UNITED STATES OF AMERICA
BEFORE THE
FEDERAL ENERGY REGULATORY COMMISSION

ISO New England Inc. and New England Power Pool	)	Docket No. ER10-787-___
New England Power Generators Association, Inc.	)	
	)	
v.	)	Docket No. EL10-50-___
	)	
ISO New England Inc.	)	
PSEG Energy Resources & Trade LLC, *et al.*	)	
	)	
v.	)	Docket No. EL10-57-___
	)	
ISO New England Inc.	)	

OPENING BRIEF OF THE NEW ENGLAND POWER GENERATORS ASSOCIATION, INC.

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The New England Power Generators Association, Inc. ("NEPGA") hereby submits this opening brief in the paper hearing the Commission has set in the above-captioned dockets, *ISO New England Inc.*, 131 FERC ¶ 61,065 at PP 17-23 (2010) ("Hearing Order"). In support, we submit the attached testimony of Dr. Roy Shanker, Mr. Robert Stoddard, Professor David McAdams and Mr. Christopher Ungate.

OVERVIEW

In our protest, we observed that while ISO-NE had taken a leadership role in capacity market design for many years, it apparently faced challenges it could not overcome in designing a fully effective "Alternative Price Rule," or "APR." We appealed to the Commission to fill this void. And the Commission did just that. Recognizing that the unmitigated exercise of buyer market power would imperil the long-term survival of competitive markets, the Commission ordered ISO-NE to develop a fully effective mechanism for mitigating "out-of-market" entry, or "OOM." Hearing Order at PP 18, 38-87.

Based on its recent stakeholder presentation, the Commission's directive apparently has prompted ISO-NE to take a major stride forward towards resuming its historic leadership position. While some details need improvement and explanation, the new APR that ISO-NE appears poised to file will fully mitigate all *future* OOM not already in existence This is, as far as it goes, just and reasonable, as we explain in detail below.

Unfortunately, a fatal shortcoming remains. ISO-NE's proposal apparently will grandfather all existing OOM resources, as well as all resources that *should* be designated as OOM in the *future*, but in the *past* were *not*. Unless this problem is solved, ISO-NE's proactive work on designing a new APR will be for naught because the market will remain artificially flooded with excess OOM supply, crashing the price far below competitive levels for many years to come. Past exercises of buyer market power will quite literally become "the gift that keeps on giving."[1] This proposal is unjust and unreasonable for three basic reasons:

First, it is *per se* unlawful to allow buyers to continue to artificially suppress prices in future capacity auctions.

Second, there is no legal or equitable bar blocking the relief we seek. Load has repeatedly argued that some resources were developed in reliance on the then-existing FCM mitigation regime and that those resources should be immune from any revisions to that regime. But there is no retroactive ratemaking here; we propose *prospective* changes to the auction rules to mitigate the *future* effect Historic OOM on *future* prices in *future* auctions.

[1] In the 1920s, the Victor Talking Machine Company trademarked the phrase "the gift that keeps on giving" as an advertising slogan for its phonographs. *See* U.S. Patent and Trademark Office, Registration No. 0224081 (filed Jan. 9, 1925), *available at* Trademark Electronic Search System, http://www.uspto.gov/ebc/tess/index.html (search "the gift that keeps on giving"). In contrast to a live performance, recorded music, then in its infancy, offered the consumer the ability to play the same performance over and over again. So too here, if Historic OOM is allowed to continue suppressing capacity prices in future auctions, instead of being limited to past performances.

Nor, contrary to load's contention, is there anything inequitable about strengthening mitigation on the buyer side. This is a surprising argument for load interests to make, given that they have repeatedly and successfully argued for intensifying the mitigation measures imposed on generators. The story of organized markets is, in fact, marked in practically every chapter with successively heavier mitigation of the supply side of the market—from imposing bid caps, to mitigating bids to marginal cost reference levels, even to reversing the previously granted full exemption from all mitigation to units built after mid-1996. In many instances these new mitigation measures resulted in reduced payments to generators, thus changing the revenue streams that were forecast when the resources were built. But the Commission steadfastly rejected any contention that these new mitigation measures were unfair or unlawful.

In contrast, there is no basis for load to argue that *any* legitimate settled expectations will be upset if the new APR is applied to all existing resources. Under ISO-NE's new June APR, resources mitigated as OOM will be *allowed to clear*. Because these resources are mitigated under our proposal, existing in-market resources are protected from price suppression, and receive a higher, mitigated price. Historic OOM resources could be paid this higher, mitigated price too, or they could be paid the lower, unmitigated price—we take no position at this time. At worst, however, they would receive the unmitigated price that precisely equals what the clearing price would be if they won this case entirely and there was no new APR to begin with.

The June APR does one thing and one thing only: it removes any artificial price-suppressing effect that OOM might have on the prices load pays for the remainder of its capacity obligations. And that is just as it should be. As long as OOM resources clear, load has no legitimate reliance interest in continuing to offer OOM resources into the auction below true cost in order to suppress capacity prices market-wide. If OOM resources were, in fact, built for the purpose of suppressing capacity prices, that, at a minimum, would be an exercise of market power that would create unjust and unreasonable rates; in some circumstances, it could be market manipulation. In no event can such conduct give rise to any reliance interests that the Federal Power Act or equitable principles possibly could protect. In short, there is no legal or equitable barrier to the relief we seek.

Third, none of the market improvements at issue in this case will make any difference whatsoever if Historic OOM is not fully mitigated. OOM entry has flooded the market in the first three capacity auctions due to deficiencies in the existing market design. Under any reasonable estimate, it will take 7 to 15 years (or longer) for load growth and retirements to absorb this massive overbuild. Without mitigation of these resources, market prices will approach the price floor (towards zero or at some Commission-imposed value) and stay there. It makes no difference what form the APR takes if Historic OOM is given *carte blanche* to continue suppressing prices to near-zero levels for many years.

The cure for this problem is simple. All resources that entered the market from its inception until the effective date of ISO-NE's new APR should be subject to that new mitigation measure on a prospective basis. If resources pass that test, they will not be mitigated. If they fail, they *will* be mitigated for purposes of determining the mitigated supply curve and the APR Price. And the Commission should adopt a self-certification process, subject to audit, to determine whether these resources are or were being supported by some form of subsidy that is relevant to their classification.

In addition to the APR and Historic OOM issues, we also propose that additional zones should be modeled and additional de-list bids allowed to set price to permit locational pricing. ISO-NE plans to propose additional zonal modeling, which we support, but also plans to couple that with an expansive new mitigation regime. The details of that mitigation likely will be spelled out in ISO-NE's July 1 brief, but we highlight some initial concerns below.

Finally, we also demonstrate that the Cost of New Entry ("CONE") value in New England has fallen to unjust and unreasonable levels. We provide a ground-up estimate of the updated cost of a peaker. At Attachment A, we provide a short summary of the questions the Commission posed for this paper hearing, our answers, and a roadmap for where to find those answers in this brief.

ARGUMENT

I. THE CURRENT FCM DESIGN, EVEN WITH THE RECENTLY ACCEPTED REFORMS, IS UNJUST AND UNREASONABLE

A. Clear Capacity Market Design Criteria Emerge From Commission Precedents

While capacity markets are barely ten years old, they have become an indispensable part of all three eastern RTOs. *See Testimony of Roy J. Shanker on Behalf of New England Power Generators Association*, attached as NEPGA Exhibit 1 ("Shanker Test.") at 4:15-23 (citing *PJM Interconnection, L.L.C.*, 115 FERC ¶ 61,079 (2006), *order denying reh'g and approving settlement*, 117 FERC ¶ 61,331 (2006), *order on reh'g and clarification*, 119 FERC ¶ 61,318 (2007); *Devon Power LLC*, 113 FERC ¶ 61,075 (2005), *order approving settlement*, 115 FERC ¶ 61,340 (2006); *New York Indep. Sys. Operator, Inc.*, 103 FERC ¶ 61,201, *reh'g denied*, 105 FERC ¶ 61,108 (2003); *New York Indep. Sys. Operator, Inc.*, 89 FERC ¶ 61,109 (1999), *order on reh'g and clarification*, 90 FERC ¶ 61,085 (2000)). Even outside the RTOs, "no control area … operates without the equivalent of some mandated adequacy requirement, either directly or indirectly." *Id.* at 4:23-5:2.

The reason for the capacity market construct is the "missing money" that occurs whenever there are energy price caps, minimum requirements for installed capacity, and a desire to even out cash flows for both generators and load, which reduces the risk of price fluctuations reflected in the cost of capital. *See id.* at 5:2-12; *id.* at 7:1-2 (noting the Commission's "preference for designs that reduce price volatility") (citing *PJM Interconnection, L.L.C.*, 115 FERC ¶ 61,079 at P 104).

Arising out of this decade-long experience with capacity constructs are "four general requirements for capacity markets to succeed," each "based on bedrock economic theory" and anchored in established Commission precedent. *Id.* at 5:13-14. These requirements have become the "screening criteria to consider capacity market design or sets of design changes." *Id.* at 6:5-6.

First, "over time, compensation must be sufficient to attract new entry and retain economic existing generation." *Id.* at 6:9-10 (citing *ISO New England Inc.*, 125 FERC ¶ 61,102 at P 43 (2008), *order on reh'g*, 130 FERC ¶ 61,089 (2010)). "This means that on average and over time, the recovery from the bulk power markets for energy and capacity must result in payments equal to the cost of new entry." *Id*. at 6:13-15 (citing *Blumenthal v. ISO New England Inc.*, 117 FERC ¶ 61,038 at PP 82-87 (2006), *order on reh'g*, 118 FERC ¶ 61,205 (2007), *petition for review denied*, *Blumenthal v. FERC*, 552 F.3d 875 (D.C. Cir. 2009); *Devon Power*, 115 FERC ¶ 61,340 at P 114)). Hence, "if prices will be lower than average some of the time, they *must* be higher than average during other periods." *Id.* at 6:22-23.

Second, "capacity markets must include locational and reliability price signals to reflect the fact that capacity in certain congested areas has potentially greater value than capacity located elsewhere." *Id.* at 7:3-5 (citing *PJM Interconnection, L.L.C.*, 119 FERC ¶ 61,318 at P 76; *Devon Power LLC*, 103 FERC ¶ 61,082 at P 37 (2003)). Capacity with "attributes that provide for a differential reliability benefit … should be recognized in the market design and compensated accordingly." *Id.* at 7:12-14. This minimizes or eliminates the "need for out-of-market contracts such as [Reliability-Must-Run] agreements." *Id.* at 7:15-16.

Third, all "competitive resources within a given location should be compensated at the same price." *Id.* at 7:17-18 (citing *PJM Interconnection*, 117 FERC ¶ 61,331 at P 141; *Commonwealth Edison Co.*, 113 FERC ¶ 61,278 at P 43 (2005), *order on reh'g*, 115 FERC ¶ 61,133 (2006); *Devon Power LLC*, 110 FERC ¶ 61,315 at P 45 (2005); *New York Indep. Sys. Operator, Inc.*, 110 FERC ¶ 61,244 at P 65 & n.76, *order on reh'g*, 113 FERC ¶ 61,155 (2005); *New York Indep. Sys. Operator*, 103 FERC ¶ 61,201 at P 81)). "The law of one price for similarly situated competitive units is a basic economic building block, and price discrimination among competitive supply is inefficient and in the long run will increase costs." *Id*. at 8:23-9:3 (citing *Blumenthal v. ISO New England*, 117 FERC ¶ 61,038 at P 83). Some exceptions might be appropriate, or necessary, however, under circumstances where market power exercise and uneconomic entry had already distorted conditions. *Id.*

Fourth, the "exercise of market power by both sellers *and buyers* must be mitigated to ensure that prices are neither artificially inflated nor artificially suppressed." *Id*. at 9:4-5 (citing *New York Indep. Sys. Operator, Inc.*, 122 FERC ¶ 61,211 at PP 32, 100, *order on reh'g*, 124 FERC ¶ 61,301 (2008), *order on reh'g and clarification*, 131 FERC ¶ 61,170 (2010); *Edison Mission Energy v. FERC*, 394 F.3d 964, 968-70 (D.C. Cir. 2005); *Midwest Indep. Transmission Sys. Operator, Inc.*, 111 FERC ¶ 61,043 at P 78, *order on reh'g*, 112 FERC ¶ 61,086 (2005)). "The exercise of market power by either side of the market is destructive for competition and long-term consumer welfare." *Id*. at 9:18-19 (citing *Devon Power*, 115 FERC ¶ 61,340 at P 114).

These principles, all rooted in the Commission's capacity market design precedent, should now be "formally recognize[d] … as necessary attributes of capacity markets and the foundation for evaluating any new or existing market design elements." *Id*. at 10:3-5. Any capacity market design proposal "inconsistent with any single element of these basic principles" is likely to fail to achieve just and reasonable rates and "should be rejected or modified to conform with them." *Id*. at 10:6-7.

B. The FCM Design Aimed for but Missed Almost All Objectives, Rendering the Resulting Rates Unjust and Unreasonable

The capacity market design objectives set forth above were well-accepted five years ago when the FCM was designed. *See generally Devon Power LLC*, Docket Nos. ER03-563-000, *et al.*, Explanatory Statement in Support of Settlement Agreement of the Settling Parties, Attachment 1 (Mar. 6, 2006). The settlement agreement thus sought to create a market that conformed to these objectives:

(1) For example, in order to achieve the first principle—that compensation must, on average and over time, result in payments equal to the cost of new entry—the FCM adopted an empirically updated administrative measure of CONE, anchoring the FCA parameters and, more loosely, the FCA outcomes, to that CONE.

(2) In conformance with the second principle—that capacity markets must include locational and reliability price signals—the parties agreed upon a locational capacity market that recognized the reliability value of resources depending on where they were located.

(3) In conformance with the third principle—the law of one price—the Commission rejected proposals to pay existing suppliers less than new entrants, and approved what then appeared to be effective measures to prevent price discrimination by buyers.

(4) And in conformance with the fourth principle—mitigation of market power—capacity offers were heavily mitigated in order to avoid the exercise of seller market power, and buyer market power mitigation, with its flaws not yet apparent, was included as well.

In practice, however, the FCM failed to achieve any of these design objectives, except the mitigation of seller market power. *See generally infra* Section II.A; Shanker Test. at 10:13-13:3; *Testimony of Robert B. Stoddard on Behalf of New England Power Generators Association*, attached as NEPGA Exhibit 2 ("Stoddard Test.") at 10:15-12:21. Contrary to the first principle, capacity prices in each FCA dropped 40 percent below CONE (which was itself automatically decreasing) in auction after auction as uneconomic new entry flooded the market. Contrary to the second principle, capacity prices remained stubbornly non-locational, even as the proliferation of capacity resources paid under Reliability-Must-Run ("RMR") agreements or otherwise required to remain available for reliability proved that resources at different locations provided very *different* value to the system—even when locational constraints were known and violated, prices failed to reflected the resulting valuations. Contrary to the third principle, states, utility commissions and load engaged in widespread, but narrowly tailored, subsidies, resulting in disparate, vintage-based treatment of existing and new resources, though they both provide the same reliability support to the system. And contrary to the fourth principle, the effect, intentional or not, of this rampant price discrimination and entry by OOM resources was a massive wave of artificial price suppression caused by the flagrant exercise of buyer market power, overwhelming the Historic APR. *See* Shanker Test. at 34:4-6.

The FCM Revision, *ISO New England Inc.*, Docket No. ER10-787-000, Various Revisions to FCM Rules Related to FCM Redesign (Feb. 22, 2010) ("FCM Revision"), contained an only slightly revised February APR. As Dr. Shanker explains, these small steps are unlikely even to come into play—much less resolve—the problems left unaddressed by the Historic APR due to the massive amount of existing OOM currently on the system:

> The APR that existed prior to the Hearing Order (the "Historic APR"), and its variants APR-1, APR-2, and APR-3 which have been placed in effect for FCA-4

> (the "February APR") are the FCM rules that are intended to address the artificial price suppressive impacts associated with uneconomic entry as well as the inability of the FCM to recognize certain material locational reliability requirements. The Historic and February APRs attempts to identify narrowly prescribed situations where OOM capacity resources artificially suppress prices and offer limited remedies. As ISO-NE and NEPOOL implicitly recognize, the Historic APR fails to adequately remedy the problem. Unfortunately, the February APR, while a step in the right direction, also falls well short ….
>
> *First*, the APRs adopt too narrow a definition of OOM capacity resources. They continue to grandfather all of the existing OOM projects that have entered the capacity market in the first three FCAs. In addition, they inappropriately and arbitrarily terminate OOM status for future OOM projects after six years. I recommend that any offers of capacity that have been obtained via a discriminatory procurement process (*e.g.*, new entrant only) or other OOM pricing and offered into an FCA at below the cost expected of a purely merchant plant (that can only rely on normal, widely available market revenue streams and costs) by a purchaser of capacity (or entity working on behalf of such a purchaser), specifically including governmental entities, should be subject to mitigation. This includes the procurement of what would otherwise be deemed uneconomic demand-side management. My recommendation would be that uneconomic entry via discriminatory actions by such entities should include mitigation to reflect 100% of the effective net cost of new entry of the underlying generation supporting the contract pricing (*i.e.*, the all-in cost of the contract over time less the expected market value of energy and ancillary services that are economically provided under the contract) in the APR adjustment. While the Commission has accepted lower mitigation values, the 100% figure is the most representative of the true economic cost of the resource and, absent any estimation uncertainty, is the value that should be used.
>
> *Second*, the APRs' pricing method is incorrect. In particular, in the February APR, APR-1 and APR-2 identify the lowest price associated with displaced economic entry, not the appropriate "but for" clearing price that would have been observed absent the OOM capacity resources. When there is substantial OOM generation, this discrepancy can be expected to be substantial. The last incremental resource to de-list can cost significantly less than the marginal "but for" resource that would have set clearing prices if (a) there had been no underpriced OOM, or (b) OOM resources were priced at levels reflective of their true costs. I recommend that the APR pricing method be based on true "but for" clearing prices established on the basis of the mitigated prices identified above. This will ensure that the full price suppression impact of OOM capacity is eliminated. The rules should not be set up to permit "partial" price suppression. The Commission would never allow this on the supply side; nor should it be permitted on the buyer side if competitive markets are to be sustainable over the long-term.

Shanker Test. at 10:13-12:11 (footnote omitted).

