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January 13, 2004

By Hand

Magalie Roman Salas Secretary Federal Energy Regulatory Commission 888 First Street, N.E. Washington, DC

Re: New York Independent System Operator, Inc. v. Dynegy Power Marketing, Inc., Docket No. EL03-26

Dear Ms. Salas:

Pursuant to the Commission's Order of November 25, 2003, ordering paragraph (D), and the Commission's Notice of Extension of Time, issued on January 9, 2004 in Docket No. EL03-26-000, the New York Independent System Operator, Inc.("NYISO") files this Rebuttal to Dynegy's Response to the NYISO's Motion to Vacate Award of Arbitrator ("NYISO's Rebuttal").

The NYISO's Rebuttal contains confidential trade secret and commercial information relating to the level of the bids submitted by Dynegy to certain energy markets administered by the NYISO. This information is not otherwise disclosed by the NYISO, and disclosure of such information could adversely affect competition by Dynegy in, and the competitiveness of, the markets administered by the NYISO. Accordingly, the NYISO requests privileged treatment for the confidential portions of the Rebuttal. 18 C.F.R § 388.112. Copies of the original Rebuttal are being submitted marked as required by the Commission's regulations, and fourteen copies are being submitted from which the information for which confidential treatment is being sought has been deleted. 18 C.F.R.§ 388.112(b)(ii) and (iii).



Magalie Roman Salas December 5, 2003 Page 2

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Sincerely yours,

Wm J'/oung

William F. Young

Enclosures

cc: Elizabeth A. Grisaru, Esq. Peter W. Brown, Esq. Unofficial FERC-Generated PDF of 20040115-0017 Received by FERC OSEC 01/13/2004 in Docket#: EL03-26-000



Dynegy Power Marketing, Inc.

REBUTTAL OF NEW YORK INDEPENDENT SYSTEM OPERATOR, INC. TO RESPONSE OF DYNEGY POWER MARKETING, INC TO MOTION OF THE NEW YORK INDEPENDENT SYSTEM OPERATOR, INC. TO VACATE THE AWARD OF ARBITRATOR

Pursuant to Rule 212 of the Commission's Rules of Practice and Procedure, 18 C.F.R. § 385.212, the Federal Energy Regulatory Commission's ("FERC" or "the Commission") order of November 25, 2003¹ ("November 25 Order") in this docket, and the Commission's Notice of Extension of Time,² the New York Independent System Operator, Inc. ("NYISO") files this rebuttal to the response of Dynegy Power Marketing, Inc. ("Dynegy") to the NYISO's motion to vacate the Arbitrator's award ("Award") issued on October 28, 2002, in American Arbitration Association ("AAA") Case No. 13 198 00247 02. The NYISO's Motion to Vacate asks the Commission to vacate the Award on the grounds that the Award applies a "full bid" compensation standard that grants Dynegy additional payments for MW that were not erroneously mitigated by the AMP in the August 10, 2001 Day-Ahead Market ("DAM"), and that is based on fundamental misunderstandings of the design and underlying economic

¹ Order Asserting Jurisdiction Over Arbitration Award and Directing Submittal of Exhibits, 105 FERC ¶ 61,249 (2003).

CONFIDENTIAL INFORMATION HAS BEEN REMOVED FOR PRIVILEGED TREATMENT

² New York Independent System Operator, Inc. v. Dynegy Power Marketing, Inc., Notice of Extension of Time, Docket No. EL03-26-000 (Jan. 9, 2004) (granting the NYISO's request to file this rebuttal on January 13, 2004).

principles of the New York electric markets, thereby resulting in costs for jurisdictional energy sales that are not are not consistent with the applicable NYISO tariff, and not just and reasonable.³ As shown below, Dynegy's filing does not show that the Award's application of the "full bid" standard is consistent with the facts, the economic principles underlying the New York markets, or the Federal Power Act. Accordingly, the Commission should vacate the award, and confirm that the "full bid" standard should be applied to award Dynegy the compensation proposed by the NYISO.

I. Summary of Argument

The fundamental facts are not in dispute:

- The operation of and rules governing the New York electric markets under normal circumstances are undisputed;⁴
- The dollar and megawatt ("MW") points on the Dynegy bid curves, including the dollar amount of the "full bid" for the MW scheduled from the Dynegy units are undisputed;⁵ and
- The existence and effect on Dynegy's bids and schedules of an error in the application of the Automated Mitigation Procedures ("AMP") on August 10, 2001, in the NYISO's DAM is not in question.⁶

⁴ See Joint Stipulations of Fact ("JSF") at ¶¶ 1-46, attached at NYISO Motion to Vacate, Tab 2.

⁵ Hearing Exhibit 10, attached at NYISO Motion to Vacate, Tab 3.

⁶ JSF at ¶ 54; see also New York Independent System Operator, Inc. v. Dynegy Power Marketing, Inc., Response of Dynegy Power Marketing, Inc. to Motion of the New York Independent System Operator, Inc. to Vacate Award of Arbitrator, Docket No. EL03-26-000 (Dec. 24, 2003) ("Dynegy Response") at 3.

³ New York Independent System Operator, Inc. v. Dynegy Power Marketing, Inc., Motion of the New York Independent System Operator, Inc. to Vacate Award of Arbitrator, Docket No. EL03-26-000 (Feb. 20, 2003) ("NYISO Motion to Vacate").

The disagreement between the parties, and the fundamental issue before the Commission, concerns the number of MW to which the "full bid" standard⁷ should apply. Dynegy's Response confirms that its method, which the Arbitrator adopted, applies the "full bid" for the last MW scheduled in the DAM at issue to *all* the MW that were scheduled in the hours in which the AMP errors occurred, despite the fact that: (1) the last MW were only scheduled because of the AMP error, rather than because they were bid at competitive levels;⁸ (2) the evidence shows that absent mitigation the erroneously mitigated units were not marginal units and would not have set the LBMP (market-clearing price);⁹ (3) only a small fraction of the output from Dynegy's units was inadvertently mitigated (at most [] MW in any hour),¹⁰ while the majority (94% or more) of its output, received a locational-based marginal price ("LBMP") that was significantly higher than the corresponding bids for thoseMW;¹¹ and (4) Dynegy's Asset Manager and its witness at the arbitration hearing, Mr. John Borin, acknowledged that Dynegy was fully compensated for its financial commitment risk, as well as other operating costs, by being paid at or above its bid at any given output level.¹²

⁷ New York Independent System Operator, Inc., 95 FERC ¶ 61,471 at 62,690 n.9 (2001) ("However, we also note that if NYISO subsequently determines that the bid was not an attempt to assert market power, the generator will be paid its full bid.").

