

DOCKET NO. **45542**

COMPLAINT OF RAIDEN
COMMODITIES LP AGAINST
ELECTRICITY RELIABILITY
COUNCIL OF TEXAS

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PUBLIC UTILITY COMMISSION
OF
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**COMPLAINT BY RAIDEN COMMODITIES REGARDING ERCOT'S REFUSAL TO
RESET THE MARKET ON MARCH 30, 2015 AND MAY 18, 2015**

Raiden Commodities LP
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Fax: (512) 248 3095
Counsel: Juliana Morehead
Juliana.Moorehead@ercot.com

For its Complaint against the Electric Reliability Council of Texas (“ERCOT”) Raiden Commodities, L.P. (“Raiden”) states¹:

Statement of the Case

On August 7, 2015, ERCOT market participant Raiden filed an ADR request with ERCOT in regards to actions taken by ERCOT on March 30, 2015 and May 18, 2015. *See Ex. 2.* While occurring on different Operating Days, both involved ERCOT calculating inappropriate, incorrect and inefficient locational marginal prices in response to non-standard events that took place during these two operating days. In both cases the issue is whether ERCOT correctly interpreted and followed the Protocols. On December 18, 2015 Raiden was notified that their request for ADR for both events was denied. *See Ex. 3.*

Regarding the events that transpired on March 30, 2015 and ERCOT’s subsequent response to those events, Raiden believes Protocol Section 6.3(4)(ii) provide ERCOT with the authority and obligation to re-calculate incorrect prices. Moreover, by not judiciously exercising the discretion afforded to them by the Protocols, ERCOT’s actions needlessly raised the price of electricity to Texas electricity users for an indefinite period of time.

With respect to the events of May 18, 2015, ERCOT clearly violated Protocol Sections 6.3(4) and 6.3(5) by not re-calculating incorrect prices resulting from knowingly using incorrect data.

Raiden brings a complaint under P.U.C. Proc. R. 22.251(d), contending ERCOT violated Protocol Sections 6.3(4)(iii), 6.3(4) and 6.3(5) and in response to ERCOT’s denial of Raiden’s ADR requests in relation to ERCOT’s actions on March 30, 2015 and May 18, 2015.

Raiden is unaware of any underlying proceeding or any prior or pending related proceedings associated with the relevant issues in this complaint.

¹ The verification of facts by Adam Sinn is attached as Exhibit 1.

Correct application of the ERCOT Protocols will affect locational marginal prices for the intervals in question and will have a concomitant effect on every party that transacted during those time periods.

Statement of Issues

I. MARCH 30, 2015

On March 30, 2015 from 06:13 to 06:39 a hardware failure within ERCOT made SCED unable to set Locational Marginal Prices (“LMPs”). Eventually the hardware problem was resolved and SCED set the LMPs. But those LMPs did not reflect dynamics of supply and demand and thus did not accurately or even remotely reflect market prices as is the purpose of SCED and the ERCOT market generally.

The published LMPs for the HB_North hub for the three intervals (06:00, 06:05, and 06:10) prior to the hardware failure at 06:13 were \$20.72, \$22.32, and \$21.09. One hour later the LMPs for the same location were \$25.78, \$23.23, and \$22.72. However, during that hour ERCOT generated, published and eventually used for settlement – meaning that consumers paid and generators received – LMPs reaching nearly \$3400.00. The reason for that price spike had absolutely nothing to do with supply, demand, outages, or any other grid condition. During the hardware failure there were no supply shocks, no demand shocks, and no sudden transmission outages. Therefore any significant price movements were the direct result of inefficient, incorrect and negligent decision-making by ERCOT during the hardware failure.

LMPs reached \$3400.00/MW immediately following the hardware failure because during the hardware failure from 06:13 to 06:39 ERCOT failed to issue instructions for adequate generation; thus, when SCED began operating again at 06:39 ERCOT lacked sufficient generation and had to bring inefficient and expensive generation online in order to immediately

resolve and correct the errors ERCOT made during the hardware failure. By 07:00 SCED was able to mitigate ERCOT's bad decisions and LMPs normalized.

ERCOT contends that the post-hardware failure price spike represented a "valid" market solution because it was produced by the SCED. But that answer elevates form over substance and ignores the entire market theory underlying SCED's use. SCED is merely an algorithm. Thus, to operate properly, it depends on accurate information and data inputs. During the price spike, ERCOT did not allow provide SCED accurate information about market dynamics and thus SCED's output was not a market solution. A valid market price does not exist, by definition, when a substantial portion of available supply is not allowed to participate in the market. And that is what happened here.

Nothing happened to market fundamentals during the hardware failure that could explain the subsequent price spike. The events that transpired on March 30th have been the subject of many discussions at stakeholder forums and no one – from either ERCOT or the stakeholder community – has ever suggested that the spiked prices represented actual supply and demand, because they did not. Prices that do not reflect supply and demand are, by definition, not valid market solutions. Nothing prevented ERCOT from doing its job accurately and properly on March 30. ERCOT simply did not do that and its negligence caused the ensuing price spike, nothing else.