C. Several Potential Solutions Could Fix the Identified FCM Issues

Shortly before this filing was due, ISO-NE released a draft discussion of its new, potentially far more effective June APR. As Dr. Shanker explains:

> In general it appears that the ISO-NE recommendations—assuming that its July 1 Filing adopts the proposals circulated in advance—will conform closely to the recommendations that I have made above. ISO-NE will consolidate the three rules into one, as I recommended, greatly simplifying it. Most importantly, ISO-NE will modify the pricing mitigation for the impact of OOM units on the capacity clearing prices received by existing in market generation. Specifically, ISO-NE will recommend what I see as a "first pass" or Tier 1 solution to set a clearing price for existing generation based on the use of a mitigated supply curve or set of offers reflecting pricing for OOM generation at appropriate reference prices indicative of the OOM generation's "true" economic cost of new entry. These mitigated offer levels will be used to calculate clearing prices for existing units, and the offers will be based on a review by the internal market monitor.
>
> This aspect of ISO-NE's recommendation, assuming mitigated prices are used for all OOM resources (historic and new), in determining the auction price exactly conforms to my recommendation presented above and in earlier comments. It will assure that existing generation is compensated without distortion due to the presence of OOM. A Tier 2 set of prices will be established based on the original unmitigated offers, and, by allowing the OOM units to clear in future auctions, having already sunk their investment—albeit at the distorted prices that they themselves have caused—ISO-NE's proposal assures that OOM units can participate in the market, while preventing them from distorting prices for existing units. This two-tier pricing will create a disincentive for uneconomic new entry. The NEPGA proposal calculates the Tier 1 price by mitigating all historic and new OOM offers to an appropriate reference price. It applies Tier 2 prices (reflecting the original OOM offers) to new OOM and new entry, and takes no position with respect to which of these prices is to be applied to historic OOM.

Shanker Test. at 13:6-14:9 (footnote omitted); *see also* Stoddard Test. at 17:15-26:18.

Among the issues left unaddressed, or inadequately addressed, by ISO-NE in its June APR and its accompanying proposal are: (1) an effective means to counter the artificial price suppression due Out-of-Market capacity that entered during the first three FCAs ("Historic OOM"), *see* Shanker Test. at 11:1-18 (quoted above); (2) an effective accounting for demand response resources and other capacity resources due to the lack of any transparency or discovery in this proceeding; and (3) a reset of the artificially-suppressed CONE. Unless these issues, discussed in detail herein, are fully addressed, ISO-NE's latest draft FCM redesign is unlikely to fare any better than its predecessors and prices will remain artificially suppressed to a degree that is unsustainable in the long run.

One promising component has been embraced by ISO-NE's peers in their capacity market design, but eschewed by the June APR: a sloped demand curve to replace the FCM's current vertical demand curve. Such a sloped demand curve, while by itself insufficient to fully correct the failures of the FCM, could substantially alleviate almost all of these failures (and would not interfere with the abilities of states to sponsor additional resources). While ISO-NE's June APR could result in just and reasonable rates if the problems discussed herein are appropriately addressed, we also sketch a Demand Curve APR that combines the benefits of a demand curve with sufficient additional fixes, creating an FCM that will meet the just and reasonable mandate of the Federal Power Act.

II. THE COMMISSION SHOULD ORDER FULL AND EFFECTIVE MITIGATION OF OOM

A. The Current FCM Effectively Mitigates Only Seller, Not Buyer, Market Power

The Commission has long sought to foster the development of workably competitive bulk power markets. Perhaps the single most difficult obstacle to achieving this goal is the problem of market power: the ability of a market participant or group of participants to profitably, predictably, and sustainably affect clearing prices through discretionary pricing decisions. Absent market power, competitive single-clearing price auctions generally create the correct incentives for resources to enter, bid in, and leave markets in a manner that is efficient. *See Testimony of David L. McAdams on Behalf of New England Power Generators Association*, attached as NEPGA Exhibit 4 ("McAdams Test.") at 10:1-10. Each participant in a competitive market "intends only his own gain, and [yet] is in this … led by an invisible hand to promote an end which was no part of his intention," that is, the socially optimal allocation of resources.

Adam Smith, *The Wealth of Nations* 485 (Modern Library 2000). But when a participant has market power, it will be tempted to offer resources at uneconomic prices because the loss from the misallocation of these resources is outweighed by the participant's gain from the effect on market prices. In a market distorted by the exercise of market power, there can no longer be any expectation that competition will guide participants to socially optimal outcomes; instead we face deadweight losses to society as a whole.

Capacity markets are particularly vulnerable to the exercise of market power—in either direction. Because of steep—or even, in the case of ISO-NE, vertical—demand curves, adding or removing even a relatively small amount of capacity can have dramatic effects on clearing prices. Because the payoff in terms of price effect is so large compared to the amount of capacity needed to achieve that effect, these steep (or vertical) demand curves create particularly powerful incentives to exercise market power. This incentive may be even further aggravated in *annual* capacity markets, like the FCM and PJM's RPM, which cover one-year delivery periods in each auction, thereby increasing the total payoff of market power exercise by reaping its rewards over periods considerably longer than in the day-ahead or real-time energy markets.

1. The FCM Tariff Heavily Mitigates Seller Market Power

As applied to the capacity *sellers*, these concepts are fairly uncontroversial and even basic. A net seller of capacity benefits from every increase in the capacity market clearing price. If such a seller can influence the clearing price through its decision whether and at what price to offer capacity resources, there may be both the incentive and the ability to exercise market power. Hence, the FCM has since the beginning heavily guarded against this possibility by administratively reviewing and capping the offers of all existing capacity suppliers.

Suppliers are barred from offering existing resources at prices above 0.8 times administrative CONE, that is the CONE used by ISO-NE, without prior administrative review and pre-approval. ISO-NE Tariff § III.13.1.2.3.1.1. While offers up to 0.8 times administrative CONE ("Dynamic De-List Bids") may be made freely, viable capacity markets must clear at prices set by economic new entry and in the long-run average out to actual economic CONE. *See* Shanker Test. at 6:9-7:2; Stoddard Test. at 10:15-11:3. Therefore, in any functioning capacity market in which administrative CONE approximates economic CONE, the clearing price will not usually be set by any of these unconstrained Dynamic De-List Bids, rendering them largely irrelevant.[2]

Offers by existing resources above 0.8 times administrative CONE are subject to administrative review and mitigation if they do not reflect the cost of the resources to the satisfaction of the Internal Market Monitor. ISO-NE Tariff § III.13.1.2.3.1.1. Such bids, classified either as Static De-List Bids, *id.* § III.13.1.2.3.1.1, or Permanent De-List Bids, *id.* § III.13.1.2.3.1.2, must be submitted to the Internal Market Monitor approximately nine months in advance of the FCA, along with cost documentation. *Id.* § III.13.1.2.3.1. While Permanent De-List Bids below 1.25 times administrative CONE have a presumption of competitiveness, *id.* § III.13.1.2.3.2.2, any resource whose Permanent De-List Bid clears is barred from participating in any future FCA, *id.* § III.13.1.2.3.1.2, even if market conditions change so that its participation would again be economical—a heavy deterrent against such bids. Static De-List Bids do not even have a presumption of competitiveness. *Id.* § III.13.1.2.3.2.2. And the Internal Market Monitor will reject any Permanent or Static De-List Bid it decides is higher than the resource's net risk-adjusted going forward cost, effectively forcing the resource to continue to participate at a price below its choosing. *Id.* §§ III.13.1.2.3.1.1, III.13.1.2.3.2.2.

2 The auction clearing-price and committed resource are unaffected by the level of bids certain to be infra-marginal and would be the same if all such bids had been set to zero. The fact that Dynamic De-List Bids have become irrelevantly supra-marginal, rather than infra-marginal, in recent auctions is a symptom of the dysfunction of the market, including the deviation of administrative from economic CONE, discussed *infra* Section IV, and the flood of OOM capacity which is the subject of this section, not an intended feature of market design.

In short, the clearing price in each FCA is set by either: (1) a Dynamic De-List Bid, capped at 20 percent below CONE, which is supposed to approximate the expected long-run average clearing price of a functioning market; (2) a Static or Permanent De-List Bid, which has been re-reviewed and capped below competitive levels; or (3) an offer by new entry, which can only *reduce* price levels and hence cannot serve as a tool of *seller* market power. The FCM thus comprehensively blocks the exercise of *seller* market power—physical withholding through withdrawal or economic withholding through anti-competitively *high* bids.

2. The Historic APR Unjustifiably Offers Almost No Restraints on Buyer Market Power

Not so on the other side of the market. *Buyer* market power may be exercised through uneconomic entry in an auction, or by existing uneconomic supply that cleared in a previous auction at a price below its true cost level. By definition, neither course of behavior is in any way restrained by existing mitigation measures that impose seller-oriented measures such as price caps and limits on withdrawal.

As of this date, in fact, not a single party has stepped forward to argue that the Historic APR adequately restrained buyer market power in past auctions and should be reinstated. *See also infra* Section II.B.1. This is not surprising, because even a brief recapitulation of the history of the FCM to date, *see, e.g.*, *infra* Section II.B.3, demonstrates that the exercise of market power has come from buyers, not sellers. And as the Commission recognized in the Hearing Order, ISO-NE's February APR, while an improvement, contains critical shortcomings. Hence, the FCM's only effective market power mitigation measures have, like the guns of Singapore,[3] all been pointed in one direction only (toward suppliers), leaving the other side (buyers) unscathed.

[3] During World War II, the heavy artillery defending Singapore were fixed to fire only seaward to guard against naval invasion, rendering them useless against the 1942 Japanese overland invasion to which the city easily fell and

There is, in sum, a striking contrast between the FCM's aggressive treatment of *seller* market power and the lenient, near non-existent, restraint on *buyer* market power. No such distinction between these mirror images is justified by economics or law.

In point of fact, a net *purchaser* of 5,000 MW of capacity benefits as much from a $1/kW-month *decrease* in clearing price as a net seller of 5,000 MW of capacity benefits from a $1/kW-month increase in clearing price. If the fear of distortion away from competitive price levels requires effective bid mitigation directed against the exercise of seller market power described above, it also requires equally effective measures against the exercise of buyer market power. If the mere potential for the exercise of seller market power requires bid caps, downward bid mitigation, and restraints on withdrawal—even when there is no showing of intent or incentive—then the potential for buyer market power exercise justifies bid floors, upward bid mitigation, and restraints on entry without any showing of intent.

Nor can anti-competitive downward price distortions be excused as harmless or permitted by law. As the Commission has recognized, if prices are suppressed below competitive, market levels, society as a whole is worse off in the long run. *See, e.g., Amaranth Advisors L.L.C.*, 120 FERC ¶ 61,085 (2007) ("*Amaranth*"); *Energy Transfer Partners, L.P.*, 120 FERC ¶ 61,086 (2007) ("*ETP*").[4] The suppression of FCM auction prices creates inefficiencies that harm the public

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which was described as the "worst disaster and largest capitulation in British history." Winston Churchill, *The Hinge of Fate* 81 (Houghton Mifflin Co. 1986).

[4] "The direction in which the manipulative conduct moves the price is immaterial to its legality." *ETP*, 120 FERC ¶ 61,086 at P 31. The Commission's rationale is equally applicable in market design as in enforcement cases: uncompetitive prices, high or low, ultimately hurt markets *and consumers*. *See id.* ("The academic literature takes a similar view; making no distinction between the harms resulting from upward or downward manipulations. These harms may include: *deadweight losses due to distortions in consumption, production*, storage, and transportation, as well as a reduction in hedging effectiveness, and a decline in market liquidity.") (emphasis added); *Amaranth*, 120 FERC ¶ 61,085 at P 123 ("The harm to consumers from an upward manipulation is immediate. Harm from downward manipulation is more long term. … Policing market behavior is about protecting the interest of *all participants, sellers and consumers alike*.") (emphasis added).

interest in general, the market, and consumers in particular. *See* Shanker Test. at 32:20-34:12 (explaining why buyer-side market mitigation is necessary). If prices are suppressed below what would occur in a workably competitive market, we will have the wrong investment, retirement and consumption decisions. *See id.* at 38:10-41:2. Investment decisions that would have been made at price outcomes produced by a workably competitive market will not, in fact, be made. This includes demand resources and renewables, both of which will lose part or all of their capacity revenue stream, which will, at least in some cases, force them to exit the market. At the same time, OOM supply will produce an oversupply of capacity resources: we literally will be building generation to wasteful levels. *See* Stoddard Test. at 15:10-16:3

In addition, retirement decisions will be made in ways that compromise overall efficiency, and are likely to undercut efforts to reduce greenhouse gas emissions. Some of the older, inefficient units in the market, with higher greenhouse gas emissions, cost relatively little to maintain and operate and thus can more readily survive artificially-suppressed capacity prices. Conversely, at least some of the newer, more efficient gas-fired combined-cycle units, with more environmentally beneficial emissions profiles, cost more to maintain and operate and will be given the price signal to retire. Similarly, renewables and demand resources will be given the price signal to retire or exit the market when, with efficient, workably competitive price outcomes, they might survive and even thrive—without government subsidies.

The ultimate effect of the exercise of buyer market power will be the displacement of competitive markets by cost-of-service regulation, such as RMR contracts. *See* Shanker Test. at 38:12-18; *id.* at 41:15-42:16. "[T]he exercise of buyer market power is at its safest, most profitable, and most pernicious, when it is under the direction of state or other regulatory agencies that artificially lower the costs for their own constituents, while at the same time offering contracts or regulated recovery to assure the recoupment of expenses incurred for those procuring the uneconomic resources." *Id.* at 40:19-23. "With such subsidies in place, efficient, cost-effective existing resources may become artificially uneconomic not because of competitive market forces, but because of subsidies beggaring existing resources into penury or exit." Stoddard Test. at 24:14-17.

This is the same outcome previously sought by some load interests. And as the Commission stated in rejecting such arguments:

> While it may be true that the proposal might benefit Connecticut ratepayers on a short term basis, such measures defeat the purpose of single price auctions and competitive markets, the intent of which are to establish just and reasonable rates over the long term that reflect the marginal cost of competitive generation in this market.

Blumenthal v. ISO New England, 117 FERC ¶ 61,038 at P 83. That same reasoning applies here. Load may think that the imposition of cost-of-service regulation offers short-term benefits, but it will be harmful in the long run. *See* Shanker Test. at 38:12-18; *id.* at 41:15-42:16.

The Commission correctly recognized this serious problem when it approved the FCM settlement. There it stated that "when loads own new resources, they may have an interest in depressing the auction price, since doing so could reduce the prices they must pay for existing capacity procured in the auction." *Devon Power*, 115 FERC ¶ 61,340 at P 113. More recently, ISO-NE and its Internal Market Monitor made similar observations:

> Because the annual new capacity requirement is small relative to the size of existing generation capacity, *buyers may have the ability and incentive to exploit the market's price sensitivity* by building or contracting for a large amount of new capacity bilaterally and then offering such capacity into the FCA at an uncompetitively low price. This could depress the capacity clearing price in the FCAs, depending on the size of the capacity addition. This is a concern because depressed prices, or even the prospect of depressed prices, could prevent the FCM from attracting or retaining competitive, market-based resources.

ISO New England Inc., Docket No. ER09-1282-000, Internal Market Monitoring Unit Review of the Forward Capacity Market Auction and Design Elements at 43 (June 5, 2009) ("Internal Market Monitor Report") (footnote omitted; emphasis added); FCM Revision, Filing Letter ("Filing Letter") at 13 ("When significant quantities of OOM resources clear in the FCA and new entry is needed, the clearing price *may not reflect* the cost of new competitive resources because new resources are completely displaced by OOM resources that are willing to offer into the FCA at a price well below the cost of new resources supported only by market revenues.") (emphasis added).

For purposes of setting the competitive clearing price for an FCA, the particular vehicle used to subsidize the new resource is irrelevant (be it utility ownership, long-term contracts, or subsidies through state programs). And the price-suppressing effect of such actions is potentially very long-lasting. It could be profitable to dramatically overbuild the market, driving capacity prices as low as possible for many, many years. This would be a particularly fruitful strategy if the Commission allows OOM to escape the APR after a predefined time period, rather than requiring mitigation to stay in place until the market absorbs the excess capacity produced by the uneconomic new entry. To resolve this buyer market power problem, the Commission need not wrestle with issues of intent or incentive any more than it does with respect to seller market power.

B. Unrestrained Exercise of Buyer Market Power Threatens to Destroy the FCM

While the Commission approved replacement of the Historic APR with the February APR, Hearing Order at P 71, the flaws of the Historic APR bear repeating here because the February APR, and possibly other proposals the Commission will have to evaluate, share some or all of these flaws. Moreover, several of the APR proposals currently in contention are affected by determinations made under the Historic APR. In particular, the February and June

APRs carry forward the value of CONE calculated on the basis of auction outcomes under the Historic APR. They also exempt all Historic OOM capacity introduced under the Historic APR from all future buyer market power mitigation. The flaws of the Historic APR therefore will continue to undercut the benefits of any current or future APR that does not start on a fresh page.

1. The Historic (and February) APRs Exempt Most Exercises of Buyer Market Power

The Historic APR adopted a truncated definition of OOM capacity that failed to capture many potentially highly effective uses of buyer market power. As a consequence, egregious and successful strategies to artificially suppress capacity prices below competitive levels not only escaped effective mitigation, but did not even appear on the Internal Market Monitor's radar screen.

In the Filing Letter accompanying the FCM Revision, ISO-NE defined OOM capacity as follows:

> Out-of-market resources are those that participate in the FCA at prices below the resource's long-term average cost net of non-FCA market revenues because they are able to count on revenues from non-market sources. For example, they may be built by a party with a contract that ensures full payment for the resource regardless of the level of FCM prices. Thus, in-market resource behavior in the FCA is based on costs and expectations of future market-based revenues, while OOM resources are able to count on additional, often resource-specific revenues and thereby stay in the auction at relatively low prices.

Filing Letter at 13.

This narrative definition, while capturing a significant subset of resources that are used to exercise buyer market power, wrongly excludes resources bid below cost by a net-purchaser who recovers the cost—not through "revenues from non-market sources"—but entirely through the portfolio savings achieved by artificially suppressing FCM clearing prices (thus reducing the amount paid for the rest of its capacity obligation). The significance of this loophole can perhaps best be understood by considering its mirror image on the seller side. Under this mirror image rule, net suppliers—even if they have market power—would be free to economically withhold resources as long as they recovered the cost of withholding through increased profits on the sale of their other capacity; only conspiracies between suppliers to cross-subsidize withholding or similar schemes would be prohibited. This mirror image rule would hardly be a satisfactory response to economic withholding.

Whatever the imperfections of ISO-NE's *narrative* definition, the operative *tariff* language adds an additional enormous loophole. For example, capacity offers at or above 0.75 times administrative CONE are not even reviewed to "determine whether the offer is consistent with the long run average costs of that resource," but are granted in-market status by irrefutable presumption. *See* ISO-NE Tariff § III.13.1.1.2.6.[5] A sufficient quantity of such resources can *guarantee* that the capacity market can never clear above 0.75 times administrative CONE.[6] This loophole in the Historic and February APR—partially, but incompletely, addressed in the June APR, *see* below at 58-64—standing by itself is sufficient to threaten the long-run viability of the capacity market.