⁸ Hearing Transcript at p. 153, ln. 8-p. 154, ln. 11.

⁹ Hearing Transcript at p. 232, ln. 25-p. 234, ln. 5.

¹⁰ Hearing Transcript at p. 149, ln. 5-ln. 10; Hearing Transcript at p. 213, ln. 18-ln. 23 (This testimony shows that while the Hearing Exhibit 10 shows the exact number of MW erroneously mitigated as [], the NYISO does not bill and settle in fractional MW in the DAM).

¹¹ Hearing Exhibit 10; see also NYISO Motion to Vacate at 7, 8 n.29.

¹² Hearing Transcript at p. 89, ln. 20-p. 90, ln. 25, attached at NYISO Motion to Vacate, Tab 4.

As shown below, the Award is fundamentally flawed because it: (A) compensates Dynegy for MW that were *not* erroneously mitigated; (B) assumes that Dynegy submitted bids based on its average costs rather than its marginal costs, which is contradicted by the testimony of Mr. Borin and presumes, without evidence or logic, that Dynegy was pursuing a bidding strategy that would not be profit-maximizing in the New York markets; and (C) cannot be upheld as either a cost-based or market-based result.

The NYISO respectfully submits that the "full bid" should only be applied to those MW that, as a result of the AMP error, were in fact paid less than their bid. The NYISO examined the results of the DAM for the hours in question and determined whether, as a result of the AMP having erroneously lowered the bids for a portion of the Dynegy bid curve, there were any MW that were not paid their "full bid." The undisputed facts show that there were only a relatively small number of MW in each relevant hour that did not receive the full amount bid by Dynegy for those MW. The NYISO thus calculated the additional compensation due to Dynegy by determining the MW that were not paid at or above the level of their bid, and multiplying the difference between the clearing price paid and the full bid for those MW, times that number of the undercompensated MW. This methodology is both consistent with the design and economic principles of the New York electric markets, and makes Dynegy fully whole for the erroneous application of the AMP.

II. Argument

A. <u>The Award Improperly Applies a "Full Bid" Standard that Compensates Dynegy for</u> <u>MW that were Not Subject to Erroneous Mitigation</u>

The "full bid" standard originates in the Commission's discussion, in its order approving the AMP, of the appropriate remedy for erroneously lowering a unit's bids through the mis-

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application of default bids by the AMP.¹³ In the AMP order, the Commission noted that "the proposed AMP may mitigate bids in situations where market power is not the cause for high or volatile bids."¹⁴ Here, in accordance with NYISO procedures, Dynegy submitted six price quantity pairs that defined its bid curve for each Roseton unit.¹⁵ Only some of those bids, at the high end of the bid curve, were erroneously mitigated by the AMP.¹⁶

Dynegy incorrectly asserts that the NYISO "segmented" its bids and then calculated the supplemental payment "as if each segment had been bid separately and, in the NYISO's view, if the clearing price in the hour in question exceeded the value assigned to a particular segment of a bid, Dynegy would receive no payment for that segment."¹⁷ Contrary to this assertion, the NYISO did not "segment" Dynegy's bids, and all of Dynegy's units received payment at the August 10, 2001 DAM market-clearing price (LBMP). ¹⁸ In response to this first-time error in the application of the AMP, what the NYISO did was analyze the DAM schedules to determine which of Dynegy's MW were paid an LBMP that equaled or exceeded the bid for those MW, and which, if any, were not. The NYISO determined, based on facts that are not disputed, that the LBMP compensated the majority (94% or more) of Dynegy's units in excess—indeed,

¹⁴ 95 FERC ¶ 61,471 at 62,690.

¹⁵ See Hearing Transcript at 20-22.

¹⁶ Hearing Transcript at p. 141, In. 7- p. 142, In. 9; see also Hearing Exhibit 10.

¹⁷ Dynegy Response at 6.

¹⁸ Hearing Transcript at p. 240, ln. 16-ln. 25 (Dr. Savitt testified that Dynegy was paid at least the LBMP for every MW scheduled in the DAM on August 10, 2001).

¹³ See supra note 6.

significantly in excess—of the value *Dynegy* assigned to them, *i.e.*, their bids.¹⁹ For a few of Dynegy's MW (at most [] MW in any hour),²⁰ however, the LBMP payment was less than the full bid, as a result of those bids being erroneously lowered by the AMP. The NYISO fully concurs that those MW should be given additional compensation, equal to the difference between the LBMP and the "full bid" for those MW.

Dynegy complains that: "Paying a generator for some arbitrary fraction of their bid curve, as suggested by the NYISO is not payment for the 'full bid."²¹ But that is not what the NYISO method does. Rather, it divides the actual DAM *schedule* for August 10, not the bids, into MW that were paid at or above the associated bid and those that were not.²² The Savitt Spreadsheet, Hearing Exhibit 10, provides a detailed description of this methodology and how the NYISO calculated the supplemental payment necessary to ensure that those megawatts were paid their full bid.

For example, as shown by Dr. Savitt's testimony at the hearing, for Roseton Bus 1, hour, 9, Cell B 3 represents the scheduled MW for the August 10, 2001 DAM, which were [] MW.²³ Cell B 8 shows the LBMP as listed on the NYISO's Open Access Same Time Information System ("OASIS"), \$151.37, at the Roseton 1 Bus in hour 9.²⁴ In order to find out whether any MW were paid less than the bid for those MW, Dr. James H. Savitt, the NYISO's Market

- ²³ See Hearing Transcript at p. 146, In. 19 In. 22.
- ²⁴ See Hearing Transcript at p. 144, ln. 22 ln. 23, p. 146, ln. 23 ln. 24.