The ERCOT protocols required ERCOT to correct its errors by re-setting LMPs for the time periods during the price spike, using accurate market information about supply and demand. Section 6.3(4)(ii) of the Protocols directly applies to the occurrences on March 30th:

ERCOT shall correct prices when: ... (ii) invalid prices are identified in an otherwise valid market solution.

Because there was no change in market fundamentals, once the hardware failure was resolved ERCOT should have continued to use the prices from the 06:10 interval, immediately preceding the hardware failure, until such time as SCED was able to overcome the operational errors that had been made during the hardware failure. –

ERCOT's refusal to re-set the market during the artificial price spike is not only contrary to the theory of SCED and the Protocols, but has caused real and substantial financial harm to ratepayers in the form of excess charges and payments. Texas consumers should not be required to needlessly subsidize ERCOT's negligence and its refusal to admit its negligence. Nor should Texas generators benefit from that negligence. But those are the results of ERCOT's actions and its refusal to follow its obligations.

Raiden requests that ERCOT be required to correct the prices published prices by using the price established for the interval ending at 06:10, for the next nine intervals, i.e., until 06:55 during which time ERCOT's SCED was not producing valid solutions but rather solutions that reflected the mistakes made during the hardware failure. This necessarily means that ERCOT should also be required to re-settle the market to reflect the corrected prices, as Section 6.3(4)(ii) of the Protocols contemplates and requires.

Raiden believes an evidentiary hearing will be necessary to determine the facts known to and the facts surrounding ERCOT's decisions on March 30th.

II. MAY 18, 2015

On May 18, 2015 ERCOT received incorrect dynamic line ratings for line 6510_A telemetered from the TSP. ERCOT used these incorrect line ratings to dispatch generation, resulting in inaccurate LMPs and inefficient dispatch. There is no legitimate dispute that this happened. Yet ERCOT refused to take any action to correct things, contrary to Sections 6.3(4) and 6.3(5) of the Protocols.

Sections 6.3(4) and 6.3(5) of the Protocols state:

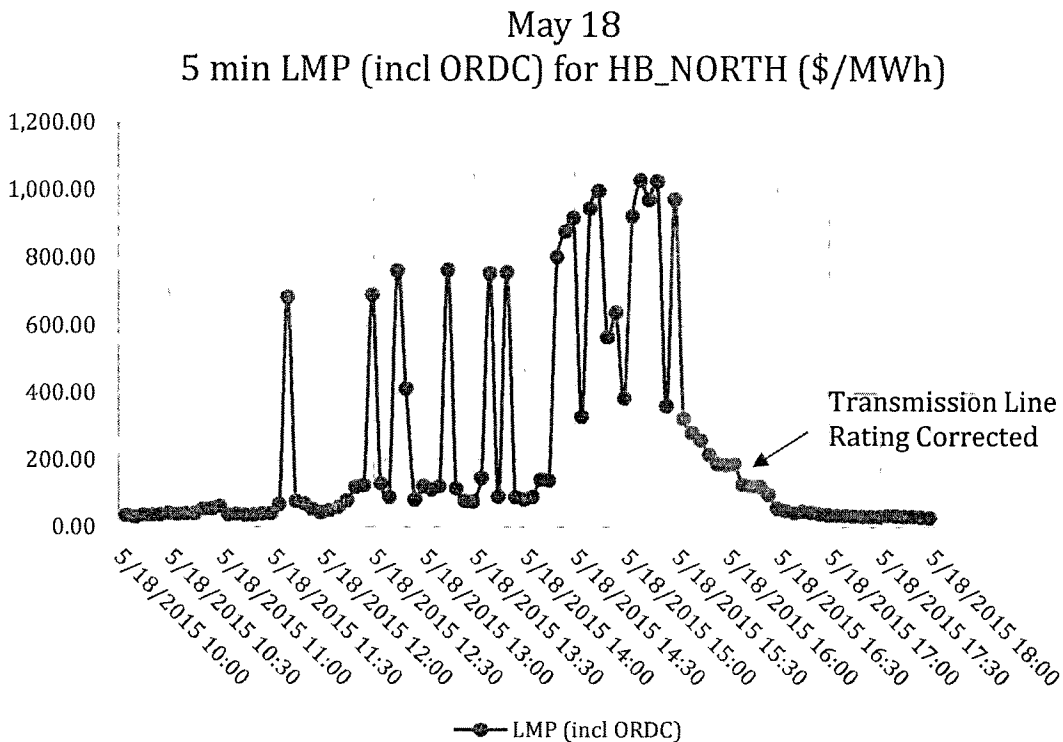
- (4) ERCOT shall correct prices when: (i) a market solution is determined to be invalid, (ii) invalid prices are identified in an otherwise valid market solution, or (iii) the Base Points received by Market Participants are inconsistent with the Base Points of a valid market solution, unless accurate prices cannot be determined. The following are some reasons that may cause these conditions.
 - (a) Data Input error: Missing, incomplete, stale, or incorrect versions of one or more data elements input to the market applications may result in an invalid market solution and/or prices.
- (5) If it is determined that any Real-Time Settlement Point Prices, Settlement Point LMPs, Electrical Bus LMPs, Real-Time prices for energy metered, Real-Time On-Line Reserve Price Adders, Real-Time Off-Line Reserve Price Adders, Real-Time Reserve Prices for On-Line Reserves, Real-Time Reserve Prices for Off-Line Reserves, and/or constraint Shadow Prices are erroneous, ERCOT shall correct the prices before the prices are considered final in paragraph (6) below. Specifically:
 - (b) If it is determined that correcting the Real-Time Settlement Point Prices will affect the Base Points that were received by QSEs, then ERCOT shall correct the prices before the prices are considered final and settle the SCED executions as failed in accordance with Section 6.5.9.2, Failure of the SCED Process.