[5] For example, a resource might have an economic cost of $30/kW-month, but if the current administrative CONE is $4/kW-month, a sponsor could subsidize its costs by $27/kW-month and have it enter the market with a bid of $3/kW-month—reflecting only 10% of its economic cost—without any review or even the possibility of mitigation.

[6] The Connecticut Department of Public Utility Control emphasizes the continuity between the Historic and February APRs, noting that the February APR "only provided increased market transparency, clarification, and additional details but *would not change* the designation of any resource as either in-market or out-of-market" compared to the Historic APR, but makes no attempt to reconcile the limitations of the tariff with ISO-NE's broader narrative definition of OOM. *ISO New England Inc.*, Docket Nos. ER10-787-000, *et al.*, Opposition of the Connecticut Department of Public Utility Control, et al., to the New England Power Generators Association's Motion for Disclosure at 8 (June 14, 2010) ("CDPUC Opposition") (internal quotation and alteration marks omitted; emphasis in original).

Connecticut also seeks to draw a parallel between the categorical exemption from OOM review at 0.75 times CONE and the 0.8 times CONE threshold for Dynamic De-List Bids. *Id.* at 12. The comparison misses the mark in several crucial respects, most importantly that both of the thresholds are substantially *below* CONE in a capacity market which in the long-run should be expected to average out *to* CONE. Hence, even if Dynamic De-List bids could be used as tools of seller market power, they would at worst function as a speed bump on the way to prices far below the necessary long-run average; conversely, unreviewable OOM at 0.75 times CONE can actively push clearing prices down without limit. For the parallel to hold the OOM threshold would have to be as far above CONE as the Dynamic De-List threshold is below, at 1.2 times CONE rather than 0.75 times CONE.

2. *Even When Triggered, the Historic (and February) APRs Fail to Adequately Mitigate Out-of-Market Offers*

As we noted in our protest, *ISO New England Inc.*, Docket No. ER10-787-000, Motion to Intervene and Protest of NEPGA (Mar. 15, 2010) ("NEPGA Protest"), the Historic APR goes into effect only when new capacity is needed. NEPGA Protest at 23. But there is no rational or lawful reason for allowing artificial price suppression as long as there is no immediate need for new entry. Artificial price suppression is problematic regardless of the balance of supply and demand. Capacity markets are structured both to incentivize new entry and to retain needed existing facilities. Artificial price suppression during times when no new unit is needed will drive capacity clearing prices below the marginal costs of some current suppliers who would be efficient suppliers in a competitive market, but who will be forced to leave if prices are artificially suppressed. This effect impairs efficiency and deters new otherwise-economic entrants. And it will increase the risk, and consequently the premium, that new resources demand to participate in the FCM. *See* Shanker Test. at 38:4-9 ("[E]ventually all favored 'new suppliers' will become 'existing suppliers' subject to victimization. To compensate for that risk, any entrant would have to be compensated by ever increasing price levels, encouraging ever greater use of buyer market power as the perceived cost of new entry rises. As the market structure is unwound, required contract by required contract, risk gets shifted back to consumers and one of the core benefits of competitive markets is lost.").

Hence, in addition to encouraging new generation when and where needed, a just and reasonable APR should also set the capacity clearing price at the competitive measure of the cost of new entry to ensure that needed existing generation is retained. The Historic and February APRs both fail to accomplish this goal.

Even setting aside periods of excess capacity, the Historic APR's definition of the need for new capacity is profoundly flawed. For any given FCA, the Historic APR's definition of OOM capacity only includes capacity newly offered into that FCA. For the next FCA, the same capacity offered at the same uneconomic prices is now suddenly deemed to be sanctified as existing capacity, and thus wrongly assumed to be unable to artificially suppress prices in future FCAs. This could hardly be less rational. If new capacity is needed, even small amounts of slightly uneconomical capacity (that is, capacity with a marginal cost only slightly above the competitive price) *may* have become efficient (that is, have a marginal cost below the new competitive price) in the next FCA. But at least such resources might be mitigated. Under the current rule, if load takes a large market position that has a long-lasting suppressive effect on many future FCAs, the rule is easily evaded.[7]

The Historic and February APRs also will not mitigate the clearing price to any level higher than the administrative CONE for that particular auction. In other words, if OOM resources distort prices downward within a range bounded by the Auction Starting Price, on one hand, and CONE, on the other, the APRs would let the distorted result stand. For example, if there was OOM supply that, during a period of capacity need, suppressed prices from 1.5 times CONE to 1.1 times CONE, the Historic APR would limit the adjusted price to CONE rather than adjust to the level that would have occurred absent the OOM supply—namely, in this example, 1.5 times CONE, which may be legitimately representative of the real cost of new entry, independent of any administrative CONE value set under the existing tariff. In this case, OOM resources can freely suppress any part of the price signal that indicates the actual competitive cost of new capacity resources, thereby discouraging more rapid and substantial new market-

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[7] The February APR is only slightly better. It carries forward new OOM supply for six auctions, but this limitation is arbitrary and will often be insufficient. *See* discussion *infra* at 42.

based entry when needed. The linkage of administrative CONE to any mitigated price is arbitrary and not rooted in any theoretical basis consistent with the Commission's established four basic principles.

Even if administrative CONE were an adequate measure of the real economic cost of new entry—and it is not, as we demonstrate below (at Section IV.A)—because the Historic and February APRs are capped at administrative CONE, net purchasers offering uneconomic supply could, intentionally or not, ensure that the FCA clears at no higher than administrative CONE.[8] This would mean that no new in-market entrant ever would earn more than the administratively set value of CONE. And because FCM prices could drop below, but never rise above, the cost of new entry, they would never *average* the cost of new entry. This means that new entry would never have a reasonable opportunity to recover its full cost, violating a core principle of capacity market design. *See supra* at 6 (quoting Shanker Test. at 6:13-15). Because CONE itself is understated—as we explain below—viable competitive new entry recedes even farther into the distance. And because the APR only is in effect *when new entry is needed*, the circumstances in which it will effectively mitigate the exercise of buyer market power approach the null set.

Finally, and perhaps most insidiously, the APR is capped at the lower of CONE and the offer price of the least expensive "new" resource not committed in the auction, less $.01. Hence, even if all the other prerequisites of the APR are fulfilled, the price will *not* be restored to what it would have been absent the uncompetitive OOM offers. A concrete—and far from hypothetical—example makes this distinction clear: Net purchasers may commit thousands of MW of OOM capacity to drive down the supply curve. This will displace a similarly large

[8] As long as the categorical exemption from review of offers at or above 0.75 times CONE remains in place, more calculating exercisers of buyer market power can depress prices even more rapidly by side-stepping the APR completely. *See supra* at 21.

amount of competitive capacity and walk down the part of the supply curve covered by that amount. The Historic and February APRs will only walk back a single step on the capacity curve, which could be achieved by a single one-MW resource offered at one cent above the depressed auction price (but far below what the competitive clearing price would have been). Therefore, the APR may partially correct small price distortions, but will let large price distortions pass almost unscathed. This perverse outcome invites manipulation and is unjust and unreasonable.

In the Hearing Order, the Commission generally agreed with these criticisms:

> [T]he existing APR provides a price adjustment for OOM resources only when there is a need for new capacity as reflected by an ICR that exceeds all existing capacity. But new capacity may be needed in other situations, such as when some existing capacity retires from the market. Moreover, we also agree with commenters that OOM resources can affect prices even when no new capacity is needed, by displacing what would otherwise be the marginal, price-setting existing resource. And we agree with commenters that the price adjustment under the existing APR does not always fully correct for the effect of OOM resources on the capacity price. That is, the existing APR does not establish the price that would have arisen had all of the OOM resources offered at prices that reflect their full entry costs net of in-market revenues. Thus, when OOM resources are offered into the market, the existing APR does not ensure that capacity market prices reflect the market cost of new entry when new entry is needed.

Hearing Order at P 70. The Commission should stay the course.

3. Almost All New Entry Under the Historic APR Has Been Out-of-Market

The Historic APR's theoretical flaws have been proven in practice. In the most recent auction, FCA #3, as in the two previous ones, almost all new entry was Out-of-Market or sponsored by a utility or a state. As Mr. Stoddard explains:

> FCA #3 set out to procure the Net Installed Capacity Requirement of 31,965 MW for the 2012-2013 Capacity Commitment Period from a pool of 43,415 MW of qualified resources: 37,609 MW of Existing Capacity, 2,830 MW of New Generating Capacity Resources, 2,420 MW of New Import Capacity Resources, and 555 MW of New Demand Resources. Of the new resources, "1,912 MW … sought approval to offer below 0.75 times CONE but were not accepted by the [INTMMU], and will be treated as out-of-market capacity…." Permanent, Static,

> and Administrative Export De-List bids totaled 1,196 MW, leaving 36,413 MW of Existing Capacity in FCA #3 [at any price above 0.8 times CONE] (the price at which resources may submit Dynamic De-list Bids)—a surplus of 4,448 MW—prior to Dynamic De-Lists.

Stoddard Test. at 38:7-16 (footnotes omitted).

The resulting surplus of capacity in the market, which was driven in large part not by market forces but rather by bilateral actions of load interests, continues unabated.

> This surplus has its origin in both supply and demand conditions. Because of decreased load forecasts, Net ICR for 2012-2013 was 563 MW below Net ICR for 2011-2012. But the bulk of the surplus comes from surplus capacity cleared in FCA #1 and FCA #2, which included 1,310 MW of resources designated as Out-of-Market by the [INTMMU], 586 MW of new capacity treated as existing in FCA #1 (and consequently was not subject to review as Out-of-Market), and 2,778 MW of Demand Resources, many of which would likely have been deemed Out-of-Market under the FCM Revision. Taken together, these three categories of supply sum to 4,673 MW, almost the whole of the 4,755 MW of surplus resources cleared in FCA #2, and greater than the surplus Existing Capacity in FCA #3 (net of de-list bids).

Stoddard Test. at 39:3-12 (footnote omitted).

In spite of this substantial surplus, however, FCA #3 saw significant net additions to the capacity base. A total of 37,026 MW cleared the auction, a surplus of 5,061 MW over the Net ICR. Every kilowatt of new Demand Resources treated as "in-market" had as its lead participant either a utility or a state entity. As Mr. Stoddard also observed:

> Considering the 2,796 MW of "new" resources broadly, it appears that only a small fraction are entering in response to FCM price signals. All the Demand Resources are either Out-of-Market or sponsored by a utility or a state and, therefore, may have costs above the avoided capacity payments under FCM. Only 4 MW of the 1,670 MW of new Generating Capacity Resources appear be to truly new, in-market entry, with the remainder being explicitly Out-of-Market, sponsored by a utility or a state, or to be capacity associated with major capital expenses and so qualifying as "new." Finally, under the current rules, imports are treated as new resources. Nearly all of the "new" imports are from Hydro-Québec, which has historically been a significant capacity importer to ISO-NE; in fact, only 817 MW of the 1,397 MW of "new" capacity importers cleared, leaving excess transfer capability on both the New York and New Brunswick interfaces.

Stoddard Test. at 41:3-14.

Over the same period, capacity requirements grew by less than 300 MW annually. *See* Internal Market Monitor Report (ICR for FCAs #1 and #2); *ISO New England Inc.*, Docket No. ER10-186-000, Forward Capacity Results Filing (Oct. 30, 2009) (ICRs for FCA #3).[9] In other words, over a period of three years, an overhang of seven to eight years of requirements growth was built up. Given the large amount of OOM capacity that entered in the first three FCAs, estimated at 2,005 MW by ISO-NE's expert, Ethier Aff. at 10 n.2, and 2,345 MW by its market monitor, Dave LaPlante & Hung-po Chao, Illustration of Proposed Changes to the Alternative Price Rule at 6 (Oct. 23, 2009), http://www.iso-ne.com/committees/comm_wkgrps/othr/fcmwg/mtrls/2009/oct232009/oct23_laplante_pres_fcmwg.pdf, notwithstanding a serious national recession and slowdown in demand growth, there is no indication that the overbuilding of inefficient capacity will slow down. Not surprisingly, this will disproportionally shut demand resources out of the market, because their costs are largely marginal (rather than sunk) and therefore reflected in the bid price. Stoddard Test. at 32:19-33:100. If continued at the present rate, OOM capacity will far outpace capacity demand and—if the current rule set is permitted to remain in place—auction prices will asymptotically approach zero.

One of the malign collateral effects of this OOM supply boom is that it also depresses the administrative calculation of CONE, which in turn allows lower and lower bids to escape any mitigation under the existing definitions of OOM. *See* ISO-NE Tariff § III.13.2.4(b). CONE for FCA #3 formulaically fell to $4.918/kW-month, at least 60 percent below any reasonable estimates of the economic CONE for a new peaking proxy unit in New England and between 37 percent and 46 percent less than the CONE in neighboring markets. *See* Stoddard Test. at 82:3-

[9] While this anemic growth may reflect the recent economic recession, even in the long-run, ISO-NE's expert projects only 290 MW average annual growth in ICR. FCM Revision, Attachment 3, Prepared Testimony of Robert G. Ethier at 10 n.2 ("Ethier Aff.").

83:14; *see infra* Section IV. A consistently falling and depressed CONE serves as a substantial—and likely impassable—road block to new entry by resources that must rely solely on wholesale market revenues. Any price signal for efficient investment in maintenance and upgrades to existing resources, or for investment in efficient new resources, including renewables and demand resources, is suppressed to the point of inaudibility. As a practical matter, competitive merchant entry, unsupported by long-term contracts with net purchasers, is precluded by the high likelihood that market prices will remain suppressed by the unfettered exercise of buyer market power, intentional or unintentional, in the capacity market.

4. *Surplus OOM Capacity Was Created for the Express Purpose of Exercising Buyer Market Power*

As we have explained, the Commission does not delve into actual intent when deciding whether to mitigate suppliers. Nor should it do so when mitigating sellers. In point of fact, however, there is ample evidence that load interests have engaged in a large-scale effort aimed at artificially suppressing capacity prices far below competitive levels.

For example, Connecticut entered into a contracting process with new resources that included *express requirements* on how to bid into the FCM. *See DPUC Review of Peaking Generation Projects*, Docket No. 08-01-01, 2008 Conn. PUC LEXIS 126, at *15 (June 25, 2008) (listing the "effect on the forward capacity market (FCM) price" as first factor in the OCC's evaluation of proposed peakers); *DPUC Review of Energy Independence Act Capacity Contracts*, Docket No. 07-04-24, 2007 Conn. PUC LEXIS 219, at *82-83 (Aug. 22, 2007) ("The Department agrees with the [Office of Consumer Counsel] and finds that Section 3.4(b) of the Master Agreement between Ameresco and UI explicitly requires it to participate in the FCA. This was *driven by the objective of obtaining a New England-wide price impact in the FCA*, which was desirable for the Department in its objective to lower costs for Connecticut ratepayers.") (emphasis added); *id.* at *99 ("There will be a *multiplier effect* for the benefit of ratepayers as a result of the hedge created by these [Contracts for Differences]—even if the contracted capacity is a small portion of the supply meeting Connecticut's requirements, these contracted resources are *expected to lower the market clearing price* and therefore reduce costs to all load.") (emphasis added); *DPUC Investigation of Measures to Reduce Federally Mandated Congestion Charges,* Docket No. 05-07-14PH02, Second Interim Decision, Attach. 4 at 4 (Nov. 16, 2006). These statements confirm the perverse incentives created by the historic APR.[10]

Demand response offers a similar example, as set forth in two reports by Synapse Energy Economics, paid for by numerous load-serving entities, state regulators and entities that administer state energy efficiency programs.[11] While suppliers have long supported demand response participation as an important piece of the overall market design, such participation must occur in a manner that is consistent with the design and structure of competitive markets. The evidence strongly suggests, however, that at least some demand response has, instead, been used as a tool to undermine—not support—the development of competitive markets.

The 2007 Report, which preceded the first FCM auction, begins its discussion by accurately explaining the core design principle of the FCM: "[t]he prices paid to generators [in the FCM] should approximate the cost of new entry, which is assumed to be the fixed costs of a merchant combustion turbine, net of a conservative estimate of profits from energy sales." 2007

[10] As it happened, some of NEPGA's members participated in Connecticut's contracting process. Suppliers cannot bypass a state-sponsored opportunity to add new supply merely because they do not like what it will do to the underlying markets. Competitors will promptly step in to meet the call for new capacity from a credit-worthy buyer. But this does not change the facts that the Historic and February APRs are rife with loopholes that allow OOM supply to suppress prices seen by existing capacity resources. It is these rules that must be fixed.

[11] *See* Rick Hornby *et al*., Avoided Energy Supply Costs in New England: 2007 Final Report, at 1-1 (Jan. 3, 2008), http://www.synapse-energy.com/Downloads/SynapseReport.2007-08.AESC.Avoided-Energy-Supply-Costs-2007.07-019. pdfhttp://www.nationalgridus.com/non_html/eer/ne/2007_NE_AESC_Report.pdf ("2007 Report") (identifying sponsors); Rick Hornby *et al.*, Avoided Energy Supply Costs in New England: 2009 Report, at 1-1 (Oct. 23, 2009), http://www.synapse-energy.com/Downloads/SynapseReport.2009-10.AESC.AESC-Study-2009.09-020.pdf ("2009 Report") (same).

Report at 6-5. Then, however, the 2007 Report sets forth an elaborate plan, full of highly technical analyses, for undermining that design goal, and with it the entire market.