¹⁹ See Hearing Exhibit 10; see also NYISO Motion to Vacate at 7, 8 n.29.

²⁰ See Hearing Exhibit 10.

²¹ Dynegy Response at 15.

²² See, e.g., Hearing Transcript at p. 176, ln. 23-p. 177, ln. 17.

Monitor and Principal Economist, determined where the LBMP, \$151.37, would have fallen on Dynegy's unmitigated bid curve. To do this, Dr. Savitt first interpolated along the MW points of the Roseton 1 bid curve.²⁵ The bid curve for Roseton 1 is set forth in the box extending from cell B 35 to cell G 37, on Hearing Exhibit 10. Dr. Savitt testified that a simple straight-line interpolation shows that the \$151.37 LBMP in cell B 8 falls on Dynegy's bid curve between its], listed in cell D 36.²⁶ Dynegy's bid of [], listed in cell C 36 and f 1 bids of [] corresponds to [] MW, as corresponds to [] MW, as seen in cell C 35, and the bid of [seen in cell D 35.²⁷ Interpolating, Dr. Savitt subtracted Dynegy's bid of [1 for [] MW] for [] MW. Then, Dr. Savitt subtracted the bid of [] from the LBMP from its bid of [of \$151.37. Finally, Dr. Savitt divided the results of [] into [] to arrive at the conclusion that the LBMP of \$151.37 falls about [] of the way between [] MW and [] MW.²⁸ Thus, the highest number of MW that should have been accepted in hour 9], as noted in cell B 5 and, correspondingly, all MW at or below that level were paid at was [or above the bid for those MW.²⁹

Next, Dr. Savitt used the interpolation process to determine where along the dollar part of Dynegy's bid curve the [] MW that were actually scheduled fell.³⁰ Again, Dr. Savitt

²⁹ See Hearing Transcript at p. 147, ln. 20 - p. 148, ln. 4 (Please note that there is a typographical error in the transcript at p. 148, ln. 4; it reads [], but it should read [].).

³⁰ See Hearing Transcript at p. 148, ln. 15 - ln. 19.

²⁵ See Hearing Transcript at p. 147, ln. 5 - p. 148, ln. 15.

²⁶ See Hearing Transcript at p. 147, ln. 12 - ln. 19.

²⁷ See Hearing Exhibit 10.

²⁸ See Hearing Transcript at p. 147, ln. 20 - ln. 23.

determined that the [] MW fell somewhere between [] MW, in cell D 35, and [] MW, in cell E 35.³¹ Interpolating, Dr. Savitt found the difference between [] MW and [] MW, and the difference between [] MW and [] MW. Continuing the interpolation process, he then divided the results of [] into [] to arrive at the conclusion that the implied price is [] of the way between [], as seen in cell D 36, for [] MW, and [], as shown in cell E 36, for [] MW.³² Thus, the interpolated price for [] MW that were scheduled is [], as listed in cell B 7.³³

With these two interpolated numbers, along with the bus LBMP and the number of MW actually scheduled, Dr. Savitt was able to calculate the supplemental compensation that would be necessary to ensure that Dynegy receives its full bid for the MW that were erroneously mitigated. He subtracted the total [] MW accepted from the number of MW that should have been accepted based on Dynegy's bids, [], and determined that [] MW, as listed in cell B 10, were accepted and scheduled only because they were erroneously mitigated to a lower bid.³⁴ Those [] erroneously scheduled MW received the LBMP of \$151.37, but, as shown above, Dr. Savitt determined that the bid at the level of [] MW was [].³⁵ Thus, to determine the supplement owed to Dynegy for the [] erroneously mitigated MW, Dr. Savitt subtracted [] from the LBMP, \$151.37.³⁶ The result of this calculation is that Dynegy should receive a

- ³³ See Hearing Transcript at p. 148, ln. 25 p. 149, ln. 2.
- ³⁴ See Hearing Transcript at p. 149, ln. 5 ln. 10.
- ³⁵ See Hearing Transcript at p. 149, ln. 11 ln. 19.
- ³⁶ See Hearing Transcript at p. 149, ln. 21 ln. 25.

³¹ See Hearing Transcript at p. 148, ln. 20 - ln. 21.

³² See Hearing Transcript at p. 148, ln. 20 - ln. 25.

supplement of [], as listed in cell B 9, for each of the [] MW inappropriately scheduled. For hour 9, a total of [], listed in cell B 11, the result of multiplying [] by f 1 erroneously scheduled MW.³⁷ would bring Dynegy up to its full bid for the erroneously scheduled MW. Dr. Savitt used this methodology for every hour at issue for the Roseton Units in order to determine that the compensation owed to Dynegy totaled \$12,682.97, as listed in cell B 27.³⁸ As noted above, Dynegy does not dispute any of the numbers on which Dr. Savitt based his calculations. In contrast, Dynegy's approach, as illustrated by the example from hour 9. would apply the bid at [] MW to all the MW scheduled in hour 9, whether or not they were subject to an error in the AMP, and whether or not Dynegy would actually have been dispatched] MW level absent that error, given that its bids for that output level were higher than at the [the market-clearing price. There is no basis in the remedial purpose of the "full bid" standard for extending it to MW that were not erroneously mitigated, or for giving Dynegy the benefit of a bid that would in fact have priced its upper output levels out of the market.

B. <u>The "Full Bid" Standard Should Apply Only to the MW Erroneously Mitigated by the</u> <u>AMP</u>

Dynegy complains that it had no way of knowing that "compensation of an inappropriately mitigated supplier would be limited to only those MW that were inadvertently mitigated."³⁹ This is a remarkable complaint, given that the purpose of the compensation is to provide a remedy for MW that were inadvertently mitigated. Dynegy provides absolutely no basis for its supposition that MW that were *not* inadvertently mitigated, and hence were treated

³⁷ See Hearing Transcript at p. 149, ln. 25 - p. 150, ln. 9.

³⁸ See Hearing Transcript at p. 150, ln. 20 - ln. 22.

