are reduced, it is expected that a minimal amount of additional capacity will be available to serve consumer demand.

A meaningful impact to pricing should be expected from the implementation of RTC and marginal losses, but the effects of each are significantly different compared to the other. RTC adds efficiencies to the market by continually optimizing the dispatch of energy and ancillary services, while marginal losses sends a pricing signal based on electrical distance from the center of load. As provided in the ERCOT Study, RTC is expected to result in a more fully optimized RT market, while marginal losses would result in a large generator revenue shortfall, an increase in the amount of RUC, and a potential increase in costs to the consumers.

We do not find any correlation between the two projects, and from a market perspective they are two very different policy options that should be evaluated independently.

22. Are there any synergies that may result from contemporaneous adoption of both RTC and marginal transmission losses?

There would be some synergies which revolve around IT systems upgrades required by both ERCOT and its market participants. However, we do not recognize any operational or market synergies from adopting these changes concurrently.

23. What are the effects on retail customers and the retail market from the implementation of both RTC and marginal transmission losses?

CPS Energy estimates that retail customers would realize an overall benefit from lowered production costs as a result of RTC, but we expect that the marginal transmission losses proposal will negate the benefits by increasing the costs of wind resources located in the West Zone by lowering the LMPs due to the losses experienced by those resources. We also expect that there will be an increase in generator make-whole payments, as well as startup costs, which will ultimately result in higher costs for all consumers in ERCOT.

III. CONCLUSION

CPS Energy appreciates the opportunity to present these comments to the Commission in the hope that they may prove useful in addressing the many issues associated with the potential implementation of changes to the ERCOT energy-only market structure.

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Respectfully submitted,

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