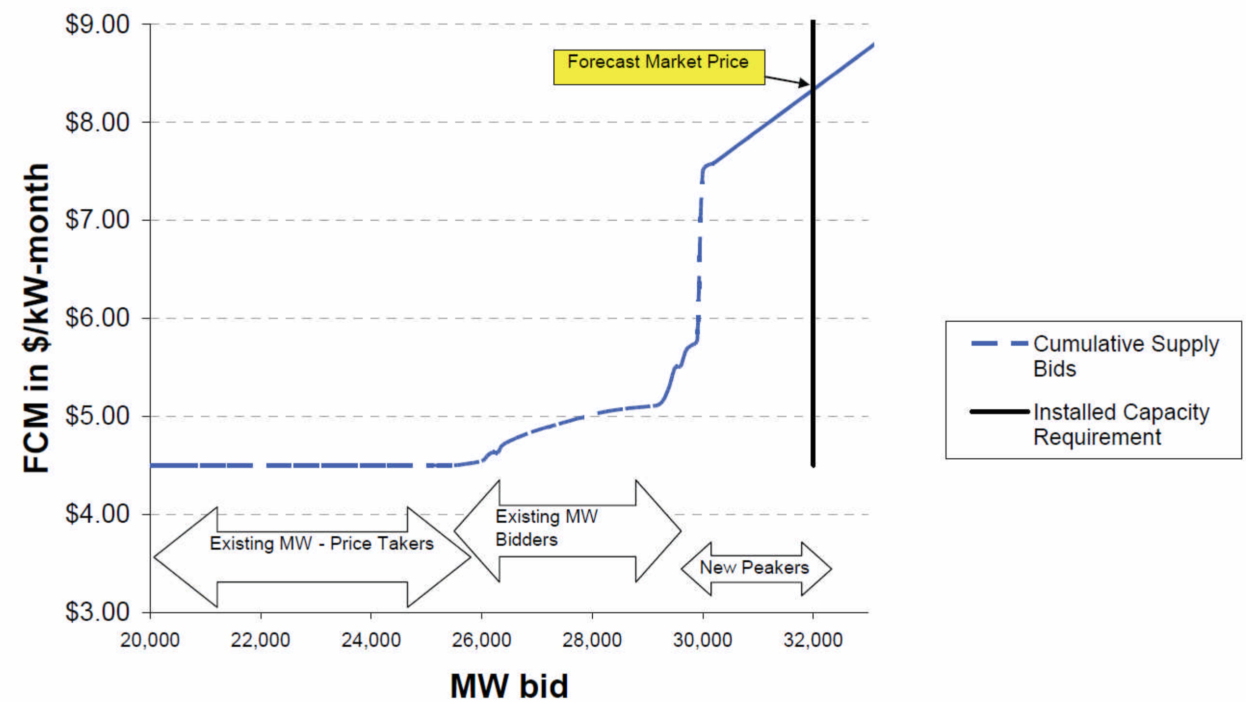
Apparently seeking to ensconce artificial price suppression into the lexicon of organized markets, the 2007 Report actually creates an *acronym*—"DRIPE," or "Demand-Reduction-Induced Price Effects." The report addresses both "Energy DRIPE" and "Capacity DRIPE"; here we focus on Capacity DRIPE, which is the express calculation of the market-wide reduction in capacity price outcomes caused by demand response participating in the FCM. 2007 Report at 6-15 - 6-25.

The 2007 Report goes on to set forth various scenarios, with different levels of price effect and portfolio profit. We are told, for example, that even if demand response reduces auction prices by a very small amount, that effort still can be rewarding. As the 2007 Report explains, "[v]ery small impacts on market prices, when applied to all … capacity being purchased in the market, translate into large absolute dollar amounts." 2007 Report at 6-15.

The report even includes two charts showing how load can use demand reduction to walk down the supply curve to achieve these "large absolute dollar" (*id.*) reductions in capacity payments with relatively small levels of demand response. The first graph shows the FCA price, without any demand response, clearing at the cost of new entry—on the chart, approximately $8.33:

"DRIPE" TABLE 1[12]

Exhibit 6-3. Illustrative FCM Price with No DSM Bids

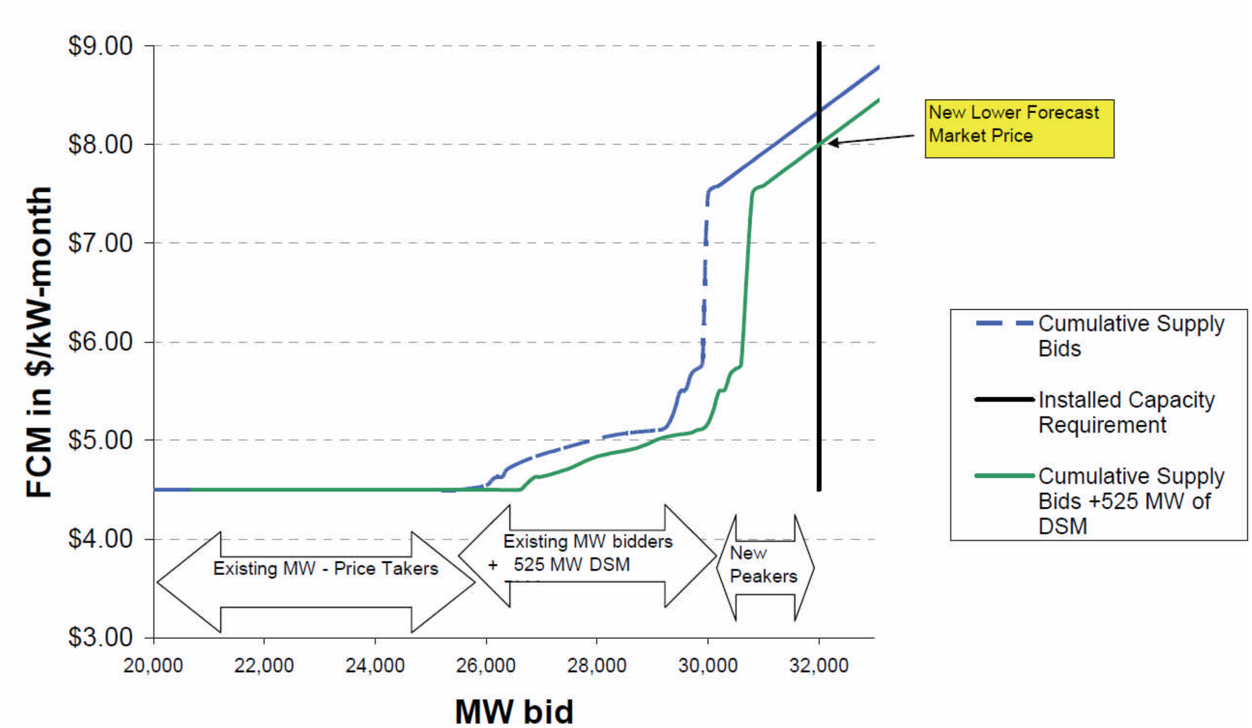


The second chart shows what happens if load injects 525 MW of demand response into the market:

[12] 2007 Report at 6-9, Exh. 6-3.

"DRIPE" TABLE 2[13]

Exhibit 6-12. Illustrative FCM Price with 525 MW of DSM Bids



As the report explains, this has a relatively modest price effect: the 525 MW of assumed demand response reduces the clearing price, in this example, by 25 cents per kW-month.[14] But because this 25-cent drop "would reduce the price of some 33,000 MW of pool-wide capacity requirement[s]," it translates into a projected $99 million annual reduction in capacity payments. 2007 Report at 6-24. According to the report, moreover, the DRIPE—or price suppression—value of this demand response is about $190/kW-year, or $15.83/kW-month.[15] And on top of this, the demand response would earn approximately $8.08/kW-month in capacity payments, 2007 Report at 6-23, for a total "value" of $23.83/kW-month. The implicit point is that load can

[13] 2007 Report at 6-24, Exh. 6-12.

[14] *See* 2007 Report at 6-24 ("each kW of DR would reduce the market-clearing price by an average of $0.0000057/kW-year"). Therefore, $0.0000057/kW-year per kW of DR x 525,000 kW of DR = $3/kW-year of price suppression. And $3/kW-year. ÷ 12 months = $0.25/kW-month.

[15] *See id.* ("total potential DRIPE effect of about $190/kWyear of load reduction"). In addition, $99 million of "Capacity DRIPE" ÷ 525,000 kW of DR = $188.6/kW-year. And $190/kW-yr ÷ 12 months = 15.83/kW-month.

garner net benefits, in this example, as long as it pays less than $23.83/kW-month for demand response. *See* 2007 Report at 6-11 (explaining that DRIPE values created by demand response resources, and capacity payments received by those resources, are additive).

Notably, the 2007 Report gives no attention to the underlying actual cost of demand response. This itself is telling. The focus is never on whether demand response is economic on a stand-alone basis, but rather on whether it satisfies a cost-benefit test that is tied heavily to the alleged "benefits" of price suppression.[16] This raises a large red flag.

In addition, as a simple look at either of these charts show, the portfolio profits magnify greatly if load can walk down the supply curve so that it never hits the "hockey stick" portion reflecting new entry. The report, not surprisingly, makes this very point, expressly stating that "it is possible that in the early years of the FCM the quantity of demand reduction bid by new demand-response and energy-efficiency resources could be so large as to avoid not only new peakers, but also some lower-cost existing capacity." 2007 Report at 6-9.

As a simple look at either chart also shows, if load injects uneconomic demand response into the FCM in sufficient quantities to avoid new entry, and even avoid some existing capacity, the price outcomes would be reduced from approximately $8.25/kW-month to approximately

[16] During the relevant period, the benchmark costs of capacity in the FCM have dropped from $54.00/kW-year in FCA #1 to $43.20/kW-year in FCA #2 to $35.41/kW-year in the most recent FCA#3. *See* ISO-NE, FCM Calendars and Auction Results, http://www.iso-ne.com/markets/othrmkts_data/fcm/cal_results/index.html. Yet at the same time multiple sponsors have offered demand response incentives substantially larger than anything justified by these capacity prices. *See* Public Service of New Hampshire, 2007 Least Cost Integrated Resource Plan, at 58 (Sept. 30, 2007), http://www.puc.nh.gov/Regulatory/CaseFile/2007/07-108/INITIAL%20FILING%20-%20PETITION/07-108%202007-09-28%20PSNH's%20Least%20Cost%20Integated%20Resource%20Plan%20(18).pdf (discussing utility "offer[ing] an incentive payment of $80/kW-year to its customers to participate in the demand response program."). Unsurprisingly, such incentives were justified—not on the basis of the savings at the competitive price—but on the basis of portfolio-wide price suppression, that is, as profitable exercise of market power. *See id.* at 65-66 (measuring benefits of programs on the basis of portfolio-wide "AC" or avoided cost); Cheryl Jenkins et al., Energy Efficiency as a resource in the ISO New England forward capacity market, at 175, 181-82 (2009), http://new.veic.org/Libraries/Resource_Library_Documents/ISO_NewENgland_ECEEE_Jenkins.sflb.ashx (study by Vermont Energy Investment Corporation officials justifying state demand response programs on the basis of capacity price suppression yielding a portfolio benefit of $24 million a month).

$5.00/kW-month, for total portfolio profits of *$1.3 billion*. This is, in a nutshell, reverse hockey-stick reasoning, seeking to strategically inject demand response to avoid the "kink" in the supply curve—effectively withholding demand in amounts designed to maximize the DRIPE, or price-suppression effect.

This is close to what happened in real life. As discussed below, the total amount of demand response that cleared in the FCM completely obviated the need for new entry by generation. But for the floor, the auction would have crashed closer to zero. On its face, the 2007 Report sets out a game plan to artificially distort FCM prices downward, potentially by very large amounts.

The Massachusetts Department of Public Utilities ("Mass DPU") recently confirmed the success realized by this price suppression strategy:

> It is useful to note that DRIPE has recently been demonstrated in practice. Demand resources played a significant role in the 2008 FCM auction, representing roughly two-thirds of the bids awarded, and clearly having a dampening effect on the market price of capacity. … It is clear that the effect is real on wholesale … capacity markets in New England.

In re Energy Efficiency Guidelines Consistent, D.P.U. 08-50, 2008 WL 5725616 (Mass. DPU Aug. 22, 2008). Notably, energy-efficiency programs considered "cost-effective" in light of their capacity price suppression effect are "funded by Massachusetts' ratepayers," *In re Energy Efficiency Guidelines Consistent*, D.P.U. 08-50-A, 2009 WL 762220, *18 (Mass. DPU Mar. 16, 2009). And the Mass DPU has approved performance incentives so that load-serving entities will "aggressively pursue energy-efficiency opportunities," *In re NSTAR Elec. Co.*, DPU 08-117, 2009 WL 1620776, *6 (Mass. DPU May 29, 2009), that achieve the "benefits" of "capacity DRIPE," *id.* at *4.

If a supplier allegedly engages in withholding, it faces serious sanctions, including criminal indictment. *See United States v. Reliant Energy Servs., Inc.*, CR04-0125, Indictment

(N.D. Cal. Apr. 8, 2004). Displaying blindingly sharp contrast, the buyer side of the market apparently has become so desensitized to the governing legal and economic principles that it sees nothing wrong with funding a study to determine what circumstances present profitable opportunities for the exercise of buyer market power, and what levels of profit are available, then broadcasting the results across the internet. If there is better evidence of the need for complete mitigation of buyer-side market power, we cannot imagine what it could be.

* * * * *

We are *not* saying that demand response has no role in the FCM, or that all demand response necessarily is OOM. We are saying that demand response could offer political camouflage for an OOM strategy, and the market design needs to be vigilant in detecting such behavior. If load is allowed to offer demand response that is uneconomic on its face into the capacity market, but offers portfolio profits, it ultimately will destroy the market. And if that happens, load will also destroy legitimate demand response that is seeking to stand on its own two feet and compete on a market basis. These resources, like generators, cannot survive in an environment where scarcity pricing in the energy market is muted by price caps and reliability requirements, and capacity prices are artificially suppressed by buyer market power. If that situation is allowed to endure, legitimate, market-based demand response—as well as all other technologically innovative products that seek to thrive on market forces—will die on the vine. In order to avoid this outcome, all demand response that cleared in prior FCAs should be closely examined to determine whether it should be mitigated as OOM going forward.

C. A Functioning Capacity Market Requires Effective Mitigation That Prevents Offers By OOM Resources From Suppressing the Clearing Price

Having recounted the failure of the Historic and February APRs to restrain the exercise of buyer market power, and before turning to the evaluation of their proposed replacements, it is useful to summarize and justify a few basic requirements for any effective APR: (1) OOM bids must not influence the price paid to existing and competitive resources; (2) OOM resources must be mitigated to prevent such impacts, regardless of claimed intent or type of resource; (3) OOM resources must be mitigated until they become in-market; and (4) OOM resources introduced in the previous FCAs (so-called Historic OOM) must have the mitigation rules prospectively applied to their megawatts in future auctions. We discuss the first three points immediately below. We then discuss the fourth point in the next section of this brief.

It is possible to design an APR that will restrain potential buyer market power as vigorously, and in the same manner, as the current FCM restrains the potential for seller market power. Such an APR would require that any bid up to a wide margin *above* the administrative CONE—meaning any bid that could be expected to set clearing prices unless there is a large capacity shortage—would have to be proven to the satisfaction of the Internal Market Monitor to reflect the full cost of the resource. This is no more onerous than the current FCM's requirement that every bid that is not at least 20 percent *below* CONE must prove that its costs are no lower than the bid. Moreover, an APR that similarly mitigated the exercise of buyer market power as aggressively as the FCM currently mitigates sellers would effectively re-price any bid that fails to meet this test, and assign capacity obligations on the basis of re-priced bids alone, even if this means that some resources do not receive any capacity payments at all. Again, this is the functional equivalent of the current FCM's limitations on withdrawal from the capacity market.

While such an APR would be effective and justified, the requirements we set forth here are much more modest. These functional minimums are just enough to prevent a collapse of the FCM under the weight of unfettered exercise of buyer market power. They impose much more lenient mitigation of buyer market power than is currently the case with respect to seller market power.

1. The Competitive Capacity Price Should Not Be Affected by OOM Capacity

The first basic requirement for an effective APR is that it should insulate capacity prices for existing, competitive capacity from the price-suppression effects of OOM capacity. This requirement is based on two imperatives.

First, in order to eliminate, or even reduce, the exercise of buyer market power, we need to require substantial elimination of the improper incentive to engage in such conduct. The purpose of exercising buyer market power is to reduce the price paid to competitive resources. And the instruments of buyer market power are OOM resources and bids from OOM resources. Effective mitigation needs to sever the link between the two. Otherwise it will be impossible for the market to give suppliers an opportunity to recover competitive prices, averaging the cost of new entry over time. As Mr. Stoddard explains:

> [A] flawed APR opens the door for capacity buyers to engage in actions calculated to suppress capacity prices below a competitive level. Actions that are uneconomic on their own merits, but profitable in the context of the portfolio benefits to the economic actor, are the hallmark of market manipulation. Because a sound market design must minimize the opportunities for price manipulation that moves the market outcome away from its long-run, efficient equilibrium, a sound APR mechanism should be adopted.

Stoddard Test. at 26:8-14. In addition:

> In order to properly correct for the impacts of OOM and restore prices that would have occurred under a competitive outcome, the APR needs to account for all prior OOM, including that from the first three FCAs.

Stoddard Test. at 35:8-10.

Second, we need to ensure that OOM does not warp the proper incentives of competitive resources:

> [T]he APR must effectively remove any incentive for net short entities to add uneconomic capacity in order to artificially suppress the price, while still allowing for entry of new resources that have been secured by market participants under economically efficient contracts.

Stoddard Test. at 14:9-12.

Both of these imperatives are substantively met only by an APR that compensates competitive resources at a price unaffected by OOM bids. This requires prices for competitive resources to be set by an auction from which OOM bids are either entirely barred or in which they enter only in fully mitigated form.

Importantly, this requirement is completely independent of the price, if any, paid to OOM resources. Hence, it may be met by an APR under which OOM resources receive no capacity payments or obligations at all, by an APR that clears all OOM resources and pays them the full price paid to competitive resources, or by any number of conceivable intermediate rules on APR compensation:

> [The] APR mechanism allows these resources to clear even if their actual costs are higher than the FCA clearing price. With a robust APR, however, these offers would not suppress capacity prices for resources below the competitive level (*i.e.*, the level that would have prevailed had all resources been offered at competitive levels)….

Stoddard Test. at 32:5-9.

2. *All OOM Bids Should Be Mitigated Regardless of Intent or Type of Resource*

The second basic requirement for any effective APR is that *any* bid by *any* resource that has the potential to affect the clearing price for competitive resources also must be competitive. In other words, *all* OOM bids need to be either mitigated or excluded from any auctions setting the competitive clearing price. This is the only bright-line test consistent with "Commission precedent requir[ing] bright-line measures or tests to distinguish OOM capacity that should trigger APR mitigation … from capacity that should not trigger such mitigation because it does not inappropriately suppress market-clearing prices below a competitive level." Hearing Order at P 77 (citing *New York Indep. Sys. Operator, Inc.*, 95 FERC ¶ 61,471 at P 2 (2001)).

There is no basis for the hue and cry—sure to arise from some parties—that "OOM capacity introduced for resource adequacy or to satisfy public policy goals, such as the integration of renewable and demand response resources," must be exempted from mitigation. Hearing Order at P 77. To the contrary, multiple, independent and sound reasons militate against privileging so-called "Innocent OOM."

First, our proposal allows all OOM, "innocent" or not, to clear the market. We only mitigate the price-suppression effect of OOM offers. There thus is no penalty imposed on any OOM resources—not to mention "innocent" ones.