³⁹ Dynegy Response at 17.

in accordance with normal NYISO market procedures, should somehow be eligible for additional compensation.

Dynegy asserts that it relied on the NYISO's Technical Bulletin #67,⁴⁰ issued on July 26, 2001, without any showing that it changed its bidding behavior in any way as a result of such asserted reliance. Putting that aside for sake of argument, Dynegy correctly notes that Technical Bulletin #67 "specifically addressed the Commission's directive regarding the treatment of generators when the AMP improperly mitigated their bids."⁴¹ According to Technical Bulletin #67, an erroneously mitigated unit will receive a supplement calculated as the difference between the unit's bid and the LBMP times the number of MW supplied by the unit.⁴² Since the whole point of the calculation described in Technical Bulleting #67 is to determine compensation for bids that were "improperly mitigated," it follows that the calculation does not apply to bids, and the associated MW, that were not improperly mitigated. As Dr. Savitt explained at the arbitration hearing, he drafted Technical Bulletin #67 with the intent "that if [the NYISO] were to have made a mistake and inadvertently, erroneously mitigated a unit, that [the NYISO] did not want the unit to be forced to run at a loss, and that [the NYISO] would provide a supplement to that unit for any MW that got dispatched above the--where the unit's bid was in excess of the

⁴² Technical Bulletin #67 (emphasis added):

In the unlikely circumstance that unit is mitigated inappropriately, the unit will be held harmless to the level of its bid that was consistent with the information provided to the NYISO but not incorporated into the Reference Level for the day(s) at issue. For the hours at issue, the affected unit would receive a supplement to its LBMP revenues equal to the difference between the LBMP and its bid, times the number of MW supplied by the unit.

⁴⁰ Hearing Transcript at p. 57, ln. 17-p. 58, ln. 8; p. 63, ln. 5-ln. 16.

⁴¹ Dynegy Response at 15 (emphasis added).

LBMP.⁴³ Consequently, Dynegy's statement that "Technical Bulletin #67 makes no distinction between mitigated and unmitigated MW⁴⁴ misses the point: the bulletin specifically addressed the applicable compensation for erroneous applications of the AMP where certain scheduled MW were not paid their "full bid." Importantly, Dynegy provides no basis in the tariff, equity or logic for its premise that "compensation of an inappropriately mitigated supplier" should extend substantially beyond "those MW that were inadvertently mitigated."⁴⁵

Equally important, the AMP did not err with respect to the vast majority of Dynegy's output,⁴⁶ and Dynegy testified that it was willing to accept any commitment in the DAM that was consistent with or greater than its bid curve.⁴⁷ As Dynegy admits, only a certain, limited number of MW were erroneously mitigated⁴⁸ (at most [] MW in any hour),⁴⁹ and the rest of its MW were compensated fully by being paid at least their full bid.⁵⁰ The Commission should confirm that the "full bid" standard was intended as a remedy for mis-applications of the AMP, and should therefore apply only to those MW to which the AMP was in fact mis-applied.

- C. <u>The Award Erroneously Adopts a "Full Bid" Standard that Implies that Dynegy</u> <u>Submitted Bids that were Not Profit-Maximizing</u>
- ⁴³ Hearing Transcript at p. 182, ln. 3-ln. 11.
- ⁴⁴ Dynegy Response at 16.
- ⁴⁵ Dynegy Response at 17.
- ⁴⁶ See Hearing Exhibit 10.
- ⁴⁷ Hearing Transcript at p. 86, ln. 12-p. 90, ln. 25.
- ⁴⁸ Hearing Transcript at p. 83, ln. 6-ln. 12; p. 115, ln. 24-p. 116, ln. 7.
- ⁴⁹ Hearing Exhibit 10.
- ⁵⁰ See supra note 7 and accompanying text.

Dynegy's Response claims it "should be paid its full bid price for each and every MW accepted by the SCUC after the improper mitigation,"⁵¹ and that this is necessary in order for it to be paid "at a level that accounted for the risks presented in the NYISO's market for all the MW offered by Dynegy."⁵² As discussed further below, this argument necessarily assumes that Dynegy's bids are based on its average rather than its marginal costs. If a supplier's bids are based on average costs, then some bids will be above the average, and some will be below the average. Correspondingly, if bids are not at the level of costs at every point on the bid curve, costs for MW below the average would need to be made up by the bids for MW above the average. This is the bidding strategy that Dynegy is implicitly describing by claiming that MW lower on its bid curve need to be paid at the bid for MW higher on its bid curve, in order for the lower MW to recover all their costs.

Mr. Borin unequivocally acknowledged, however, that Dynegy did not in fact pursue this strategy. He confirmed that Dynegy's bids covered its costs at *every* point on its bid curve. His testimony thus shows that Dynegy bids are based on its marginal costs, not its average costs:

20	Q. You were willing to run it right at				
21	your bid price?				
22	A. Right at the bid price.				
23	Q. Looking at the bid curve, then, for				
24	the Roseton units that you were willing to run				
25	at any price at or above the bid curve, is it				
1	Borin				
1 2	Borin safe to assume that the bid curve reflects the				
-	2011				
2	safe to assume that the bid curve reflects the				
2 3	safe to assume that the bid curve reflects the cost of operating those units during the				
2 3 4	safe to assume that the bid curve reflects the cost of operating those units during the Day-Ahead Market?				

⁵¹ Dynegy Response at 13.

⁵² Dynegy Response at 14.

units.
Q. You're in the business of running
your units below cost?
A. I don't know any company that would
want to do that.
Q. The costs are reflected at every
point along the bid curve; is that correct?
A. The costs would be incorporated
the costs go into constructing the bid curves.
It's one component of it.
Q. The costs would include the costs of
being required to cover the Real-Time commitment
in the Day-Ahead Market, would they not?
A. Absolutely. As I stated earlier,
there are fuel costs, emissions costs,
liquidated damages, risk premiums.
Q. Risk costs would be one of those
costs?
A. Absolutely. ⁵³

The NYISO's LBMP market is designed to encourage all sellers to bid at marginal cost

and under this market structure bidding at average cost is not profit-maximizing.⁵⁴ Mr. Borin's

testimony shows that Dynegy did not in fact follow such an irrational approach. The "full bid"

standard should be applied in a manner consistent with these economic principles that underlie

the NYISO's market design and should not presume that sellers pursue irrational bidding

strategies.