ERCOT has publicly admitted to relying on incorrect line rating data on May 18, 2015, for a transmission line in west Texas (Equipment ID 6510 A from station ID CRM8T to GLNHV) to determine the least cost generation facilities necessary to reliably meet the anticipated physical load during at least the intervals HE11 – HE17.

The effect of using this incorrect data in the SCED process was to incorrectly and inefficiently reduce the true capacity of the transmission line at the relevant times, thereby causing significantly more expensive than necessary generation to be used to satisfy actual

demand. Oncor, the owner and operator of the transmission line, has explained how the incorrect data was submitted in several ERCOT stakeholder forums.²

As shown in the chart below, ERCOT's incorrect dispatch significantly affected Real Time LMP prices. Those prices were significantly higher than they should have been had ERCOT used actual (i.e., accurate) data describing grid conditions because the incorrect line data created phantom or artificial congestion causing SCED to produce an inefficient dispatch along with the associated inefficient and false prices.



² Separately, Raiden urges ERCOT and the PUCT to investigate whether the false line ratings led to market manipulation. As part of the public explanation, Oncor stated that they had been supplying the incorrect line ratings for many weeks. It is highly probable this information was known to some, but not all, Market Participants who may have taken advantage of the situation by removing capacity from the system and that they essentially got “caught” on May 18th.

Raiden is not aware of any disagreement over the facts of May 18, 2015 or of ERCOT's actions. Moreover, the issue has been discussed at various stakeholder venues. This is a straightforward matter. Pursuant to the above Protocols ERCOT was required to re-set LMPs using correct, known data. Its refusal to do so is contrary to the clear language of the above Protocols and renders them without any meaning. ERCOT's position – that it can rewrite the Protocols at its whim – prevents the Protocols from providing market participants of notice of expected conduct and outcomes and renders the Protocols utterly arbitrary and capricious. .

Section 6.3(4) of the Protocols explicitly references the conditions under which ERCOT is to correct prices. Included in these conditions is an explicit reference to “incorrect versions of one or more data elements input to the market applications.” That is, the Protocols specifically state that incorrect data is a reason that ERCOT shall – not may – correct prices.

ERCOT contends that the phrase “data input error” in the above Protocols does not have its common and ordinary meaning, but instead describes only errors that occur within ERCOT's systems or errors that are generated by ERCOT itself. Thus according to ERCOT, the incorrect data supplied by Oncor does not constitute a “data error” because the incorrect data did not originate from ERCOT.

There is nothing in Rule 6.3's language or purpose to support ERCOT's position. Oncor's incorrect line rating information was used by SCED to set prices and was therefore “data . . . input to the market applications.” ERCOT's position is inconsistent with the unambiguous language of Rule 6.3.

ERCOT's position is also inconsistent with the rationale for including the “data input error” language in the Protocols in the first place. That language reflects the fact that reliable, least cost dispatch of an electricity network is an interdependent activity that relies on

information and actions from the system operator, grid connected assets and market participants all operating in concert and there is always the very real possibility that errors – unintentional or otherwise – will occur. The actions of one or more parties, directly and necessarily affect everybody else. For this reason, every RTO or ISO of which Raiden is aware has similar “data input error” language in their Tariffs. The language is typically broad – as is the case in the ERCOT Protocols – because there is simply no way to predict the myriad of errors, mistakes or problems that might cause incorrect prices.

Furthermore, ERCOT’s interpretation is inconsistent with creating and maintaining a competitive wholesale market because it potentially institutionalizes conditions whereby (1) outcomes are irrational, not transparent, and inconsistent³, (2) prices become random, and as a result (3) overall prices rise because of the increased risk. Additionally, ERCOT’s (unreasonable and incorrect) position does not relieve ERCOT of its obligation to correct those prices. Rule 6.3 identify “data input error,” among other items, as a possible cause of invalid prices. Rule 6.3 does not say that ERCOT’s obligation to correct invalid prices is limited to incorrect prices caused by the incomplete list of potential causes. Rather, Rule 6.3 unconditionally obligates ERCOT to correct invalid and incorrect prices before they become final. ERCOT has knowingly and intentionally refused to honor that mandate for May 18, 2015.