Second, the effect an OOM resource has on the FCM does not turn on the intention of its sponsor. A 100-MW OOM resource sponsored with the purest of intentions will distort clearing prices just as much as a 100-MW OOM resource sponsored for the express purpose of price suppression. Similarly, from a social welfare perspective, any subsidy masks but cannot change the true cost of a resource, and the resulting misallocation of capacity obligations is equally harmful, regardless of intent: "[s]ubsidies mask, but do not change, the underlying true cost of new resources and result in discriminatory treatment of existing resources providing the same product or service." Stoddard Test. at 29:6-8. In addition:

> [S]ubsidies are often available to new resources only, leading to a skewing of investment and retirement decisions among resource owners. With such subsidies in place, efficient, cost-effective existing resources may become artificially uneconomic not because of competitive market forces, but because of subsidies beggaring existing resources into penury or exit.

Stoddard Test. at 29:13-17. Because the harm OOM inflicts on the FCM is independent of sponsor intent, mitigation should be too (just as it already is on the seller side).

The 2009 Report by Synapse starkly underscores this point. That report forecasts FCM prices through 2024, assuming that sufficient renewable generation is built to meet current targets (and, of course, assuming no additional OOM mitigation). For the first period covered by these projections, 2013, the report has the price dropping to $1.30/kW-month, then rising slowly to all of $2.10/kW-month by 2024. 2009 Report at 6-13, Exh. 6-5. This is graphic evidence, out of load's own mouth, that the failure to mitigate OOM will keep FCM permanently underwater.

Third, distinguishing between OOM resources intended to suppress market prices, on one hand, and OOM resources which are not, on the other, is a difficult and error-prone task. In the past, as noted *supra* at 28-35, some OOM sponsors have been remarkably candid about their use of subsidized new entrants and demand response to suppress market prices. Such frankness is unlikely to continue if OOM status turns on the sponsor's intention. In that case, admitting the OOM scheme's purpose would frustrate its accomplishment, and sponsors necessarily would become more circumspect.

Fourth, permitting OOM resources of some favored types (such as, for example, renewable or demand response resources) to be presumed innocent, and therefore exempt from mitigation, would eviscerate any effort at buyer market power mitigation. Exempting certain types of resources from OOM mitigation would effectively grant a license to exercise buyer market power using these types of resources. A market participant bent on exercising market power to artificially suppress prices would only need to choose a resource of a type included in the master list exempted from mitigation.

In short, there is no reason to exempt OOM resources from buyer market power mitigation based on the sponsor's intent. Sponsoring uneconomic new entry with malice aforethought and sponsoring uneconomic new entry with full ignorance of the impact of such decision both carry with them the same end result. As discussed at Section II.D, *infra*, states and other sponsors remain free to further their legitimate preferences for specific resources type, regardless of APR. An effective APR will merely prevent the harmful price effects of uncompetitive bids.

3. OOM Resources Should Be Mitigated Until They Become In-Market

A final question with respect to OOM resources is whether a resource, once identified as OOM, should carry that status forward forever, or whether there are circumstances under which a resource would be deemed to have become in-market. The same but-for principle that underlies the criteria also offers a sound answer to this question.

In an adequately mitigated capacity market, existing in-market resources must be permitted to clear at the price that would have resulted if all OOM resources were originally bid competitively. In a forward capacity market, competitive capacity resources (except possibly those relatively rare resources with a construction lead time longer than the forward period of the market) will generally only be built *after* they have tentatively proven themselves economic by clearing in a forward capacity auction. In contrast, OOM resources can and will be built on the basis of their subsidies without regard to whether they have established that they are economic. Hence, the dispositive issue for OOM resources is whether they *would* have cleared in the capacity market if bid at a competitive price consistent with their investment cost. As long as the OOM resource would not have cleared if bid competitively, it would not have been built without a subsidy, and hence must continue to be deemed OOM. And if it would have cleared as new capacity even if bid competitively, it would have been created even without subsidy. From that auction forward, the resource would have existed even in the but-for world without OOM distortion and there is no longer any reason to treat it as OOM or prevent it from competing with other in-market resources at its going-forward cost. *See* Shanker Test. at 45:21-46:6.

An alternative proposed in the FCM Revision, and present in both the February and June APRs, is to deem OOM resources to have become in-market after a fixed number of auctions. Such a rule is arbitrary, likely to be either over- or under-inclusive, and opens up a loophole for the exercise of market power by a persistent or sufficiently large sponsor. For example, a slightly subsidized, nearly economic resource may just barely fail to clear at a competitive price in its first FCA. In its second FCA, the capacity market may have tightened slightly and the resource would have cleared even if bid competitively. At this point there is little justification for continuing to treat the resource as OOM for another five FCAs (as proposed in the February APR). The resource would most likely have been built and exist without any subsidy and therefore should be treated as in-market going forward.

At the other end of the spectrum, a resource may be so massively uneconomic, or there may be such a large overhang of OOM capacity, that even after many years it will never approach clearing at a competitive price. Blessing this resource as in-market based purely on the passage of time lacks any legal or economic foundation. To the contrary, a market participant with buyer market power and a little bit of foresight could plan ahead a few years so that in every auction there is a new vintage of OOM capacity being deemed in-market due to the passage of time. Such a scheme could keep capacity market prices artificially depressed into the indefinite future.

D. Historic OOM Resources Should Be Mitigated

While it has not received the most attention, the most critical issue in this case is how to treat the *future impacts* of *Historic OOM,* in *future auctions,* including the thousands of megawatts of OOM entry that flooded the New England markets in the first three auctions. If Historic OOM is not mitigated in future auctions, nothing else that happens in this case will make any difference whatsoever for 7 to 15 years, or perhaps even longer. ISO-NE and load propose to give all of this Historic OOM *carte blanche* forever. They claim that these OOM resources "relied" upon the rules in effect at the time and that Commission precedent prohibits mitigating OOM resources in future auctions based on rule revisions. Neither of these arguments justifies letting OOM resources continue to undercut capacity market prices for years into the future.

Generators would never be successful in arguing that they should be excused from mitigation forever because there were no price caps when they first entered the market—an exact corollary to load's position here. But the Commission has long rejected such claims. Past auction results are protected, but *future* bids and their market impacts are not. *See New York Indep. Sys. Operator, Inc.*, 92 FERC ¶ 61,073 (2000) (accepting prospective bid cap proposal over objection that it interfered with existing contractual arrangements and expectations), *order on reh'g and clarification*, 97 FERC ¶ 61,154 (2001). The Commission routinely applies new mitigation rules to existing resources, and nothing prevents it from applying new mitigation rules to existing OOM resources here. The law, in fact, demands it. Otherwise the rates at issue here will continue to be unjust, unreasonable and unduly discriminatory.

If Historic OOM is not reflected in future auctions at mitigated prices, the clearing price will immediately drop to near zero—or to a Commission-imposed floor—and will stay there until load growth catches up to the vast OOM surplus. Stoddard Test. at 35:2-36:13. Estimates put that at FCA #10 or later, even without the addition of new OOM resources in upcoming auctions. Stoddard Test. at 44:11-45:8. The duration of prices at near-zero levels or a price floor depends entirely on how much of the Historic OOM is mitigated. If large quantities of Historic OOM are determined to be "innocent," and therefore exempt from mitigation, artificially low prices will continue for a very long time. Indeed, if large classes of OOM are deemed "innocent" and go unmitigated, it is likely that the OOM surplus will only grow over time and never be absorbed.

This does not mean that the essential reforms to APR are somehow irrelevant and can be delayed. It simply means that those reforms will have no effect for a very long time unless Historic OOM is fully mitigated in future auctions, starting now. The APR needs to be fixed *and* Historic OOM needs immediate mitigation. Doing one without the other means the FCM will fail.

1. The Markets Have Been Flooded by Surplus Capacity in the First Three Auctions

Since the onset of the FCM, thousands of megawatts of new entry have come into the New England markets. But this is not a success story. Very little of this new entry has been driven by market forces. Rather, it has been driven by out-of-market payments. Most of this entry has then been bid into the capacity auctions below cost, with the result—intentional or not—of artificially suppressing capacity market prices for all existing resources. It is classic price discrimination. New resources are getting their own set of revenues and existing resources are getting a deflated capacity clearing price.

We described this mass influx of surplus supply above (*see supra* Section II.B.3). New supply has been flooding the market even as the capacity clearing prices remain firmly at the price floor. This level of forced surplus makes no sense, nor is it a sustainable situation over the long term.

And as we also demonstrated above (*see supra* Section II.B.4), this behavior cannot be explained by competitive market forces in the capacity auctions. This is not simply overbuild in the normal course of the business cycle that should prompt retirement of less efficient resources. Something else is driving these decisions to add new supply. The obvious explanation is guaranteed payments outside of the market. Without these OOM revenues, none but the irrational would be over-supplying the market to this degree.

All of this new entry has, moreover, occurred without the APR having ever been triggered. The surplus has quickly grown so large that, even with aggressive assumptions, it will take many years for load growth and retirements to catch up. Most estimates put average annual load growth at between 300-500 MW. Some units will also retire, likely more than would otherwise be efficient given artificially suppressed prices in the capacity auctions. Stoddard Test. at 70:11-71:13.

In short, the unmitigated OOM surplus is a millstone around FCM's neck. And FCM cannot survive indefinitely under water.

2. The Commission Should Require Mitigation of Historic OOM in Future Auctions

Our proposed remedy is simple: mitigate Historic OOM in future auctions until load growth and retirements have caught up to the amount of the surplus. Since it is likely that much of the new entry in the first three auctions was subsidized or otherwise bidding below cost, we also propose a methodology for certifying that new resources were properly classified as in-market or OOM. These steps are required to ensure just and reasonable auction outcomes. And as set forth below, load's arguments about retroactive ratemaking and reliance interests are unavailing.

a. All Resources That Bid Below Cost in the First Three Auctions Should Be Mitigated in Future Auctions

The only just and reasonable outcome in this case is to fully mitigate all OOM entry so it cannot suppress prices going forward. This includes all new entry that was classified as OOM in the auctions run to date. This previously-classified OOM was originally bid into the auction below cost but the Historic APR was never triggered. All of it should automatically be mitigated in future auctions, without further debate. This includes 1,310 MW from FCAs #1 and #2 and an additional 695 MW from FCA #3, for a total of 2,005 MW. *See* Stoddard Test. at 44:14-15.

These 2,005 MW of OOM resources from FCAs #1, #2 and #3 previously were only treated as new resources for, at most, a single year, and then treated as existing every year thereafter. It is unjust and unreasonable to excuse these resources from mitigation in future auctions. Instead, just as we propose above for new resources, they should be mitigated until the surplus has been fully absorbed.

This is not, however, the end of the matter. The rules defining OOM entry were so lax under the Historic APR that vast quantities of new supply were able to bid in below cost into the capacity auctions without being classified as OOM. *See supra* Section II.B. As Mr. Stoddard explains, there are numerous resources that should be classified as OOM but currently are not. Any such resources also suppress prices and should be mitigated in future auctions.

Under the existing tariff, any resource—regardless of its costs and regardless of the magnitude of the subsidies it receives—that was offered at or above 0.75 times CONE has been treated as in-market, rather than as OOM. *See* ISO-NE Tariff § III.13.1.1.2.6. In other words, resources—no matter how uneconomical or heavily subsidized—have been permitted to bid at 0.75 times CONE and hence artificially depress price up to 25 percent below CONE, without any Internal Market Monitor scrutiny. CONE itself is well below the actual cost of building a new unit. *See infra* Section IV. Moreover, even bids beneath the 0.75 times CONE threshold have been designated as in-market by the Internal Market Monitor on the basis of information not subject to public scrutiny and an opaque process. ISO-NE itself has called for greater transparency for the review of future potential OOM bids. *See* Filing Letter at 19-21 (section entitled "Increased Transparency in the Review of Offers below 0.75 times CONE"). Therefore, many bids that are OOM under the ISO-NE's own definition were not subject to OOM designation and the associated, albeit feeble, mitigation under the Historic APR.

The unmitigated new entry that was not previously classified as OOM, but that almost certainly bid below cost into the capacity auctions, falls into two categories: (1) 586 MW of new capacity treated as existing in FCA #1, Stoddard Test. at 36:17-21; and (2) 2,867 MW of demand response (in FCAs #1 and #2). Stoddard Test. at 37:4-7.[17] As noted above, a very substantial amount of demand response cleared in the first three auctions. Approximately half of this amount is composed of utility- or state-sponsored demand response or energy efficiency (*see* Stoddard Test. at 37:7-14, and, as exemplified by the Synapse 2007 Report, was intended to suppress capacity prices. We lack sufficient information about the remainder to determine what its status should be. In our view, however, there is no basis for simply refusing to look.

In order to correctly classify "historic" new entry from the auctions run to date, all such new entry must be evaluated anew under a just and reasonable definition of what constitutes an OOM resource. We described the correct definition above. *See supra* Section II.C.2. This requires a re-examination of the classification of the resource for purposes of determining appropriate mitigation in future auctions. (We demonstrate why this is not retroactive ratemaking in the next section.)

We propose the following methodology: ISO-NE should apply the same OOM test for new resources approved as part of this paper hearing to all new entry from FCAs #1 through #3.

[17] We discuss the difficulty in setting an appropriate benchmark to determine the OOM status of demand response at *infra* at 62. Any such benchmark must take into account all out-of-market subsidies that the DR is receiving. *See ISO New England Inc.*, Protest and Comments of the Boston Gen Companies, Docket No. ER10-787-000, Protest and Comments of the Boston Gen Companies, Attachment A, Affidavit of Miles O. Bidwell (Mar. 15, 2010) ("Bidwell Aff.").

Each new resource that entered the capacity market in FCAs #1, #2 or #3 should certify to the Internal Market Monitor that its original bid did not reflect any funding received outside of the market. Stoddard Test. at 28:3-19. Any resource that received any such OOM revenues will have the burden of justifying its bid to the market monitor. If it cannot justify its bid, it will be reclassified as OOM and its offers in future auctions will be mitigated until the overbuild is exhausted. These are the same standards that should apply to new resources when they bid into the auctions in future years.

There is no valid basis for declining to engage in this additional scrutiny. If there were any colorable concern that ISO-NE's scheme for mitigating supplier market power somehow was failing to detect and mitigate actual market power, historical categorizations or calculations would be irrelevant. ISO-NE would immediately remedy the shortcoming. So too here.

Our proposed methodology also reduces the administrative burden. Each resource will self-certify, subject to audit by the Internal Market Monitor (and, of course, the Commission). The Internal Market Monitor, in turn, can audit such resources at its discretion, so long as some minimum cross-section of self-certifying resources is reviewed. If necessary, the Internal Market Monitor can audit additional resources. Unless a resource can certify that it received no out-of-market revenues, it will be required to either accept OOM status or to demonstrate to the Internal Market Monitor's satisfaction that its bids were at actual cost levels.

We have filed a motion seeking data on all of the new entry in the first three auctions. Our position is that the burden of going forward on this issue has to rest with ISO-NE, because it alone has full access to the relevant data. *See, e.g., Alabama Power Co. v. FPC*, 511 F.2d 383, 391 n.14 (D.C. Cir. 1974) ("It is a familiar rule of evidence that a party having control of information bearing upon a disputed issue may be given the burden of bringing it forward and suffering an adverse inference from failure to do so.”). In no event can we lawfully or fairly be allocated the burden without being given timely access to these data. We now think, however, that a more elegant solution that is less administratively burdensome would be for these resources (1) to face another round of scrutiny regarding whether they are categorized as OOM, and (2) to self-certify that they did not receive any out-of-market revenues when they first cleared in the FCA. We have not withdrawn our motion as of this time, but would do so if the Commission granted this relief.

b. Arguments Against Mitigating Historic OOM in Future Auctions Are Unavailing

Load representatives have raised several arguments attempting to justify letting Historic OOM go unmitigated forever. These arguments are easily refuted. Contrary to load’s apparent belief, just as much damage is done to the markets over the long term when prices are artificially *low* as when they are artificially *high*. Mitigation of buyer market power in future auctions is *required* under the law. We address load’s primary arguments in turn.

First, load claims that mitigating Historic OOM would constitute retroactive ratemaking. But we are not seeking retroactive changes to prior auction results, nor to go back in time to change what resources bid into past auctions. That would be retroactive ratemaking. We are only concerned about how the OOM supply that entered in the first three FCAs will be treated in *future* auctions. That is not retroactive ratemaking.

Rules can always be changed on a prospective basis. Mitigation rules are constantly being changed in competitive markets and applied to future auctions. And that is all that is happening here. *See, e.g.*, *New York Indep. Sys. Operator*, 92 FERC ¶ 61,073.

Second, load claims that it relied on the mitigation rules in effect during the first three auctions, and that changing these rules would harm their reliance interests. But mitigation rules for *prospective* auctions are changed all the time.

For example, less than a year ago, the Commission rejected suppliers' arguments that it would be unjust and unreasonable to change the thresholds for Net Commitment Period Compensation payments without having a phased-in transition mechanism, because earlier bids into the capacity market might have relied on an assumption that the then-current mitigation would continue into the future. *ISO New England Inc.*, 129 FERC ¶ 61,008 at P 20 (2009). As the Commission concluded, "[w]e will not allow market participants to continue to exercise market power during a transition period just because the first and second [FCAs] have already taken place." *Id.* at P 24; *see also Md. Pub. Serv. Comm'n v. PJM Interconnection, L.L.C.*, 123 FERC ¶ 61,169 at PP 40-45, *order on reh'g*, 125 FERC ¶ 61,340 (2008) (revoking earlier, expressly-granted exemption from market power mitigation for generation units of certain vintages, even though certain units were built with an expectation of no mitigation).

Imagine a scenario where you buy a Ferrari so that you can drive 175 mph on the Autobahn. If a 55 mph speed limit is subsequently imposed, you do not have any "right" to continue driving at 175 mph, even if that is the only reason why you bought the car. You adjust your future behavior or suffer the consequences.

This case is no more complicated. Rules change. There is no inherent right to be excused from the changed rules just because you "relied" on the old rules, particularly here when the reliance interest was in suppressing prices—something that we would argue has always been illegal, even if not expressly prohibited in the ISO-NE Tariff.

Here, moreover, being subjected to mitigation is either a neutral or a positive thing—unless the only goal is price suppression. In the typical supplier context, mitigation will, if anything, lower the price the supplier is paid, because mitigation lowers its bids. Here, however, mitigation *increases* the bid levels. But all OOM is allowed to clear, irrespective of the level of its mitigated bids (which may be above the clearing price). Therefore, being mitigated does not remove the OOM resources from the market. And if Historic OOM is paid the higher, mitigated price, mitigation actually *increases* the capacity revenues paid to these resources. If Historic OOM is paid the lower, unmitigated price, based on its actual offers, then it receives exactly the same clearing price that would have existed if we did not impose any new mitigation scheme in the first place.