1. <u>Rational Bidders in the New York Electric Markets Bid Their Marginal Costs in</u> Order to Maximize Profits

Under the design of the New York markets, an economically rational bidder would

submit DAM bids at the level of the seller's marginal costs at each output level for which it

⁵³ Hearing Transcript at p. 89, ln. 20-p. 90, ln. 25; see also NYISO Motion to Vacate at 14-15.

⁵⁴ NRG Power Marketing, Inc. v. New York Independent System Operator, Inc., 91 FERC ¶61,346 at 62,165 (2000) (defining LBMP as equal to short run marginal cost, which it states is "the cost to supply the next increment of Load at that location").

submits bids.⁵⁵ By definition, marginal costs include all incremental costs of producing an additional unit of electricity at a given output level.⁵⁶ Such costs include the risk that a unit may suffer an outage in the RTM and thus be required to meet its DAM commitment with energy purchased at Real-Time prices (which may be higher or lower than the DAM prices).⁵⁷ There is no evidence that outage risks are somehow distinguishable from other marginal costs for bidding purposes, and Mr. Borin's testimony, quoted above, expressly included those costs in Dynegy's marginal cost bids.

Bidding a unit's marginal costs at every point on a unit's bid curve ensures that a seller is scheduled at any market-clearing price (LBMP) that equals or exceeds its marginal costs.⁵⁸ This is the profit-maximizing bidding strategy under competitive conditions.⁵⁹ A supplier should always prefer to produce additional output when the LBMP exceeds its marginal costs since the LBMP would by definition cover the costs of producing at that output level, and any excess of the LBMP (market-clearing price) would contribute to the supplier's fixed costs and profitability.⁶⁰ In short, suppliers that bid their units' marginal costs will be fully compensated for their operating costs, including outage risk costs, at any LBMP that exceeds the bid price for a given output level, and thus are better off operating at that price than not.⁶¹

- ⁵⁸ Hearing Transcript at p. 127, ln. 19-p. 128, ln. 13.
- ⁵⁹ Hearing Transcript at p. 127, ln. 19-p. 128, ln. 13; p. 130, ln. 4-ln. 12.
- ⁶⁰ Hearing Transcript at p. 125, ln. 15 -p. 131, ln. 2.
- ⁶¹ See Hearing Transcript at p. 127, ln. 19-p. 131, ln. 2.

⁵⁵ Hearing Transcript at p. 127, ln. 19-p. 131, ln. 2.

⁵⁶ NRG Power Marketing 91 FERC ¶ 61,346 at 62,165.

⁵⁷ See JSF at ¶ 14.

By contrast, the Award and Dynegy's Response imply that suppliers bid according to an average cost strategy, such that the bids of each segment equal the average costs of all output up to that segment, with some MW lower on the unit's output curve having bids that do not recover all the costs of those MW. This is the justification advanced by Dynegy and the Award for compensating the MW at lower output levels at the bid for MW at upper output levels.

Average cost bids would ensure that a unit always covers its average costs, but such bids nevertheless do not represent a rational bidding strategy, and would not be submitted by any unit seeking to maximize profits in the New York markets. To illustrate, assume a unit has two output segments of 10MW each with incremental costs of \$50 and \$200, respectively. The first output segment should be bid at \$50 to avoid purchasing at a loss (when the LBMP is less than \$50) and to ensure that it is producing when it is profitable to do so (when the LBMP is greater than \$50). Likewise, the second segment should be bid at \$200 per megawatt-hour ("MWh"). Bids less than \$200 would run the risk of the segment's being dispatched at a loss when the price is greater than the bid but less than \$200. Bids greater than \$200 would risk the supplier's foregoing profitable opportunities to produce from the second segment. The following tables illustrate how this strategy would be applied and the profit that would be earned when the market price equals \$150:

Table 1:

	Incremental Cost	Average Cost
Segment 1	\$50	\$ 50
Segment 2	\$ 200	\$125

Table 2:

	Dispatch <u>Qty (MW)</u>	Operating <u>Cost (\$)</u>	Market <u>Revenue (\$)</u>	<u> Profit (\$)</u>
Segment 1	10	\$500	\$1500	\$1000
Segment 2 Total	10	<u>\$2000</u> \$2500	<u>\$1500</u> \$3000	<u>\$-500</u> \$500

Table 2 shows that the supplier would cover its average cost (\$2500) of producing both segments and earn a profit of \$500 if it bid based on the unit's average costs. However, an incremental cost bid would have resulted in the dispatch of only segment 1 and a profit of \$1000. This simple example illuminates the flaw in the Award's and Dynegy's assumption that Dynegy would bid its average cost, and shows why clearing price markets, such as the New York's LBMP markets, would lead participants to bid the marginal costs for each output segment in the absence of market power.

2. <u>The Award, and Dynegy's Response, Make the Unsubstantiated and Inherently</u> <u>Implausible Assumption that Dynegy's Compensation Should be Calculated as if</u> <u>Dynegy were Submitting Average Cost Bids</u>

Dynegy asserts that its "jagged bid curve does not correspond to an increase in the cost to operate the unit at one more MW, but signifies a supplier's intent that it would only commit its generation unit at that level of output at a price that corresponded to its assessment of the risk of outage and scarcity and cost of replacement MW to cover its position in the Real-Time Market."⁶² Mr. Borin admitted, however, that Dynegy's bids do cover its costs, including outage risks, at every point on its bid curve. In claiming that its bids did not cover its costs at every point on its bid curve, but instead some costs at lower output levels must be recovered by bids for upper output levels, Dynegy ignores its own witness, and is in effect claiming that its bids are

⁶² Dynegy Response at 11 (footnote omitted); see also Hearing Transcript at p. 20, ln. 10p. 22, ln. 11.

based on average costs, with all the adverse consequences described above. There is no evidence that Dynegy was in fact bidding its average costs, and Mr. Borin's testimony, as quoted above, is directly to the contrary. There is likewise no economic logic supporting an assumption of average cost bidding, since as shown above that would not be profit maximizing in the New York markets. In short, there is no evidence or economic logic that substantiates Dynegy's description of its bid curve.