When questioned about its obligation to re-calculate market prices for May 18, ERCOT and a number of Market Participants have stated that there are “so many errors in the system that virtually every price could be re-calculated,” a manifestly troubling statement and one that cannot justify ERCOT’s failure to act. The potential existence of consistent errors does not

³ Using May 18, 2015 as an example, ERCOT could confront the exact same system conditions, identical load, generator bids, etc. on a subsequent day, yet produce a vastly different dispatch and outcome because the input data from Oncor was different.

excuse ERCOT from correcting any one error brought to their attention and within ERCOT's powers, authority and regulatory mandate, as is the case with May 18th.

ERCOT's unreasonable re-writing of the phrase "data input error" for purposes of Section 6.3 of the Protocols necessarily creates an extreme reliability risk for grid operations. If ERCOT is consistent in their application of their own unilaterally concocted definition of what qualifies as data, then they are obligated to never alter or override incorrect data originating from any entity other than ERCOT that is used by the market applications, including SCED. Thus potentially when faced with the failure of the grid as a result of using incorrect data, all Texans should expect – and know – that ERCOT will let the lights go out rather than substitute and use correct data. This is a completely untenable position and one that is at complete odds with policy makers and the public at large.

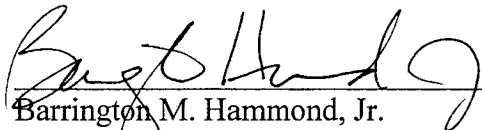
ERCOT's decision to ignore the clear meaning of Protocol 6.3 and to unilaterally re-write it, not only constitutes an encroachment on proper regulatory authority, it is also capricious and arbitrary. Under ERCOT's definition of "data" it could be argued that the only data that Section 6.3 applies to is the load forecast as all other data has its basis or origin outside of ERCOT. This is obviously not what stakeholders had in mind when they drafted the Protocols and neither is it what the PUCT believed when it approved them.

With respect to the events that took place on May 18, 2015, there are no questions of fact or ambiguities. The issue is simply whether Section 6.3 of the Protocols refers only to data originally created by ERCOT as they have universally and without stakeholder or PUCT comment have asserted, or whether reliable operation of the grid and transparent dispatch pricing mandates a broader more reasonable definition. For May 18, 2015, Raiden demands that

ERCOT use the corrected line rating data to create correct prices and then re-settle the market transactions.

Respectfully submitted,

RAPP & KROCK, PC



Barrington M. Hammond, Jr.

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bhammond@rk-lawfirm.com

ATTORNEYS FOR RAIDEN

COMMODITIES, LP


Exhibit 1

VERIFICATION

STATE OF TEXAS §
 §
COUNTY OF HARRIS §

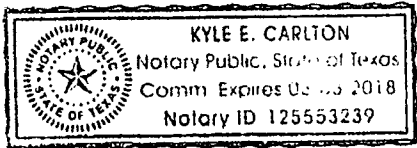
Before me, the undersigned notary, on this day personally appeared Adam C. Sinn, the affiant, a person whose identity is known to me. After I administered an oath to affiant, affiant testified:

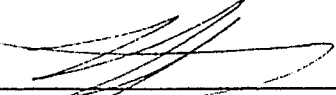
“My name is Adam C. Sinn I am capable of making this verification. I have read the Complaint by Raiden Commodities Regarding ERCOT’s Refusal to Reset the Market on March 30, 2015 and May 18, 2015 (“Complaint”). The facts in the Complaint are within my personal knowledge and are true and correct.”



Adam C. Sinn

SWORN TO AND SUBSCRIBED before me, the undersigned authority, on this the 22 day of January 2016, to certify which witness my hand and seal of office.





Notary Public

Exhibit 2

Adam Sinn
Raiden Commodities LP
3333 Allen Parkway, Suite 1605
Houston, Texas 77019

August 10, 2015

Mr. Bill Magness
ERCOT
General Counsel
7620 Metro Center Drive
Austin, Texas 78744

*Via Email: adr@ERCOT.COM
and Via Certified Mail, Return Receipt
No. 7012 1010 0002 4500 3239
and Via Federal Express*

Re: DEMAND FOR ADR

Mr. Magness:

Raiden Commodities LP ("Raiden") invokes the ADR procedures in ERCOT Protocol 20 relating to its demand that ERCOT, pursuant to Rule 6.3(4) and (5), resettle the market and correct invalid and incorrect prices existing on both March 30, 2015 and May 18, 2015.

Raiden complied with Protocol 9.14 and was assigned Settlement Dispute Numbers 1-1473567281, 1-1473567291, 1-1469559011, 1-1469559001, 1-14669559031 and 1-1473567361.