In the normal course, a capacity resource would either be indifferent, or affirmatively support, this treatment, depending on what price is paid. The *only* reason for Historic OOM to oppose this outcome is if these resources are intentionally seeking to artificially distort auction clearing prices downward, to benefit their net-short position in capacity. When we see load interests object to our proposal, that will, in fact, be an on-the-record display of the intent to continue artificially suppressing capacity prices.

Third, load asserts that the Commission's decision in *New York Independent System Operator*, 122 FERC ¶ 61,211, *order on reh'g*, 124 FERC ¶ 61,301 (2008), *order on reh'g and clarification*, 131 FERC ¶ 61,170 (2010) ("*NYISO*"), requires perpetual "grandfathering" of Historic OOM to excuse Historic OOM from mitigation forever. *NYISO* is distinguishable, and even if it is not, it should not be followed here.

In *NYISO*, the Commission exempted two new OOM units from mitigation in future auctions because applying a new mitigation rule "to units that already exist in the market misses the point of this prospective rule, which is to affect future auctions. Deterrence of [the two new units'] entry, by definition, is no longer possible." *NYISO*, 122 FERC ¶ 61,211 at P 118.

That logic does not transfer to this case. The mitigation of Historic OOM has a much larger role than merely deterring the entry of OOM supply that is already here. It is true that these new entrants' costs are already "sunk" and their decision to build can no longer be affected. *See* Stoddard Test. at 34:11-16. But that is not, and has never been, the main purpose of mitigation. The main purpose of mitigation is to ensure just and reasonable rates in future auctions.

There are several other significant differences between this case and *NYISO*. *See* Shanker Test. at 60:7-20 (distinguishing *NYISO* from ISO-NE's proposal). The mitigation contemplated in *NYISO* would have prevented the two new units in question from clearing in future capacity auctions. They thus would have been deprived of capacity revenues. *See id.* at 60:9-14 ("For NYISO, the proposed mitigation would have resulted in the mitigated units potentially not clearing at all should their 'true' price exceed the market-clearing price. It was in this context that the Commission ruled that it was inappropriate to apply such exclusory mitigation on units that were built and operating ...."). In contrast, the mitigation at issue here does not prevent the mitigated OOM resources from clearing as capacity resources. *See* Stoddard Test. at 36:3-13.

Another distinction is that in *NYISO*, there was no equivalent to the APR at the time the two new In-City units were built. These two units could at least argue that they had no notice that bids below cost would be mitigated. That is not true here. All buyers were on notice that bids below cost were improper and would have to be fully justified. It turned out, however, that the initial APR was so full of loopholes that it failed to trigger in any of the first three auctions. While the Historic APR was ineffective, its existence indisputably put OOM entrants on notice that their conduct was disfavored and should not be allowed to artificially reduce capacity market clearing prices.

Furthermore, in *NYISO*, the Commission found that the capacity clearing prices, even as depressed by the pre-existing OOM supply, resulted in reasonable capacity compensation, *see* 122 FERC ¶ 61,211 at P 119; it thus was deemed sufficient to apply the NYISO APR-equivalent only to future OOM entry. Here that rationale does not obtain because prices would likely fall to zero for many, many years.

In sum, *NYISO* does not stand for the proposition that mitigation rules cannot be changed and applied to existing resources in future auctions. And even if it did, we have shown why our case is distinguishable. But if the Commission were to rule that *NYISO* did apply to the facts of this case, we respectfully submit that it was wrongly decided. There is no rational basis for allowing prior OOM entry to artificially suppress future auction prices.

3. If the Commission Does Not Require Full Mitigation of Historic OOM in Future Auctions, Some Transitional Pricing Mechanism Will Be Essential

If the Commission does not impose an effective remedy here, clearing prices probably will fall close to zero as soon as the price floor is removed, and stay there until the supply surplus is fully absorbed. If only a portion of the Historic OOM is mitigated, the same thing will happen, but for a lesser period of time.

In the event that Historic OOM is not fully mitigated as proposed herein, some transition mechanism will be essential while the overbuild is exhausted. An obvious solution is a price floor, but price floors are notorious for being too low (particularly in a market that is supposed to result in revenues at the true cost of new entry on average and over time) and often "reward" bad actors for their efforts to delay true relief. Still, a price floor is better than capacity clearing prices near zero, which would be a manifestly unjust and unreasonable result.

If a very large overbuild will be around for a very long time, alternative pricing structures should likely be considered, or modifications made to a price floor to reflect the fact that it will be around for a very long time. Demand curves (proposed below) or escalating transition payments (such as during the FCM transition) both come to mind, but both still require some revised treatment of Historic OOM.

Our hope is that we will not need to venture down this path, and that the Commission will instead require the full mitigation of all Historic OOM, including resources properly reclassified as OOM. This, we respectfully submit, is what the Federal Power Act requires.

E. Mitigating OOM Bids Does Not Conflict with State Jurisdiction or Legitimate Objectives

We expect that market participants who have benefited from the downward price distortions in the FCM will object to the June APR, the Demand Curve APR described below, and indeed any APR with the prospect of effectively ending these distortions and bringing the FCM to competitive equilibrium. One banner which these beneficiaries may raise is that much of the OOM capacity covered by the various APRs consists of renewable generation, demand resources, or types of capacity which, while perhaps currently not competitive, may be favored on policy or political grounds. Any effective APR, it will be claimed, interferes with the rights of states to make such choices.

This is a red herring. No APR under discussion here imposes *any requirements whatsoever* on states with respect to their local power supply policy. With or without an APR, states remain perfectly free to permit or not to permit new generation, or to choose some particular type of facility to further other state policy objectives (such as limiting greenhouse gas emissions). Nothing in any APR under consideration will in any way threaten state action on these matters.

The sole effect of any APR is on the *price* of capacity—hence the name "Alternative *Price* Rule." And the price of capacity is a matter undisputedly within the Commission's exclusive jurisdiction under *Conn. Dep't of Pub. Util. Control v. FERC*, 569 F.3d 477 (D.C. Cir. 2009). As the D.C. Circuit there ruled:

> Of course, it is a basic principle of economics that prices affect supply—the auction clearing prices in each sub-region of New England will certainly influence the amount of capacity that generators are willing to supply. Indeed, one of the primary purposes of the new market mechanism is to provide incentives to attract new infrastructure where needed. But an incentive is not a mandate. The mere fact that the Forward Market will encourage new supply does not mean that it regulates facilities used for the generation of electric energy. Rather, the Forward Market is designed to address pricing issues, which fall comfortably within FERC's statutory authority over the sale of electric energy at wholesale in interstate commerce.

Me. Pub. Utils. Comm'n v. FERC, 520 F.3d 464, 479-80 (D.C. Cir. 2008) (internal citations and alterations omitted), *rev'd in part on other grounds sub nom. NRG Power Mktg. v. Me. Pub. Utils. Comm'n*, 130 S. Ct. 693 (2010).

The Commission similarly considered and rejected this same argument when it was used to attack NYISO's In-City ICAP Offer Floor Rule, NYISO Market Services Tariff, Attachment H, at § 4.5(g):

> Because uneconomic entry could produce unjust and unreasonable capacity prices by artificially depressing those prices, and NYISO's proposal provides a reasonable means to deter uneconomic entry in the in-City market, we deny NYPSC's request that the Commission reject the proposed minimum bid requirements for new capacity suppliers. Contrary to NYPSC's claim, we find that granting its request would adversely impact matters within the Commission's jurisdiction—in particular, the establishment of just and reasonable wholesale electric energy rates. Adoption of NYPSC's proposal would lead to artificially depressed capacity prices, thus both causing existing generators to be under-compensated and also directly and adversely impacting the Commission's ability to set just and reasonable rates for capacity sales in the in-City market.
>
> The NYISO's offer floor proposal is an integral part of NYISO's proposal, which the Commission is adopting, needed to "promote long-term reliability while neither over-compensating nor under-compensating generators." The issue before us in this proceeding is not how to meet the resource adequacy requirements of

> New York State, but how prices for capacity in the wholesale markets should be determined in order to remedy identified flaws in the ICAP market. As we have found previously, issues of resource adequacy are important to the Commission in meeting our statutory mandate under the FPA to ensure that the rates, terms and conditions of jurisdictional transmission and sales of electric energy are just, reasonable, and not unduly discriminatory, or preferential.
>
> Further, we find that our action in approving NYISO's minimum bid proposal does not adversely affect NYPSC's regulation of resource adequacy in NYC. This new pricing methodology does not prescribe whether or what types of generation facilities should be built, contrary to NYPSC's concerns. Additionally, as we previously stated, NYISO's measures dealing with the prevention of uneconomic entry is aimed at net buyers of capacity. Thus, there is no interference with New York State's standards for resource adequacy, as this limitation would allow not only more traditional generation, but also renewable resources (for example, those under renewable portfolio standard requirements) and demand resources.

NYISO, 122 FERC ¶ 61,211 at PP 109-12.

In reviewing whether an offer is consistent with the long-run average costs of that resource, net of expected net revenues other than capacity revenues, the Internal Market Monitor considers:

> reductions in costs such as reduced taxes in determining expected net revenues. Expected net revenues considered in this determination shall only include net revenues that are: (i) tradeable throughout the New England Control Area or not restricted to resources within a particular state or other geographic sub-region; and (ii) available to all resources of the same physical type within the New England Control Area, regardless of the resource owner. Expected net revenues shall include economic development incentives that are offered broadly by state or local government and that are not expressly intended to reduce prices in the Forward Capacity Market.

ISO-NE Tariff § III.13.1.1.2.6. Subsidies like Production Tax Credits or Investment Tax Credits, if made widely available to all existing and new resources of a specific technology type within New England, would not be included in determining whether a resource is out of market, because such credits are available to all resources of the same physical type. Thus, the New England region, and/or the Federal Government, would remain free to subsidize preferred types of capacity resources without running any risk of triggering any APR or other OOM mitigation.

In addition, as explained above, our proposal helps legitimate demand response. It makes no sense to pay *more* to demand response to *avoid* buying capacity than one would pay to buy the capacity itself. Hence, any effort to overpay for demand response in order to reduce capacity payments is a red flag signaling out of market activity. This phenomenon will only exist (intentionally) when the goal is to artificially suppress capacity prices.

Pursuing this price suppression goal will harm all capacity suppliers, *including* demand response providers who do not benefit from subsidies and are, instead, attempting to build a business supported by the market. Markets offer the best way for demand response to grow into a thriving force. And artificial price suppression, unless stopped, will cut this growth off at the quick.

Subsidies beget greater subsidies: The more some favored capacity resources are subsidized, the more the clearing price is artificially suppressed. And the more the clearing price is artificially suppressed, the more other favored capacity resources—even those which would have been competitive at the original undistorted price levels—require in the way of subsidies to remain viable. Absent mitigation, there are only two ways this vicious cycle ends: (1) the sponsors run out of money for more subsidies, or (2) the capacity price drops close to zero with all capacity needs provided by fully-subsidized and sponsored resources, shifting the risk of investment back from shareholders to consumers. Unless we seek the wholesale replacement of competitive power markets by central planning, effective mitigation is the only alternative.

In the past, parties with a financial stake in capacity price suppression have also argued that it is essential to maintain the original "balance" of the FCM Settlement, and that any changes to the APR must be balanced by corresponding changes in load's favor elsewhere in FCM. This is nonsensical. The original FCM Settlement included an APR provision that was designed to mitigate buyer market power, to "balance" against scores of provisions mitigating seller market power. That Historic APR, however, turned out upon experience to be too full of loopholes to work. Hence, to restore the intended "balance" of the original FCM settlement in the first place requires an *effective* APR.

F. ISO-NE's June APR is Promising, But Retains Some Fatal Flaws

It is against this backdrop that we evaluate ISO-NE's most recent proposed APR, the June APR offered in draft form by ISO-NE on June 15. Bob Ethier *et al*., Draft Response to FERC Order of April 23, 2010 at 27-42 (June 15, 2010), http://www.iso-ne.com/pubs/pubcomm/pres_spchs/2010/final_prop_fcm_rev6_15_10.pdf ("ISO-NE Presentation"). We expect that ISO-NE will submit a more formal description of its latest proposal contemporaneously with this filing and hope that the concerns expressed here with respect to the draft will have been appropriately addressed. In any case, we will comment further on the finalized version of the June APR in our response brief to be submitted by September 1.

1. ISO-NE's June APR Corrects Key Problems in Earlier APRs

The June APR bases itself on the requirements of the Hearing Order. In particular, the June APR is triggered whenever OOM resources depress price levels, not only under limited circumstances such as when new entry is needed or OOM resources first enter. It also fully adjusts prices to what they would have been in a world without OOM entry, rather than merely making a partial and *de minimis* adjustment. It does this by creating a true "but-for" price for existing resources, based on both legitimate in-market offers, and mitigated offers from OOM resources. In both regards, the June APR conforms to sound economic principles and positively distinguishes itself from the February and Historic APRs. ISO-NE Presentation at 27. Not coincidentally, conformance to sound economics also results in a simpler unitary APR, rather than the complex triune February APR. *See* ISO-NE Presentation at 28.

Under the June APR, whenever OOM resources depress the price of the FCA, a secondary "APR Price" is calculated. *See* ISO-NE Presentation at 29-33. This alternative price is determined by the intersection of (1) a supply curve in which OOM resources are offered at mitigated prices calculated by the Internal Market Monitor and (2) the FCM's regular vertical demand curve. Because OOM resources are mitigated to a higher price for purposes of calculating the APR Price, the resulting APR Price necessarily is higher than the FCA Price.

While the operative distinction between resources for purposes of setting the two prices is in-market or OOM status, for purposes of assigning prices the June APR distinguishes between existing and new resources. New resources, defined as in-market *and* OOM resources within "a specific term of 3 to 5 year[s]" of their first FCA, are cleared up to and paid the lower FCA price. ISO-NE Presentation at 32. Existing resources, defined as those (OOM or not) that no longer are new, are cleared up to and paid the higher APR price. *Id.*

The core of the June APR is well designed. The APR Price is the proper but-for price—that is, the price that would have prevailed if OOM resources had been bid competitively, and existing resources are held fully harmless by being paid that price. Hence it meets the minimum requirements of the Hearing Order as well as basic economics. *See* McAdams Test. at 25:7-18 & n.19.

Some additional features of the June APR might be debated. For example, one could decide to pay new OOM resources the higher, mitigated FCA Price, though this would blunt the disincentive that paying the lower, unmitigated price otherwise would create for the construction of new OOM entry when no new entry is needed.

More serious is the prospective harm suffered by new in-market resources. By denying the but-for APR Price to such resources, competitive entry that would have occurred absent

OOM capacity will instead be severely cut short, or even completely blocked, whenever there is any outstanding OOM capacity. Given current OOM levels, this distortion can be expected to last at least for the better part of a decade, *see* Stoddard Test. at 44:11-45:8, and, if new OOM entry continues, could extend into the indefinite future. But as Prof. McAdams explains:

> [B]ecause new resources are paid a "too-low" price, in-merit resources have relatively weak incentives to enter. However, this may actually be a strength of the June APR. When OOM is *unavoidably* present in the FCM and it causes the supply stack to exceed the cumulative incremental installed capacity needs, it is *efficient* to provide in-merit resources with weaker incentives to participate in the FCM. This may sound paradoxical, so let me explain. Should all participants in the FCM be "efficiently incentivized" to participate by payments equal to the economic price, such incentives will coordinate their behavior so as to maximize social welfare. However, when some market participants—such as OOM resources—have "more-than-efficient" incentives to participate, social welfare is typically maximized by giving other market participants "less-than-efficient" incentive to enter.

McAdams Test. at 24:9-19. Thus, while such a distortion is not to be welcome in any scenario, dashing the not-yet investment-backed expectations of prospective in-market entrants may be a lesser evil than the alternative under which new in-market entry occurs under the APR Price and the OOM surplus is never absorbed into the market.

Certain issues left open by the June APR could have disturbing consequences, which we reserve an opportunity to address more fully in our second brief. For example, the final version "[m]ay set [a] limit to [the] period during which resources get the alternative price." If this means that existing resources permanently revert to "new" status after a number of years, this seems inadvisable. ISO-NE Presentation at 32. If it means that there is an artificial limit on the number of years that OOM will be considered to trigger the APR, it is equally concerning. Given that the proposed lengths of the initial "new resource" period and the "existing resource" period are not yet available, however, we will postpone arguing these issues.

2. The June APR Fails to Offer a Sound Definition of OOM

The most serious defects of the June APR are not in its core mechanism (just described). They are, instead, in its determination of whether a resource is OOM to begin with. This determination is not intrinsic to the core of the June APR auction mechanism, but can nevertheless distort outcomes, preventing effective mitigation. Unfortunately, the OOM determination contained in the June APR contains several such flaws, each of which will prevent effective mitigation of buyer market power and achievement of competitive rates. Unless these flaws are substantially corrected, we cannot endorse the June APR and urge the Commission to revise it as discussed below.

The June APR creates a new standard for OOM determinations based on a "Benchmark Offer [which] is what a resource would offer into the capacity market so that the resource would break even over the project life, after accounting for revenues from other wholesale electricity markets." ISO-NE Presentation at 36. "Benchmark Offers will be calculated by resource type for different types of generation and demand resources." *Id.* "Resources with unsupported offers below .8*Benchmark will be declared out of market and put into the APR calculation at .9*Benchmark." *Id.*

This OOM determination is a substantial improvement over the parallel aspects of the Historic and February APRs because it is tied to an estimate of the costs of a resource of the same type, rather than CONE. Such a type-based determination is likely to be far more accurate. Costly and inefficient types of resources will no longer be exempt from mitigation because they are bid in the vicinity of CONE, which is designed to reflect the cost of new entry by the *least expensive* available new resource. At the same time, any novel, cheap, and efficient type of resources which may arise will be able to bid close to its costs without having to justify itself to the Internal Market Monitor on a case-by-base basis.

Notwithstanding this, the new OOM determination still contains several flaws and loopholes that will prevent the June APR from effectively mitigating buyer market power. We have already addressed the Historic OOM issue. In addition, the issue of "OOM Evasion" remains:

> Under the June APR, a resource is designated as OOM when (a) its bid is less than 0.8 times the Benchmark Offer for that resource (what I will call its "OOM threshold") for that resource (see pg 36 of ISO-NE Presentation) and (b) this bid is not appropriately justified to the market monitor ahead of the auction, or when its delist bid is rejected for reliability reasons. Thus, a "truly OOM" resource whose economic cost is less than its OOM threshold could in principle avoid being designated as OOM by bidding its OOM threshold, instead of bidding its economic cost.