The Dynegy Response also claims that "suppliers strategically bid the upper end of their generation units at comparatively greater dollars/MW than the lower end, so as to be compensated for the increased risk of an outage and payment of greater amounts of liquidated damages for failure to deliver energy in the Real-Time Market at the higher levels of MW."⁶³ Dynegy is of course free to shape its bid curve as it desires, and the NYISO recognizes that it may be the case that in a unit's upper output ranges, the stress on a unit increases and hence the risk of outage increases. If so, the unit's bids should certainly reflect those increased risks and concomitantly increased marginal costs. That fact does not, however, change the underlying economics for all the preceding output. Dynegy's statement simply begs the question of whether the increased costs at upper output levels should be reflected in bids on an average or marginal cost basis.⁶⁴

As demonstrated by the example discussed above, tt would not be economically rational for Dynegy to bid at a level that would not recover its costs at each point along its bid curve.⁵⁵

⁶³ Dynegy Response at 12 (footnote omitted).

⁶⁴ See Central Hudson Gas & Electric Corp., 86 FERC ¶ 61,062 at 61,222 (1999) (approving the use of the marginal pricing system in New York). For the proposition that sellers are paid the LBMP, which is based on marginal costs, see supra note 61.

⁶⁵ See Hearing Transcript at p. 127, In. 19-p. 131, In. 2.

To assume otherwise would result in Dynegy incurring the risk of a unit's being scheduled at prices that would not recover its costs, with no assurance of realizing offsetting revenues from running at higher output levels.⁶⁶ The risks of operating at a loss would be increased by the fact that artificially low (below cost) bids would increase the likelihood of the unit's being scheduled in the DAM. Correspondingly, the significantly higher bid prices for the higher output levels would increase the likelihood that the unit would not get scheduled at or above those levels, and thus would not recover the revenues necessary to offset the losses from operating at lower levels.⁶⁷ Thus, the assumption that Dynegy acted according to a non-profit-maximizing strategy is inherently implausible.⁶⁸ The Award's grant of compensation based on this assumption applies a "full bid" standard that shows a fundamental misunderstanding of the design of the

⁶⁶ See Hearing Transcript at p. 127, ln. 19-p. 131, ln. 2.

⁶⁷ Id.

⁶⁸ See Murphy Tugboat Co. v. Crowley, 658 F.2d 1256, 1262 (9th Cir. 1981), cert. denied, 455 U.S. 1018 (1982) ("A reasonable jury could not, however, indulge in the assumption that a competitor would follow a course of behavior other than that which it believed would maximize its profits." (citing Knutson v, Daily Review, Inc., 548 F.2d 795, 812 (9th Cir. 1976), cert. denied, 433 U.S. 910 (1977)); see also NCAA v. Board of Regents of the Univ. of Okla., 468 U.S. 85, 101 n. 22 (1984) (noting that firms, whether profit or non-profit, act according to profit-maximizing strategies, thus implying that firms should be presumed to engage in economic behavior that is profit-maximizing); Robert H. Bork, The Antitrust Paradox 116-120 (1978) ("[P]rice theory assures us that economic behavior is not random, but is primarily directed toward the maximization of profits...." "Thus, 'firms behave as if they were seeking rationally to maximize their expected returns ... and had full knowledge of the data required; as if, that is, they knew the relevant cost and demand functions, calculated marginal cost and marginal revenue from all actions open to them, and pushed each line of action to the point at which the relevant marginal cost and marginal revenue were equal.") (citations omitted). New York markets, is not consistent with the undisputed facts, and is not consistent with the testimony of the hearing witnesses.⁶⁹

D. <u>The Award Applies a "Full Bid" Standard that is Not Just and Reasonable Under</u> <u>Either Cost-Based or Market-Based Principles</u>

The Award accepts Dynegy's theory that it would only cover its outage risks if all its MW were paid at the bid for the last MW scheduled. Examination of the dollar consequences of this contention based on Dynegy's bid curve shows the flaws in Dynegy's assertion. Dynegy's bids signal that it would be willing to produce [] MW at a price as low as [] per MWh. which would produce total revenue of []. In other words, Dynegy's own bids demonstrate that its outage risk associated with the first [] MW is covered at a price] per MWh. Under the theory of the Award and Dynegy's Response, however, Dynegy of would only cover its outage risks associated with its unit's being scheduled at [] MW if it receives its bid price at [] MW of [] per MWh for the entire scheduled quantity, or a total revenue of []. This compensation would represent a 188% increase in revenue associated with an output increase of only 0.2%. It is not credible that the risk of outage for Roseton 1, which is a typical steam generator, increases significantly from [MW to [] MW for the following reasons. First, it is highly unlikely that the physical stress on the unit is appreciably different when its output is increased from [] MW to [MW, and Dynegy provided no evidence to the contrary. Second and most importantly, the DAM schedules are purely financial. Dynegy would not be obligated to actually dispatch the Roseton units any differently having received a DAM schedule of [] versus []. Therefore, the economic

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⁶⁹ Hearing Transcript at p. 90, ln. 8-ln. 11 (Mr. Borin states that neither Dynegy nor any firm he knows is in the business of running its units below cost. Indeed, he implies that it is unthinkable that any firm would want to do that.).

risks associated with a potential forced outage of the Roseton units cannot have increased more than 0.2% that the schedule was increased in this example. The reality is that Dynegy's outage risks were covered for all the scheduled output for which the LBMP exceeded the associated bid price, and additional compensation is only warranted for the marginal costs of the additional MW that were scheduled as a result of the AMP error.⁷⁰

Dr. Savitt showed that Dynegy was paid a LBMP that significantly exceeded its bids for all but a few of the MW scheduled in the August 10, 2001 DAM.⁷¹ Mr. Borin confirmed that Dynegy's bids covered its costs, and accordingly that the market clearing price set on August 10th fully compensated Dynegy at every level on its bid curve where the LBMP was greater than or equal to its bid.⁷² In fact, most (94% or more) of the MW scheduled from Dynegy's units were infra-marginal,⁷³ which allowed Dynegy to receive its full bid plus a scarcity premium for those units. Properly understood, "scarcity premium," as relevant to the NYISO market clearing price auctions, refers to the ability of infra-marginal units to earn a return above their marginal costs, by being paid on the basis of market-clearing prices rather than a unit's bids.⁷⁴ That was plainly the case here for all but a small portion of the DAM schedules for Dynegy's units.