The Operating Days implicated by Raiden's demand are March 30, 2015 and May 18, 2015. Raiden's Dispute Contact shall be Joseph Wendt, Barnes & Thornburg LLP, 11 S. Meridian, Indianapolis, IN 46204, jwendt@btlaw.com, 317-231-7748. Raiden's Senior Dispute Representative shall be Adam Sinn, asinn@aspirecommodities.com.

The Protocol sections implicated include: 6.3, 9.14, 20 and 39.151. The relief sought is for ERCOT to resettle the market and correct invalid and incorrect prices for March 30, 2015 and May 18, 2015, as Rule 6.3 requires.

Rule 6.3 Requires ERCOT to Correct Invalid and Incorrect Prices Existing on May 18, 2015, Caused by Incorrect Line Rating Information.

On May 18, 2015 the ERCOT inefficiently and negligently used incorrect line rating data, at odds with the actual grid conditions, to dispatch generation, resulting in inaccurate pricing and inefficient dispatch.

ERCOT has admitted to relying on incorrect line rating data on May 18, 2015, for a transmission line in west Texas (Equipment ID 6510 A from station ID CRM8T to GLNHV) to determine the least cost generation facilities necessary to reliably meet the anticipated physical load during at least the intervals HE11 – HE17.

Because the data ERCOT used substantially and incorrectly undervalued the true capacity of the transmission line at the relevant times, significantly more expensive than necessary generation was used to satisfy anticipated demand. Oncor, the owner and operator of the transmission line, has explained how the incorrect data was submitted in several ERCOT stakeholder forums.

ERCOT's incorrect dispatch significantly affected Real Time LMP prices. Those prices were significantly higher than they should have been because the incorrect line data identified constraints that did not exist.

Furthermore, ERCOT's Real Time LMPs serve as the settlement prices for various financial contracts exchanged in other markets. On May 18, 2015, North Hub Day Ahead cleared nearly \$35.03. The following table provides data on the price of the daily contract for ERCOT NORTH traded on The Intercontinental Exchange (ICE):

Date:	Price/MWh for the daily peak contract for May 18, 2015
May 11, 2015	\$26.75
May 12, 2015	\$27.00
May 13, 2015	\$27.00
May 14, 2015	\$27.50
May 15, 2015	\$28.75

In other words, on Friday, May 15, 2015 at the close of business, the market expected the average price of a megawatt of electricity for the 16 peak hours for Monday, May 18th to cost \$28.75. The actual final settlement price for the daily peak contract for May 18th was, however, \$122.01 -- the market "missed" the expected final settlement price by \$93.26. Clearly the market did not anticipate this shock nor should it have because the price shock had nothing whatsoever to do with market fundamentals, but was driven by ERCOT's mistake and negligence.

ERCOT did not follow the Commission-approved Protocols that govern how it must operate in its role as an Independent System Operator. Specifically, according to Rule 6.3, ERCOT is required to re-calculate the wholesale market prices when a situation such as occurred on the 18th takes place and causes incorrect and invalid prices:

- (4) ERCOT shall correct prices when: (i) a market solution is determined to be invalid, (ii) invalid prices are identified in an otherwise valid market solution, or (iii) the Base Points received by Market Participants are inconsistent with the Base Points of a valid market solution, unless accurate prices cannot be determined. The following are some reasons that may cause these conditions

- (a) Data Input error: Missing, incomplete, stale, or incorrect versions of one or more data elements input to the market applications may result in an invalid market solution and/or prices.
 - (b) Data Output error: These include: (i) incorrect or incomplete data transfer, (ii) price recalculation error in post-processing, and (iii) Base Points inconsistent with prices due to the Emergency Base Point flag remaining activated even when the Security-Constrained Economic Dispatch (SCED) solution is valid.
 - (c) Hardware/Software error: These include unpredicted hardware or software failures, planned market system or database outages, planned application or database upgrades, software implementation errors, and failure of the market run to complete.
 - (d) Inconsistency with the Protocols or Public Utility Commission of Texas (PUCT) Substantive Rules: Pricing errors may occur when specific circumstances result in prices that are in conflict with such Protocol language or the PUCT Substantive Rules.
- (5) If it is determined that any Real-Time Settlement Point Prices, Settlement Point LMPs, Electrical Bus LMPs, Real-Time prices for energy metered, Real-Time On-Line Reliability Deployment Price Adders, Real-Time On-Line Reliability Deployment Prices, Real-Time On-Line Reserve Price Adders, Real-Time Off-Line Reserve Price Adders, Real-Time Reserve Prices for On-Line Reserves, Real-Time Reserve Prices for Off-Line Reserves, and/or constraint Shadow Prices are erroneous, ERCOT shall correct the prices before the prices are considered final in paragraph (6) below. Specifically:
- (a) If it is determined that correcting the Real-Time Settlement Point Prices will not affect the Base Points that were received by Qualified Scheduling Entities (QSEs), then ERCOT shall correct the prices before the prices are considered final in paragraph (6) below.
 - (b) If it is determined that correcting the Real-Time Settlement Point Prices will affect the Base Points that were received by QSEs, then ERCOT shall correct the prices before the prices are considered final and settle the SCED executions as failed in accordance with Section 6.5.9.2, Failure of the SCED Process.
 - (c) If the Base Points received by QSEs are inconsistent with the Real-Time Settlement Point Prices reduced by the sum of the Real-Time On-Line Reliability Deployment Prices and the Real-Time Reserve Prices for On-Line Reserves averaged over the 15-minute Settlement Interval, then ERCOT shall consider those Base Points