McAdams Test. at 27:10-16. Just as under the prior APRs, bidders with buyer market power might wish to engage in OOM Evasion. *See* McAdams Test. at 27:19-28:11. This problem, while ameliorated compared to the earlier APRs, remains serious and real. *See* McAdams Test. at 28:13-18.

Furthermore, the benchmark approach chosen to judge whether a resource is deemed to be OOM, while potentially effective with respect to generation resource, may not appropriately deal with demand response resources. For generation resources, almost all or all costs will be actual expenditures on such traditional items as real estate, construction, operations, maintenance, and fuel. A generation resource must be built and will in most cases consume fuel. And such costs are likely to be the same or similar within each type of generation resource, it is possible to establish price benchmarks for each type against which the bids of individual resources can be measured. Moreover, because these costs represent actual expenditures, each individual resource will by necessity create an objective audit record which the Internal Market Monitor can obtain and use to determine whether bids outside the benchmark ranges are justified.

Neither of these conditions obtain for demand response resources. Such resources will generally only have relatively small fixed and virtually no variable costs reflected in actual expenditures. A demand response resource requires only a one-time investment in metering equipment and, whenever the resource is dispatched, the cessation of power consumption which involves no expenditure at all (unless it is really a generator located behind the meter for which costs can be determined with reference to actual expenditures).[18] Rather, the principal costs of almost all demand response resources are opportunity costs (*i.e.*, the profits foregone by the demand responder due to the curtailment). *See, e.g.*, ISO-NE Tariff §§ III.13.1.2.3.2.1.1, III.13.1.2.3.2.1.3 (properly recognizing that the relevant costs include opportunity costs). Foregone profits, however, vary vastly even between superficially similar demand responders—think of such potential demand responders as the trading floors of two neighboring financial institutions, one barely breaking even, the other extremely profitable. This will in most cases render demand response resource cost benchmarks meaningless.

Moreover, foregone profits or opportunity costs, in contrast to actual expenditures, leave no audit record, making case-by-case determination by the Internal Market Monitor that much more difficult. In combination, these problems mean that for the Internal Market Monitor to find that a given demand response resource is offered below a proper measure of cost, it could not rely on any benchmark or financial records but would have to establish that the resource, if dispatched, would forego an undisclosed, additional profit opportunity in an industry in which the Internal Market Monitor has no special expertise. This task is difficult, drawing into question the June APR's approach to mitigation of OOM demand response capacity.

[18] This discussion treats the actually curtailed consumer as the "demand responder." That in practice there may be an intermediary or aggregator which collects the demand response payments from the capacity market and then distributes some of them to the curtailed consumer complicates the discussion, but does not change the basic economics. The principal part of the economic cost of the curtailment remains the opportunity cost of the curtailed entity.

In addition to the basic problems of benchmarking and auditing the principal part of a demand response resource's costs, the OOM definition attendant to the Historic and February APR also substantially underestimated even the measurable costs of demand response resources. *See* Bidwell Aff. at 36-42. As a consequence, as much as 2,500 MW of demand response—half of the total capacity surplus in FCM—were misclassified as in-market, rather than OOM. *Id.* at 42. The draft of the June APR gives no indication that these errors of the earlier definitions have been considered or corrected. Unless they are corrected in the final version of the June APR, these demand response issues alone could be sufficient to prevent just and reasonable capacity rates.

G. A Demand Curve APR Offers a Safer, More Effective Method of Curbing Market Power

While ISO-NE's June APR could result in just and reasonable rates if the problems discussed above are appropriately addressed, the threat of these problems, as well as yet unforeseen problems to all capacity price mechanisms based on a vertical demand curve—including the June APR—merits consideration of the alternative adopted by ISO-NE's peers.

1. The FCM's Vertical "Demand Curve" Magnifies the Effects of Market Power and Administrative Imperfections

The harmful exercise of market power can be reduced or eliminated by (1) curbing discretion in bidding and (2) limiting the effect of bids on the clearing prices. The Historic APR and the February APR rely exclusively on the former. That is also the principal means of protecting competitive clearing prices in the June APR (with or without the enhancements argued for above), though one of its signal virtues is that it also prevents OOM capacity bids—*if* correctly identified—from affecting the clearing price for existing non-OOM capacity. To be sure, a market participant whose bids are set at *perfectly* competitive levels by the Internal Market Monitor's mitigation levels or cost-review would not be able to use those bids to exercise market power or distort clearing prices. But given that perfect mitigation is hard to come by, sound market design should be robust to errors in mitigation.

The current FCM design fails this robustness design criterion. Capacity obligations are allocated on the basis of a descending clock auction which, in all but the most extreme and unprecedented circumstances, will procure only a set quantity of capacity, the Installed Capacity Requirement ("ICR"), and—regardless of offers—not a single MW more. ISO-NE Tariff § III.13.2.2. In terms of standard microeconomics, the FCM has an infinitely steep, vertical demand curve at quantity of ICR. The effect is that the capacity clearing price is set by the bid (mitigated or not) of a single MW of capacity—that of the marginal resource at ICR. If this bid is not competitive, either because of an unmitigated attempt to exercise market power or because of imperfect mitigation, that distortion can drastically affect the clearing price paid to all other resources. Under the FCM's vertical demand curve, a small error in cost estimates for a 1 MW resource, involving only comparatively trivial sums could dramatically affect the clearing price if that resource happens to be marginal, and shift total annual capacity payments by hundreds of millions of dollars. In short, a vertical demand curve is among the worst market design choices with respect to both suppressing market power and susceptibility to administrative error.

2. *A Genuine, Sloped Demand Curve Would Elegantly, Transparently, and Effectively Ameliorate Most Valid Concerns*

In the event that the Commission does not fully reform the APR as outlined in this pleading, we propose that the FCM adopt the only alternative to a vertical demand curve, that is, a genuine or sloped demand curve. While the addition of a genuine demand curve may be controversial with some parties to this proceeding, it is a plain and simple fact that this proposal provides the most elegant and simple solution to the price formation and mitigation problems at issue in this hearing. This is the capacity market design that ISO-NE originally proposed, and the design that has been adopted by ISO-NE's regional peers, NYISO and PJM, helping them avoid or ameliorate some of the problems at issue in this hearing. At this point in the evolution of capacity market design, we are hard pressed to find any valid reason not to adopt a sloped demand curve.

First, the adoption of a demand curve need not interfere with the signature feature of the FCM, the descending clock auction. The descending clock auction is a public process that avoids the requirement of sealed capacity bids. Currently, the auction opens at the ceiling price for capacity. As the auction continues, the price gradually descends and resources are withdrawn. When the amount of offered resources has dropped to the ICR, the auction stops and sets the clearing price. This process is easily adapted to a sloped demand curve: The auction would open at the ceiling price for capacity *and* the minimum quantity required. As the auction continues, the price would gradually decrease and the quantity would gradually increase. The auction would stop, setting the clearing price, when the amount of resources offered matches the current quantity. A descending clock auction thus can implement a demand curve with only the slightest additional burden on the auctioneer, and no additional burden on competitive participants, who need only, as before, consider the current auction price to decide whether to withdraw.

Second, the sole argument usually raised in defense of a vertical demand curve—that only a vertical demand curve can assure that the amount of capacity procured *exactly* matches the ICR—should carry little weight. Even a gently sloped demand curve could insure that the amount of capacity procured approximates the ICR *and* that in the long-run the average amount of capacity equals the ICR. That is all that can be asked of a reasonable capacity procurement mechanism. There is no unique benefit in procuring exactly ICR and not a MW more or less:

slightly more capacity means slightly greater reliability, slightly less capacity means slightly lower reliability. The ICR itself is hardly a fact of nature. It is an administrative forecast of requirements three or more years into the future, involving subjective elements and subject to at least small error. While a useful target to aim at, ICR is not a pronouncement from Mount Sinai, any small deviation from which could result in dreadful and immediate consequence and hence must be obeyed to the MW—as only a vertical demand curve can insure.

Moreover, load interests should not now be heard to argue that any FCM procurement of capacity greater than ICR, even slightly, would condemn rate-payers to paying for unnecessary and useless capacity. After all, these same parties have furiously sponsored new entry into the capacity markets, pushing supply higher and higher above ICR, and justified the extra capacity as a boon to reliability,

Third, a demand curve is not an entirely novel idea within the FCM. Rather, it is a feature of the FCM under both the current and the proposed tariffs. The quantity rule, which defers purchases to replace high-priced de-listing capacity from the FCA to a reconfiguration auction, ISO-NE Tariff § III.13.2.5.2.1, is an example of a demand curve under another name. *See* Stoddard Test. at 96:17-97:3. So is the capacity procurement under the third prong of the February APR. ISO-NE Tariff § III.13.2.7.8.3.2. Even the June APR, like a demand curve, procures an amount of capacity which varies depending on capacity offers but will almost always be greater than the ICR. All of these provisions demonstrate that procuring exactly ICR is not a sacrosanct requirement and all of them could be replaced by a single, broadly applied demand curve, ensuring consistency and simplifying the tariff. *See* Stoddard Test. at 47:15-49:6.

Fourth, other troublesome or overly complicated features of the FCM, introduced to compensate for problems caused by the vertical demand curve, also could be eliminated or scaled down if a sloped demand curve was broadly applied. For example, sloped demand curves would allow separation of zones when the supply/demand balance or costs diverge without relying on higher offer prices from resources in a constrained import zone. *See* Stoddard Test. at 48:23-49:3. Another example is the FCM provision of multi-year price commitment for new entrants, which is regarded as important in enabling market-based entry, but which at the same time biases downward the clearing price below the reasonable rate required for investors facing year-to-year price volatility. *See* Stoddard Test. at 47:3-14. With a demand curve, this bias can be removed, opening the door to a longer price-commitment period, which some have suggested is necessary to foster market-based entry. A Demand Curve APR may even eliminate the need for bifurcated pricing when only small or moderate amounts of OOM capacity are present.

Finally, there is a ready model for the Demand Curve APR: the LICAP demand curve. The LICAP demand curve was fully litigated and approved by the Presiding ALJ. *See* FCM Settlement at 37-39. While some circumstances have changed, and our learning about capacity markets has advanced since then, the basic concept and most of its parameters remain sound. While it does not fully resolve *all* the concerns with OOM capacity, zonal pricing and CONE discussed herein, it would ease their impact and put full solutions within reach. Unless these concerns are fully and completely addressed by adjustments to the June APR, a Demand Curve APR based on the LICAP demand curve is an adequate basis for building a just and reasonable FCM tariff.

III. CHANGES TO ZONES

OOM entry is not the only problem with the FCM. A second broad area where the FCM is deficient is in setting *locational* prices. As the Commission found in the Hearing Order:

> The Commission believes that it is important to model zones wherever possible to set appropriate locational prices. We have cited the need for locational pricing in New England for many years, noting that its absence in the Installed Capacity

> (ICAP) market (the predecessor to the FCM) was a significant flaw since "location is an important aspect of ensuring optimal investment in resources." The FCM incorporates locational pricing, but through three FCAs, zonal price separation has yet to occur despite the rejection of de-list bids for reliability in the first and third FCAs.

Hearing Order at P 134 (citing *New England Power Pool*, 100 FERC ¶ 61,287 at 62,278 (2002)); *see also* Stoddard Test. at 57:5-58:7 (discussing the failure of FCM to result in locational prices); *id.* at 60:1-16 (same); Shanker Test. at 26:10-27:12 (explaining the necessity for locational pricing). In short, there is a bust in the design.

In February, ISO-NE and NEPOOL proposed limited modifications intended to improve the modeling of capacity zones. These changes included, among other things, a rule permitting additional types of de-list bids to be considered in setting price, which the Commission accepted, finding that it "represent[ed] a good first step." Hearing Order at P 135. But ISO-NE and NEPOOL still did not permit the bids most likely to set locational prices to actually set price, and the other changes likewise fell short. Most significantly, ISO-NE and NEPOOL did not propose to always model zones.

In response, the Commission found that "as noted by the generator parties, even if the proposed Rule Changes on this issue were in place at the time of [earlier auctions], no zonal price separation would have occurred." *Id.* at P 134. The proposed rule changes accepted for FCA #4 would not have solved the problem.

The Commission thus invited comments on whether to always model zones and whether doing so would require changes to current seller mitigation rules. *Id.* at P 135. We support always modeling zones and permitting additional mitigated dynamic de-list bids to set price, as detailed below.

In its June 15, 2010 Presentation, ISO-NE announced that it would propose a mechanism for modeling all zones in its July 1 filing in this docket. It also discussed a new mitigation regime for de-list bids, although many details are yet to be worked out. We address ISO-NE's June proposal with our discussion of our own proposal below, but first we turn to the flaws with the locational rules, both the historic rules and the rules as modified by the Hearing Order.

A. The Modeling and Mitigation Rules Do Not Permit Locational Pricing

1. The FCM Has Failed to Permit Locational Pricing

Under the FCM as it exists to date, ISO-NE does not model a zone unless new entry is required. *See* Stoddard Test. at 58:8-59:6; *see also id*. at 66:9-67:17. This precludes de-list bids from ever setting price in zones. *See* Stoddard Test. at 58:11-14 ("As it stands currently, even if ISO-NE is put on notice through a Non-Price Retirement Request or a Permanent De-List Bid that a capacity resource in a Capacity Zone is likely to retire, and even if that retirement would cause the stock of Existing Capacity in that zone to fall below the LSR, ISO-NE cannot model the zone in the FCA."). There often is not a demonstrated need for new entry before the auctions are run, and as experience has shown, reliability concerns can exist even when new entry is deemed unnecessary on a system-wide basis.

In FCA #1, ISO-NE rejected 330 MW of dynamic de-list bids in Connecticut for reliability reasons. The de-list bids were submitted by NRG Power Marketing LLC ("NRG") for the Norwalk Harbor Unit 1 and Norwalk Harbor Unit 2, representing 162 MW and 168 MW of Summer Qualified Capacity, respectively. *ISO New England Inc.*, Docket No. ER08-633-000, Forward Capacity Auction Results Filing at 11-12 (Mar. 3, 2008). Connecticut was not modeled as a separate zone, however, and thus Connecticut's capacity clearing price remained the same as the rest of New England. These units therefore will be paid outside of the market (if not released from their capacity obligations pursuant to a subsequent reliability review, no later than one year prior to the start of the affected capacity commitment period).

In FCA #3, ISO-NE reported to the Commission "that Salem Harbor 3 and 4 represent approximately 581 MW and will be retained to ensure the reliable operation of the New England power system (both to meet transmission security requirements and to avoid thermal overloads on the transmission system) in Northeast Massachusetts/Boston (NEMA/Boston), an area with limited capacity resources."[19] Here again, NEMA/Boston was not modeled as a separate zone, and the capacity clearing price remained the same as "Rest of New England." These units will be paid outside of the market (if not released from their capacity obligations) and will suppress payments to other suppliers.

In short, FCM has been locational in name only. There has been essentially no price separation in any auction. This may be expected in conditions of surplus, *if* all localized reliability needs can be met by the surplus. But that has not happened under FCM. Localized reliability needs remain and have required out-of-market actions, notwithstanding the surplus, and yet the rules currently in place have prevented zonal separation from occurring.

2. The Modeling and Mitigation Rules Accepted for FCA #4 Will Not Permit Locational Pricing

In their February filing, ISO-NE and NEPOOL proposed a handful of tariff clarifications and changes designed to improve the initial modeling of zones, ISO-NE Tariff § III.12.4(c)-(f), but these steps fell far short of the most obvious solution of simply modeling zones at all times.[20] ISO-NE and NEPOOL did propose to increase some of the types of bids that can be considered

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[19] *ISO New England Inc.*, 130 FERC ¶ 61,145 at P 5 (2010); *see also ISO New England Inc.*, Docket No. ER10-186-000, Forward Capacity Auction Results Filing at 9-10 (Oct. 30, 2009) (ISO-NE "rejected the Salem Harbor 3 and 4 de-list bids for reliability reasons because to allow the resources to leave the market would have resulted in a violation of NERC or NPCC criteria, or the ISO's criteria."). *See also* Stoddard Test. at 38:4-41:14 (summarizing results of FCA #3).

[20] ISO-NE's February proposal included one helpful new rule, which we endorsed and the Commission accepted, to calculate the Locational Sourcing Requirement for an import-constrained zone as the amount of capacity needed to satisfy the higher of the local resource adequacy requirement or the transmission security requirement. *See* Hearing Order at P 108. Here again, however, this rule change would not have solved the pricing problems in FCA #1 and FCA #3.

in the formation of zones during an FCA. Specifically, they proposed to "allow[] Non-Price Retirement Requests, Permanent De-List Bids, Static De-List Bids from non-Pivotal Suppliers, Export Bids from non-Pivotal Suppliers, and Administrative Export De-List Bids from non-Pivotal Suppliers, to be considered in the modeling." Filing Letter at 29. Static De-List Bids from "pivotal" suppliers and all Dynamic De-List Bids were excluded. ISO-NE and NEPOOL also proposed a new "pivotal supplier" test, but that test excluded consideration of newly qualified resources when measuring whether a resource would be pivotal.

As found by the Commission, "even if the proposed Rule Changes on this issue were in place at the time of these two auctions [FCA #1 and FCA #3], no zonal price separation would have occurred." Hearing Order at P 134. As Mr. Stoddard testifies:

> Even if the FCM Revision had been in effect for all prior FCAs, there would have been no zonal price separation. In FCA #1, the Norwalk Harbor bids would not have triggered the modeling of a Connecticut capacity zone because they were Dynamic De-List Bids. In FCA #3, the Salem Harbor bids would not have triggered the modeling of a NEMA/Boston zone because those resources were not needed to meet that zone's LSR. If this market is to have economically efficient zonal pricing, the FCM rules must now move to model all relevant zones, all the time.

Stoddard Test. at 60:18-61:2.

In the Hearing Order, the Commission did permit these rule changes to go into effect for FCA #4, but asked for evidence on the issue of whether all zones should be modeled. Given concerns that some parties had about market power issues as zones get smaller, the Commission also sought evidence on whether additional mitigation measures would be necessary if all zones were modeled.

B. All Zones Should Be Modeled Before Each Auction

We fully support the simple and straightforward proposition that all zones should be modeled before each auction. *See* Stoddard Test. at 59:7-19, 61:3-15. This is the first and most obvious step to permitting price separation in all circumstances when price separation should occur. *See* Shanker Test. at 69:3-71:7 (concurring with the Commission's Hearing Order at PP 134-35 and explaining that this proposition is "obvious"). Assuming market power is mitigated (which we address below), there is no downside to modeling each zone before the auction. There are no reliability risks. And of course, if a zonal constraint does not bind, there will be no price separation. It is that simple.