- ⁷² Hearing Transcript at p. 89, ln. 20-p. 90, ln. 25.
- ⁷³ See Hearing Exhibit 10; see also NYISO Motion to Vacate at 7, 8 n.29.

⁷⁴ See PJM Interconnection, LLC, 81 FERC ¶ 61,257 at 62,271 (1997) (holding that paying generators the market clearing price will allow them to earn a margin above their costs, and that: "Profit maximization will depend on being dispatched--not on the bid price. Thus, suppliers will have an incentive to bid no higher than their variable costs.").

⁷⁰ Hearing Transcript at p. 89, ln. 23-p. 90, ln. 25.

⁷¹ Hearing Exhibit 10.

Dynegy's few erroneously mitigated MW were neither marginal nor infra-marginal at their original bids.⁷⁵ Consequently, while Dynegy was paid less than its bids and hence its marginal costs as a result of the AMP error, that was true only for those marginal MW identified in Dr. Savitt's analysis.⁷⁶ Additional compensation would therefore only be warranted for that portion of the scheduled output for which the bids exceeded the LBMP, because, as shown above, suppliers that bid their units' marginal costs will be fully compensated for their operating costs, including outage risk costs, at any LBMP that exceeds the bid price for a given output level. Hence, there is no cost-based economic justification for compensating all the other scheduled MW at a level higher than the LBMP, when those other MW were infra-marginal and thus were paid an LBMP equal to or greater than their corresponding bids.⁷⁷

Just as there is no cost-based rationale for the compensation for infra-marginal MW awarded to Dynegy, Dynegy's Response does not show that there is a market-based rationale for doing so.⁷⁸ Paying all the scheduled output from a Roseton unit at the level of the bid for the last increment of output scheduled from the unit would only be the appropriate outcome under normal market conditions.⁷⁹ In the hours in question, however, the uppermost output levels were only scheduled because the AMP erroneously lowered the bids for that output.⁸⁰ The actual LBMP, which reflects the value of energy to the market during the hours in question, was below

⁷⁷ See also NYISO Motion to Vacate at 20-23.

⁷⁸ See NYISO Motion to Vacate at 20-24.

⁷⁹ See JSF at **¶** 17-19.

⁸⁰ Hearing Transcript at p. 141, ln. 7- p. 142, ln. 4; p. 153, ln. 8-p. 154, ln. 11; p. 233, ln. 21- p. 234, ln. 5.

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⁷⁵ Hearing Exhibit 10.

⁷⁶ Hearing Exhibit 10; see also Hearing Transcript at p. 238, In. 5-p. 239, In. 4.

the original bids' prices levels for mitigated output. Thus, without the erroneous mitigation applied by the AMP, the mitigated output would not have been scheduled.⁸¹

By paying all the scheduled output from Roseton at a price above the actual LBMP, the Award in effect establishes a unique price that (i) applies only to the Dynegy units, and (ii) clearly exceeds the market value of the energy.⁸² Dynegy's witness Mr. Borin admitted that the logical implication of the compensation theory advanced by Dynegy was that Dynegy would get its own, unique market-clearing price.⁸³ The LBMPs posted in the NYISO markets, however, reflect the market clearing prices to be paid to all scheduled supply in the absence of congestion (as on August 10).⁸⁴ To the extent that Dynegy submitted bids for some output segments that exceeded the LBMP at Roseton, these segments would not have been scheduled and would have earned no revenue.⁸⁵ Any compensation to Dynegy above the level of the LBMP in a given hour may be warranted as a remedial measure but would not be justified by the market value of the energy, which was the actual LBMP at Roseton in each of the hours on August 10, 2001.

⁸³ Id.

⁸⁴ Hearing Transcript at p. 127, ln. 6-ln. 13. Dynegy offers a series of rhetorical questions in support of its argument that, in the August 10, 2001 DAM, "there can be no question" that value to load was created, but it is indeterminable what that exact value was. Not surprisingly, Dynegy proceeds to argue that the value it should receive is equal to measured by its own flawed compensation methodology. Contrary to Dynegy's ruminations, the value to load in the NYISO markets is the LBMP. Consequently, the value to load in the August 10 DAM is determined by that DAM's LBMP.

⁸⁵ See Hearing Transcript at p. 130, ln. 23-p. 131, ln. 2.

⁸¹ See Hearing Transcript at p. 153, ln. 8-p. 154, ln. 11; p. 233, ln. 21-p. 234, ln. 5.

⁸² Hearing Transcript at p. 84, ln. 3-ln. 24 (Dynegy's compensation proposal gives Dynegy a different clearing price than everybody else).

In sum, any additional payment to Dynegy, beyond that proposed by the NYISO, would represent an increase in the cost of meeting demand in the relevant hours that bears no relation to either Dynegy's costs, or the system marginal cost.⁸⁶ As shown above, any such award would also be antithetical to the marginal cost bidding principles that underlie the New York market-clearing price auction markets. If the compensation provided by the Award, over and above that proposed by the NYISO, cannot be justified as either cost-based or market-based, then it cannot be upheld as "just and reasonable" under the Federal Power Act ("FPA").⁸⁷

E. <u>The Contract Law Principles Cited By Dynegy Do Not Provide Authority for</u> <u>Upholding the Award</u>

Dynegy's reliance on contract law is inapplicable because it ignores the fact that this Commission's jurisdiction and authority derives from the Federal Power Act, not the common law of contracts. Dynegy has shown no basis in the FPA for its contract theories.