as due to manual override from the ERCOT Operator and settle the relevant Settlement Interval(s) in accordance with Section 6.6.9, Emergency Operations Settlement.

It cannot be disputed – indeed, ERCOT has admitted – that on May 18, 2015, a market solution was invalid and/or “invalid prices” were “identified in an otherwise valid market solution.” It also cannot be legitimately disputed that the cause was a data input error – the incorrect line ratings that affected SCED and caused the invalid prices. The existence of invalid market prices and their cause have both been publicly acknowledged by ERCOT, by Oncor and by multiple Market Participants. The language of Rule 6.3 is not permissive. It states that when invalid prices exist “ERCOT *shall* correct” them. ERCOT, however, has refused to do so.

As Raiden understands things, ERCOT refused to correct the known invalid prices on May 18, not because it disagrees that invalid prices existed (because it can’t), but because it disputes that the invalid prices were caused by a “data input error.” That position makes no sense for two reasons: (1) the invalid line ratings were unquestionably a data input error under any reasonable reading of that phrase; and (2) a dispute regarding the cause of invalid prices does not allow ERCOT to avoid its mandate to correct such prices.

ERCOT has unilaterally and unreasonably declared that “data input error” does not have its common and ordinary meaning, but instead describes only errors that occur within ERCOT’s systems or errors that are generated by ERCOT itself. Thus according to ERCOT, the incorrect data supplied by Oncor does not constitute a “data error” because it was not ERCOT’s fault and thus ERCOT has no obligation to correct the incorrect May 18 prices.

There is nothing in Rule 6.3’s language or purpose to support ERCOT’s position. Oncor’s incorrect line rating information was used by SCED to set prices and was therefore “data . . . input to the market applications.” ERCOT’s position is inconsistent with the unambiguous language of Rule 6.3.

ERCOT’s position is also inconsistent with the rationale for including the “data input error” language in the Protocols in the first place. That language reflects the fact that reliable, least cost dispatch of an electricity network is an interdependent activity that relies on information and actions from the system operator, grid connected assets and market participants all operating in concert and there is always the very real possibility that errors – unintentional or otherwise – will occur. The actions of one or more parties, directly and necessarily affect everybody else. For this reason, every RTO or ISO of which Raiden is aware has similar “data input error” language in their Tariffs. The language is typically broad – as is the case in the ERCOT Protocols – because there is simply no way to predict the myriad of errors, mistakes or problems that might cause incorrect prices. Furthermore, we believe that ERCOT’s interpretation is inconsistent with creating and maintaining a competitive wholesale market because it potentially institutionalizes conditions whereby

(1) outcomes are irrational, not transparent, and inconsistent¹, (2) prices become random, and as a result (3) overall prices rise because of the increased risk.

Additionally, ERCOT's (unreasonable and incorrect) dispute regarding the cause of the incorrect prices on May 18 does not relieve ERCOT of its obligation to correct those prices. Rule 6.3 identifies "data input error." among other items, as a possible cause of invalid prices. Rule 6.3 does not say that ERCOT's obligation to correct invalid prices is limited to incorrect prices caused by the incomplete list of potential causes. Rather, Rule 6.3 unconditionally obligates ERCOT to correct invalid and incorrect prices before they become final. ERCOT has knowingly and intentionally refused to honor that mandate for May 18, 2015.

When questioned about re-calculating market prices, ERCOT and a number of Market Participants have stated that there are "so many errors in the system that virtually every price could be re-calculated," a manifestly troubling statement. The potential existence of consistent errors does not excuse ERCOT from correcting any one error brought to their attention and within ERCOT's powers, authority and regulatory mandate, as is the case with May 18.

Separately, Raiden urges ERCOT to investigate whether the false line ratings led to market manipulation. As part of the public explanation, Oncor stated that they had been supplying the incorrect line ratings for many weeks. It is highly probable this information was known to some Market Participants who may have taken advantage of the situation by removing capacity from the system and that they essentially got "caught" on May 18th.

For May 18, 2015, Raiden demands that ERCOT re-settle and correct the invalid and incorrect prices caused by inaccurate line rating data.

Rule 6.3 Requires ERCOT to Correct Invalid and Incorrect Prices Existing on March 30, 2015, Caused by Hardware Failures.

On March 30, incorrect and invalid prices existed because of what ERCOT identified as a hardware error. Rule 6.3 specifically states that ERCOT shall correct invalid or incorrect prices caused by a hardware error.

ERCOT has refused to correct the incorrect prices on March 30, 2015, pointing to Rule 6.5.9.2, claiming that SCED was unable to reach a solution on March 30 and thus it has no obligation to correct the market. ERCOT's broad and unreasonable position essentially eliminates ERCOT's failure to ever correct invalid prices caused by hardware error, contrary to Rule 6.3's unambiguous language. SCED could not reach an accurate solution on March 30 because of a hardware failure. Rule 6.3 obligates ERCOT to correct the invalid and incorrect prices on March 30, 2015.

¹ Using May 18, 2015 as an example, ERCOT could confront the exact same system conditions, identical load, generator bids, etc. on a subsequent day, yet produce a vastly different dispatch and outcome because the input data from Oncor was different.

Mr. Bill Magness
August 10, 2015
Page 6

For March 30, 2015, Raiden demands that ERCOT resettle the market and correct the invalid prices for that day caused by hardware error and pay it \$370,469.55 in losses.

We look forward to working with ERCOT to successfully resolve this issue.

Sincerely,

A handwritten signature in black ink, appearing to be 'Adam Sinn', with a long horizontal line extending to the right.

Adam Sinn
Raiden Commodities LP

Exhibit 3

Wendt, Joseph

From: Morehead, Juliana <Juliana.Morehead@ercot.com>
Sent: Friday, December 18, 2015 5:08 PM
To: Wendt, Joseph
Cc: Tamby, Jeyant; Seely, Chad; Ogelman, Kenan
Subject: ADR No. 2015-RCL-01 – ERCOT Resolution Letter

Dear Mr. Wendt:

Electric Reliability Council of Texas, Inc. (ERCOT) has reviewed Raiden Commodities LP's (Raiden) demand for Alternative Dispute Resolution (ADR) letter dated August 10, 2015, as well as the facts and events that occurred on the Operating Days (ODs) at issue (i.e., March 30, 2015 and May 15, 2015), and relevant ERCOT Protocols and Other Binding Documents. As required by ERCOT Protocols Section 20.3, on October 16, 2015, at an informal senior dispute resolution meeting, the parties discussed the issues set forth in Raiden's demand. ERCOT Protocols Section 20.3 further provides that the deadline for resolving a dispute by mutual agreement is 45 days after the initial senior dispute resolution meeting (i.e., November 30, 2015), unless all parties agree in writing to an extension of time. On November 25, 2015, the parties agreed to extend this deadline to December 18, 2015.

OD March 30, 2015

On OD March 30, 2015, due to a hardware failure, SCED failed to reach a solution from approximately 06:13 to 06:39. Following the hardware failure (i.e., after 06:39), SCED began successfully executing solutions; the first of which was published to the market at 06:42.

ERCOT Protocols Section 6.3(4) requires ERCOT to correct prices when (i) a market solution is determined to be invalid, (ii) invalid prices are identified in an otherwise valid market solution, or (iii) the BPs received by Market Participants are inconsistent with BPs of a valid market solution, unless accurate prices cannot be determined. ERCOT Protocols Section 6.3(4) further identifies conditions that can cause one of the above-referenced scenarios, and specifies hardware errors (i.e., unpredicted hardware/software failures, planned market system/database outages, planned application/database upgrades, software implementation errors, and failure of the market run to complete) as one such condition. When SCED cannot reach a solution, it is considered a SCED Failure (ERCOT Protocols Section 6.5.9.2(1)). For intervals in which SCED fails to reach a solution, prices for those intervals are set to prices in the most recently solved interval (ERCOT Protocols Section 6.5.9.2(2)).

With respect to the intervals for which SCED failed to reach a solution on March 30, 2013 (i.e., 06:13 – 06:39), ERCOT determined that the SCED solution immediately following the hardware failure (i.e., 06:42) was valid, and applied ERCOT Protocols Section 6.5.9.2(2).

With respect to the intervals following the hardware failure (i.e., after 06:39), ERCOT identified two intervals wherein Market Participants received BPs that were inconsistent with the BPs of a valid SCED solution. Therefore, pursuant to ERCOT Protocols Section 6.3(4)(iii), ERCOT corrected Real-Time Prices for Energy Metered (RTRMPRs) for these intervals in accordance with ERCOT Protocols Sections 6.6.3.1, 6.6.3.3, and 6.6.9. Moreover, following the hardware failure, SCED successfully executed solutions and produced valid System Lambdas and LMPs that matched system conditions. Therefore, ERCOT determined that the LMPs and RTSPs those intervals were valid, and not affected by the inconsistent BPs.

For the reasons set forth above, ERCOT hereby denies Raiden's demand that ERCOT "resettle the market and correct the invalid prices for [March 30, 2015] caused by hardware error and pay [Raiden] \$370,469.55 in losses."