Moreover, Dynegy's theories of an "expectation interest" are entirely conclusory and divorced from the record. Dynegy's arguments supporting this methodology make a wholly unsubstantiated leap from the premise that competitive market prices are just and reasonable to the conclusion that the compensation sought by Dynegy is just and reasonable. Dynegy bases its proposed compensation methodology on a hypothetical, unsubstantiated market in which upper output MW from its Roseton unit set the market clearing price.⁸⁸ Dynegy ignores the question of whether or not the unmitigated bids it submitted were in fact competitive. The evidence proves

⁸⁶ See Motion to Vacate at 20-27.

⁸⁷ See 16 U.S.C. § 824d (2002); see also Motion to Vacate at 20-27 (reasoning that the compensation provided by the Award is neither cost-based nor market-based).

⁸⁸ Hearing Transcript at p. 84, ln. 3-ln. 24.

that they were not.⁸⁹ Moreover, when asked whether Dynegy had any expectation as to where the DAM would clear on August 10th, Mr. Borin replied; "We don't have any expectation of the the Roseton units would have been marginal if the AMP had not made a mistake.⁹¹ In fact,

⁸⁹ Hearing Transcript at p. 153, In. 8-p. 154, In. 11:

- 8 0. Looking at Hour 9, I see you have
- 9 Rosteon 1 down as being scheduled at 511
- 10 megawatts. If there had been no error in the
- 11 AMP in Hour 9, would the Roseton 1 unit have
- 12 been scheduled at 511 megawatts?
- 13 Α. No. it would not.
- 14 Q. How do you know that?
- 15 Α. I know that because the LBMP is
- 16 \$151.37. And at 511 megawatts, we have on their
- 17 bid curve, from their bid curve, you know, bid
- 18 point of \$198.51. SCUC would not have--this
- 19 unit would--those megawatts would not have
- 20 been economic. It would not have scheduled the
- 21 unit up to 511 megawatts.
- 22 You told us earlier about Pass 2 in 0.
- 23 the SCUC. Have you examined the SCUC output to
- 24 determine whether before mitigation was applied
- 25 to any of the Roseton units they would have been
- Savitt 1

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- 2 a marginal unit? 3
 - Α. Yes, I have.
 - **Q**. What was the result?
- 5 In the hours here that we're talking **A**.
- 6 about, Hours 9 to 19, prior to the AMP process.
- 7 none of the Roseton units--none of the Dynegy
- 8 units was a marginal unit.
- 9 Neither Roseton1 nor Roseton 2 would have been **O**.
- 10 marginal if it had not been mitigated?
- 11 Α. That's correct.

See also Hearing Transcript at p. 169, ln. 22-p. 170, ln. 11; p. 233, ln. 13-p. 234, ln. 5.

⁹⁰ Hearing Transcript at p. 95, ln. 22-p. 96, ln. 7.

⁹¹ Hearing Transcript at p. 94, ln. 6-ln.10.

Dynegy's assertion that "there was no way to tell what the clearing prices/LBMPs would have been^{w92} ignores Dr. Savitt's uncontradicted testimony that none of the Roseton units were listed as marginal units prior to the application of mitigation.⁹³ Dr. Savitt's testimony shows that Dynegy's unmitigated bids would have kept the upper output blocks from the Roseton units out of the market. Thus, Dynegy had no expectation that but for the AMP error, it would have received the revenues that it now claims it is entitled to.

The "full bid" standard was articulated by the Commission as a remedy for adverse impacts on a seller caused by an erroneous application of the AMP. Thus, if there are any common law principles that would provide guidance here, it would be the principles of remedies, not substantive contracts law. It is well recognized that:

> The fundamental principle of damages, whether the action is one for breach of contract or for a negligent act or omission, is fair and just compensation, commensurate with the loss or injury sustained from the wrongful act complained of. . . . [T]he injured party is entitled to indemnity for his loss, and no more. The plaintiff cannot hold the defendant liable for more than the actual loss which the defendant has inflicted by his wrong; the plaintiff's recovery is limited to fair compensation and indemnity for the injury which he suffered. He has no right to be placed in a better position than he would be in if the wrong had not been done.⁹⁴

This principle suggests that the focus of the "full bid" remedy should be whether or not

Dynegy can claim any actual harm as a result of the AMP error. Dr. Savitt's testimony and the design of the New York market lead to the conclusion that Dynegy suffered no harm for 94% or

more of its output that was paid at or above its bid. In fact, Dr. Savitt showed that the total

⁹² Dynegy Response at 20.

⁹³ See supra note 89.

⁹⁴ 36 NY Jur Damages § 9 (2d ed. 2002) (footnotes omitted).

revenues for the Roseton Units on August 10 exceeded their total costs, even without any additional compensation.⁹⁵ The only adverse impact on Dynegy was the scheduling of a limited number of MW outside of the normal marketrules. For those MW, the NYISO's compensation methodology squares perfectly with the remedial principles cited above. It ensures that Dynegy is made whole for its actual loss by paying the difference between the LBMP and the marginal costs reflected in Dynegy's bid, and avoids providing Dynegy with a windfall at the expense of the New York ratepayers.⁹⁶

III. Conclusion

The Award improperly interprets the "full bid" standard to provide entirely unwarranted and excessive compensation to Dynegy for MW that were not subject to erroneous mitigation. Such energy costs cannot be justified as either cost-based or market-based. Rather, the "full bid" standard should require only that an energy supplier be made whole with respect to the MW that were erroneously mitigated and scheduled. Because it is based on a flawed understanding of the New York market design and results in a windfall, the Award is not just and reasonable and should be vacated.

Respectfully submitted,

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⁹⁵ Hearing Exhibit 13, attached at Motion to Vacate, Tab 6.

⁹⁶ See NYISO Motion to Vacate at 19, 24-25 (reasoning that the Award results in a windfall to Dynegy).

CERTIFICATE OF SERVICE

I hereby certify that I have served a copy of the non-confidential version of the foregoing Rebuttal by first class mail, postage prepaid, upon each person designated on the official service list compiled by the Secretary in this Docket, in accordance with the requirements of Rule 2010 of the Commission's Rules of Practice and Procedure 18 C.F.R. § 2010 (2001).

Dated at Washington, DC, this 13th day of January, 2004.

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