OD May 18, 2015

On OD May 18, 2015, there was an overload on line 6510_A. The congestion was primarily caused by incorrect dynamic ratings telemetered by the Transmission Service Provider (TSP) that owned the line to ERCOT. However, it is likely that planned outages in the area also contributed to the congestion.

TSPs that own Transmission Facilities are responsible for: (a) determining the ratings of Transmission Facilities; (b) providing ERCOT with equipment ratings and updates as required by ERCOT (ERCOT Protocols Section 3.10(2)); and (c) sending accurate telemetry to ERCOT (Nodal Operating Guide Section 3.7.2(1)). Telemetered measurements sent by TSPs to ERCOT must be based on modeled Transmission Elements (ERCOT Protocols Section 3.10.7.5.2(3)). ERCOT is required to use physical characteristics, ratings, and operational limits of all Transmission Elements and other information from TSPs to specify limits within which the transmission network is defined in models used to operate the ERCOT Transmission Grid. ERCOT is responsible for using system ratings consistent with the ratings expected to be used during Real-Time for the system condition being modeled, including Dynamic Ratings using expected temperatures for those system conditions (ERCOT Protocols Section 3.10(4)). If Dynamic Ratings are available, ERCOT must use to such ratings in the Network Operations Model and Congestion Revenue Rights (CRR) Network Models, as well as for Supervisory Control and Data Acquisition (SCADA) alarming, in Real-Time Security Analyses, and SCED executions (ERCOT Protocols Sections 3.10.8(1) & (2)). ERCOT's Network Operations Model for May 18, 2015 indicated a Static Rating of 326 MVA for 6510_A, and accordingly this was the rating that was used to determine 6510_A's operating limits that day.

ERCOT Protocols Section 6.3(4) requires ERCOT to correct prices when (i) a market solution is determined to be invalid, (ii) invalid prices are identified in an otherwise valid market solution, or (iii) the BPs received by Market Participants are inconsistent with BPs of a valid market solution, unless accurate prices cannot be determined. ERCOT Protocols Section 6.3(4) further identifies conditions that can cause one of the above-referenced scenarios, and specifies data input errors (i.e., missing, incomplete, stale, or incorrect versions of one or more data elements input to the market applications that may result in an invalid market solution and/or prices) as one such condition.

The ERCOT Protocols require that ERCOT use system ratings consistent with the ratings expected to be used during Real-Time for the system condition being modeled, including Dynamic Ratings. On May 18, 2015, ERCOT used the rating for 6510_A for the modeled system conditions. Nevertheless, because there were inconsistencies between model ratings and the telemetered ratings, ERCOT's Nodal Market Management System (NMMS) automatically utilized the line's most limiting rating, as telemetered by the TSP. The ERCOT Protocols provide that the responsibility of ensuring the submission of accurate information to ERCOT belongs to the Market Participant that owns the information. ERCOT's duties under the Protocols rely on TSPs to submit accurate telemetry, consistent with data contained in ERCOT's models for their Transmission Elements. However, the erroneous ratings subject to this dispute were not the result of a data error; they were the result of a TSP's failure to provide ERCOT with correct telemetry. ERCOT has found no evidence to suggest that an invalid market solution occurred on May 18, 2015.

ERCOT Protocols Section 6.3(4) requires ERCOT to correct prices in three specific scenarios "unless accurate prices cannot be determined." It is unlikely that ERCOT can accurately determine prices by resetting the OD at issue because there were other binding constraints on the OD at issue, and a sequential rerun would require ERCOT to make numerous assumptions regarding Regulation Service, constraint flow change, Ramp Rates, while also assuming that all Generation Resources precisely followed their BPs on May 18, 2015.

It is ERCOT's understanding that Raiden did not suffer any actual, measurable harm resulting from the May 15, 2015 event, but rather, received financial benefit. ERCOT Protocols Section 6.3.6(a)(iii) provides that ERCOT has the authority to grant relief to a Market Participant pursuant to the timelines specified in ERCOT Protocols Section 20, *Alternative Dispute Procedure*. Relief is generally defined in the legal context as the redress or benefit given as the result of legal action. Because Raiden was not harmed by the May 15, 2015 event, it is questionable as to whether ERCOT would even have the authority to grant Raiden's relief to reset the market for OD May 18, 2015.

For the reasons set forth above, ERCOT hereby denies Raiden's demand that for OD May 15, 2015, ERCOT "re-settle and correct the invalid and incorrect prices caused by inaccurate line rating data."

This concludes the ADR Procedure under ERCOT Protocols Section 20. Pursuant to P.U.C. Proc. R. 22.251(d), Raiden has thirty-five (35) days from the date of this letter to appeal ERCOT's denial of Raiden's demand to the Public Utility Commission of Texas.

Should you have any questions, please do not hesitate to contact me.

Sincerely,

Juliana Morehead
Senior Corporate Counsel
Electric Reliability Council of Texas, Inc.