The current tariff rule—to only model a zone when there is a need for new capacity—is too narrow. As the Commission found:

> [Z]onal price separation could be justified even if new capacity is not needed. For example, the marginal cost of retaining sufficient existing capacity in a particular zone could be higher than in the rest of New England. In this situation, higher prices would be justified inside the zone to retain this capacity since, otherwise, the marginal resource would want to retire, leaving the zone with insufficient capacity.

Hearing Order at P 131. As Mr. Stoddard explains, the failure to model zones also means that the "intrinsically higher resource costs" in more congested areas cannot be reflected in price "except when the zone is absolutely short of capacity." *See* Stoddard Test. at 59:1-6. Ultimately, the failure to model zones makes it far more likely that there will be a need for payments outside of the markets. *See* Stoddard Test. at 68:5-13 (discussing PJM experience with similar modeling problem); *see also* Shanker Test. at 52:18-20 ("By failing to implement certain constraints in the FCA, the auction is effectively being run to solve for the quantity of capacity supply and associated prices for the wrong problem.").

Finally, as Mr. Stoddard states, no one has offered any defensible reason why zones should not always be modeled. The proffered reasons usually boil down to concerns about higher prices and the exercise of market power. But providing a market signal that reflects the higher cost of solving local reliability problems is the *objective* of locational pricing. The fact that creating smaller zones with locational prices is a political hot potato is insufficient justification for failing to model zones. And the exercise of market power is already prevented by a host of other laws, regulations, rules, monitoring and mitigation. If market power is a legitimate concern, the mitigation rules should be looked into. The solution cannot be to fail to model zones.

According to its June presentation, ISO-NE plans to propose to always model zones. It proposes to expand the zones to be modeled from the current four zones (Connecticut, NEMA/Boston, Maine and Rest of Pool) to the eight zones used in the energy market (adding the zones Rhode Island, Western Mass, Southern Mass, Vermont and New Hampshire, while eliminating the Rest of Pool zone). *See* Stoddard Test. at 72:3-19. ISO-NE will retain the descending clock auction to establish a supply curve, but also plans to revise the clearing engine to accommodate the model configuration, most likely using an LMP model like the one used in PJM.

ISO-NE also states that it will develop criteria for determining when to model additional zones in the future. We will wait to see the details that ISO-NE has in mind for developing these criteria, but we strongly caution against any process that gives stakeholders decision-making authority to determine when to add zones. *See* Stoddard Test. at 8:8-11 ("Nor should the question of whether a new zone will be created be subject to stakeholder vote; while stakeholders should review the methodology and assumptions used by the ISO to establish zones, determination of zones should be driven by data and analysis, not politics."). Too many stakeholders oppose locational pricing, and the higher local prices that creating a new zone may entail, to permit stakeholders any significant role in such a process. Instead, a standard distribution factor (DFAX) analysis should be utilized, wholly under the direction of a party without any financial stake in the outcome (like ISO-NE). *See generally* Stoddard Test. at 61:3-15, 64:1-19 (identifying appropriate considerations for modeling zones).

Subject to reviewing the details of ISO-NE's proposal in its July 1 filing, this proposal appears to be an appropriate move to the better modeling of zones. There are questions to be answered, such as whether the capacity zones will always be aligned with energy zones, Stoddard Test. at 65:7-66:8, and what happens if de-list bids are again rejected for reliability reasons without any locational price differences.[21] The Commission, ISO-NE and NEPOOL have all already noted that resolution of the pricing impacts of rejected de-list bids is critical in the FCM.[22] We anticipate that ISO-NE will likely provide these and other details in its July 1 filing, and we will respond once we see them.

There is, however, one significant problem with ISO-NE's plans. ISO-NE couples its proposal to always model zones with a greatly expanded and problematic mitigation regime that appears to go far beyond what is needed to mitigate market power in small zones. We discuss the mitigation rules in the next section.

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[21] In subsequent auction(s), the constraint leading to the rejected de-list bid should be expressly modeled to avoid additional payments outside of the market and to permit locational pricing. Stoddard Test. at 60-14-16; *id*. at 68:14-69:14, 74:17-75:3 ("In the unlikely event that a transmission constraint is encountered that is not captured by the predetermined zones, it should be modeled in all future auctions, limiting the need for out-of-merit payments to that one auction. Otherwise, as overall supply conditions tighten, we will likely continue to end up with units' de-list bids being rejected, resulting in above-market payments to generators and unhedgeable "uplift" costs to serve load. Avoiding these Reliability Must Run issues was precisely why the Commission found that ISO-NE must be started down the path of fundamental reforms in *Devon*.").

[22] *See ISO New England Inc.*, Docket Nos. ER07-546-000 and ER07-547-000, Filing Containing Revisions to Market Rules Implementing FCM Settlement Agreement at 20 (Feb. 15, 2007) ("[S]takeholders are concerned that [treating de-list bids rejected for reliability as zero price] could inappropriately depress the FCA clearing price. A proposal has been put forth that they be treated as Out-of-Market Capacity, which could result in the application of the Alternative Capacity Price Rule. . . . While the ISO's initial review of this proposal is favorable, the proposal was advanced too late in the stakeholder process to receive a full evaluation. "); *ISO New England Inc.*, 120 FERC ¶ 61,190 at PP 11-12 (2007) ("it is essential to market certainty to know the effect of . . . de-list bid[s rejected for reliability] on the market clearing price. . . . It is therefore critical that ISO-NE meet the May 15, 2008 deadline" to resolve the issue.); Peter Cramton, Memorandum to ISO-NE Markets Committee, Why Counting Rejected De-Lists as Out of Market Capacity Benefits Rate Payers (Apr. 26, 2007), http://www.iso-ne.com/committees/comm_wkgrps/mrkts_comm/mrkts/mtrls/2007/apr242007/a2_cramton_memo_04_26_07.doc.

C. Additional De-List Bids Should Be Considered in the Formation of Capacity Zone Prices, and Only Entities with Market Power Should Be Subject to Mitigation

The Commission also sought evidence on whether changes to the mitigation rules would be necessary if zones were always modeled.[23] If, after weighing all of the evidence in this proceeding, the Commission determines that changes are appropriate, NEPGA offers the following for consideration. Consistent with Commission policy, the exercise of both buyer and seller market power should be mitigated, but that mitigation should be narrowly targeted to only those resources with the ability to exercise market power.[24] Overly expansive rules that mitigate too many too often will prevent efficient locational pricing just as surely as failing to always model zones. *See* Shanker Test. at 56:17-58:2.

With these principles in mind, the Commission might consider the following changes to the mitigation rules it accepted for FCA #4 if it determines that further changes are needed beyond the current mitigation of sellers in FCM: (1) the "pivotal" supplier test should take newly qualified resources into account and include other minimum thresholds; (2) all Static De-List Bids[25] are already mitigated and should be considered in setting price; and (3) non-pivotal

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[23] Hearing Order at P 135 ("Rather, we note that all parties have raised valid concerns on this issue, including whether the current mitigation rules are adequate to model zones at all times, whether all de-list bid types should be allowed to set a zonal price (*i.e.*, whether a "pivotal supplier" test is necessary, and whether it should have a market share threshold), and what, if any, corresponding revisions to the current mitigation rules are necessary.").

[24] *See, e.g.*, *Edison Mission Energy*, 394 F.3d at 968-70 (describing "Commission's contradiction of its prior rulings acknowledging the potential ill effects of forcing down prices absent structural market distortions [and yet still imposing seller market power mitigation as] the epitome of agency capriciousness"); *Midwest Indep. Transmission Sys. Operator*, 111 FERC ¶ 61,043 at P 78 (noting appellate court's "concerns with mitigation plans that mitigate workably competitive markets, suppress prices and deter market entry.").

[25] "Static" de-list bids are bids to shut down for a single year that are above 0.8 times CONE. For FCA #4, a static de-list bids is any bid above 0.8 times $4.918/kW-month (that year's CONE), or any de-list bid above $3.93/kW-month.

Dynamic De-List Bids[26] should also be considered in setting price. We do not support an expansive new mitigation regime. We address these points in turn.

First, several of the categories of bids that ISO-NE and NEPOOL proposed to permit to be modeled for zone formation (in February) were linked to whether the bids were "pivotal." They proposed a new "pivotal supplier" test to examine whether any of the supplier's existing capacity is needed to meet reliability requirements within a zone. Filing Letter at 31. If so, it is pivotal and its bids will be ignored in determining zones. This definition, however, suffers from a devastating flaw. In calculating the total capacity within a zone, it inexplicably excludes newly qualified capacity resources. *See id.* at 31 (the quantity of capacity within a zone is "the total megawatts from qualified Existing Capacity Resources in the Capacity Zone").

One of the primary purposes of the three-year forward capacity model was to permit new resources to compete on a level playing field with existing resources. *See Devon Power*, 115 FERC ¶ 61,340; *Devon Power LLC*, 102 FERC ¶ 63,017 at P 2 (2006). By design, new capacity "is a perfect substitute for incumbent capacity" and "ignoring this competition … lacks any foundation in economics." Stoddard Test. at 81:2-8. Yet ISO-NE and NEPOOL propose a definition of "pivotal" that pretends that these resources will not exist—even though those new resources would no longer be just theoretical but qualified sources of supply in the auction. The result is to put a heavy thumb on the scales against permitting bids from existing resources to be considering in establishing zonal pricing.

There is no justification for this. *See* Stoddard Test. at 81:1-20. If there is any concern that new resources may not show up, that concern is misplaced. Every resource (new or existing) that qualifies to participate in an FCA must submit an extensive qualification package to ISO-NE

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26 "Dynamic" de-list bids are bids to shut down for a single year that are below 0.8 times CONE. For FCA #4, a dynamic de-list bid was any de-list bid below $3.93/kW-month.

and be approved for participation, and then also is required to offer or face stiff penalties. ISO-NE Tariff §§ III.13.1.1.2 (Qualification Process for New Generating Capacity Resources), III.13.1.2.3 (Qualification Process for Existing Generating Capacity Resources).

In addition, some minimum thresholds should be imposed on the definition of "pivotal" to ensure that resources that cannot exercise market power are not unnecessarily mitigated. A resource should be considered non-pivotal if: (a) it has only one resource within a zone, or (b) its portfolio within the zone is not larger than some reasonable threshold size. Those with only one resource within a zone—even if "pivotal" under any standard—would have no portfolio to benefit and thus no economic incentive to withhold. Stoddard Test. at 80:1-10. Any such behavior would be commercially irrational. As for a portfolio threshold, a resource owner with five percent or less market share within a zone cannot colorably exercise market power, and thus should not be mitigated. *See id.* at 80:9-10.

Second, ISO-NE and NEPOOL proposed to permit Static De-List Bids to be considered in determining zones only if the bids were from non-pivotal suppliers, and the Commission approved this in the hearing order for FCA #4. This should *not* become a permanent part of FCM. It is over-mitigation, pure and simple.

By tariff rule, all Static De-List Bids—which are bids to shut down for a single year that are above 0.8 times CONE—must be cost-based. *See ISO New England*, 125 FERC ¶ 61,102 at P 8; Tariff § III.13.1.2.3.1.1.[27] They all must be submitted to the market monitor for review (to determine that the costs accurately implement the tariff), and, potentially, for adjustment. Once the market monitor is finished, all Static De-List Bids must be submitted to the Commission for its review. *See ISO New England*, 125 FERC ¶ 61,102 at P 8; *Devon Power*, 115 FERC ¶ 61,340

[27] For FCA #4, any bid above $3.93/kW-month was treated as a static de-list bid.

at P 114. Any market participant may file at the Commission and challenge the market monitor's findings. And, of course, Congress has passed statutes and the Commission has rules against market manipulation that carry stiff penalties and possible imprisonment for anyone found guilty of manipulating market prices.

In these circumstances, it is overkill to add another layer of automatic mitigation providing that if a Static De-List Bid—after all prior limits on bidding and layers of mitigation and review have been satisfied—is from a pivotal supplier—as narrowly defined by ISO-NE and NEPOOL to exclude consideration of new resources—it nevertheless will *still* be forbidden from consideration in determining whether to establish a zone. As Mr. Stoddard points out:

> The FCM Revision had the curious effect of implying that its oversight process on Static De-List Bid prices is robust enough to set the payment to the supplier, but not robust enough to set a market price—notwithstanding the further review process at the Commission. No other capacity market has this dichotomy.

Stoddard Test. at 75:6-9; *see also id.* at 75:9-19 (discussing approaches in other capacity markets).

A better solution is that once approved by the market monitor and the Commission, all Static De-List Bids should be allowed to be considered in determining whether to create a zonal price.[28]

Third, Dynamic De-List Bids from non-pivotal suppliers should likewise be considered for price separation purposes. A Dynamic De-List Bid is a one-year de-list bid submitted at less than 0.8 times CONE. ISO-NE Tariff § III.13.2.3.2(d); *see* Filing Letter at 30 n.135 (discussing same). In establishing FCM, stakeholders already agreed that de-list bids below 0.8 times CONE did not need to be reviewed by the market monitor because they were at a price level that is not

[28] As discussed by Mr. Stoddard, all Administrative Export Bids should also be considered in the determination of zones, as there is very little incentive or ability to economically withhold via such bids. *See* Stoddard Test. at 76:3-16.

reflective of an exercise of market power. *ISO New England*, 125 FERC ¶ 61,102 at PP 9, 37-40; *Devon Power*, 115 FERC ¶ 61,340 at PP 28, 146-47; *see also* Stoddard Test. at 77:18-78:20 (explaining economic rationale for Dynamic De-list Bid threshold at 0.8 times CONE). This was upheld by the Commission in its order approving the FCM settlement, *Devon Power*, 115 FERC ¶ 61,340, and the Commission later explained the logic of not requiring such bids to submit costs:

> [W]e think that a dynamic de-list bid establishes a reasonable default level of compensation for units needed for reliability. A dynamic de-list bid must be at least 20 percent below CONE, and is only entered into the auction in an auction round where the clearing price is at or below that level. Over the long run, the average price for capacity should reflect CONE, in order to attract new entry needed for reliability. The costs of an existing unit would ordinarily be below the entry cost of a new unit, and we conclude that a default level for existing resources that is at least 20 percent below the cost of a new entrant (and at least 20 percent below the likely average price of capacity over time) is reasonable.

ISO New England Inc., 125 FERC ¶ 61,102 at P 77.[29]

This excerpt from the Commission's order includes a statement that alludes to another key rationale for permitting Dynamic De-List Bids to set price: "[o]ver the long run, the average price for capacity should reflect CONE, in order to attract new entry needed for reliability." *Id.* But FCM has no sloped demand curve, as in NYISO and PJM. And the lack of a sloped demand curve means that FCM, by default, has a *vertical* demand curve. The consequence of a vertical demand curve is price volatility. This was known as FCM was being designed, and the design thus includes price-stabilizing factors, and in particular, Dynamic De-list Bids. As Mr. Stoddard testifies:

[29] *See also id.* at PP 78-79 (describing considerations of administrative convenience for bids at this level and concluding that "[i]f it is just and reasonable to allow a de-list bid below the threshold level to establish the market price for all capacity without market monitor review, then a lower bid (based on market monitor review) should not be required to establish the compensation of only the single resource needed for reliability, as this practice would be unduly discriminatory.").

> With no demand curve to add price stability to the FCA, the relatively looser review standards for supply priced below an agreed level—0.8 times CONE—was designed as the stabilizer on the low side. (New entry into a readily contestable market is the stabilizer on the high side.) By not allowing all Dynamic De-List Bids to set clearing prices, ISO-NE would undermine this important leg in the market design in precisely those import-constrained markets where developing new capacity resources is the most costly and challenging.

Stoddard Test. at 78:6-12. Thus "[t]he Dynamic De-List Bid threshold at 0.8 times CONE was not justified because it represented the one-year going-forward cost of capacity, but instead because the FCM price should equal, on average over time, the long-run average cost of capacity (net of market earnings for energy and other products)." *Id*. at 77:20-78:2. This is the same point picked up on in the Commission's order, referring to long-run average costs. Any argument seeking to evaluate Dynamic De-List Bids based on the one-year going-forward cost of capacity fundamentally misapprehends what Dynamic De-Lists Bids are.

Under the current market design, Dynamic De-List Bids play a key role—if permitted to set price—in reducing volatility. Stoddard Test. at 48:10-13. If Dynamic De-List Bids are going to be mitigated to levels where they become irrelevant, the *quid pro quo* should be a sloped demand curve. As Mr. Stoddard testifies:

> Q If a robust set of Price stability mechanisms is not included in the new FCM design, is there any further change in the design that you would recommend?
>
> A Yes; in that circumstance, I would include a demand curve in the FCM. An administratively set, properly structured demand curve has proven to be an effective design element in the NYISO and PJM capacity markets. With a demand curve, these other markets have been able to implement small zones, combined with comprehensive buyer and seller bid mitigation (in zones without sufficient competition), and still realize locational prices that reflect the underlying supply and demand balance in each zone.

Stoddard Test. at 48:18-49:6.

To date, however, Dynamic De-List Bids have never been permitted to set price. In February, ISO-NE and NEPOOL proposed to continue to exclude all Dynamic De-List Bids from those that will be considered in creating zones, citing only generic concerns that "the benefits of more efficient pricing must be balanced against the risk of the exercise of market power by those submitting these offers." Filing Letter at 29. Here again, the rules are apparently considered robust enough to set the payment to the supplier, or where there are no constrained zones for the entire market, but not robust enough to set a market price for a constrained zone. In sum, the bias to over-mitigate rears its ugly head once more at the expense of sending a locational signal.

Another layer of mitigation is unnecessary here. As Mr. Stoddard explains:

> There is no sound economic rationale for excluding Dynamic De-List Bids from suppliers without structural market power. Moreover, removing the ability of these suppliers to set prices excludes a large portion of the supply from effective participation in the market. NEPGA Exhibit 2-F shows the market structure in FCA #2 for the two most-concentrated import-constrained Capacity Zones, Connecticut and NEMA/Boston. As the exhibit shows, there is a large amount of capacity in these zones offered by market participants with very small market shares, including utilities, municipals, government agencies, and small Demand Resource suppliers. In Connecticut, 53 percent of the qualified capacity was from suppliers with less than a 10 percent market share, and only one supplier had a market share in excess of 20 percent (NRG, with 27.4 percent), a threshold the Commission has used in other contexts for determining whether suppliers have structural market power. Similarly in NEMA/Boston, 27 percent of the qualified capacity was from suppliers with less than a 10 percent market share, and again there was only one supplier above the 20 percent mark. If ISO-NE fails to consider the cost information embedded in the offer prices from these numerous, small participants in the market, it will lose substantial market efficiency with no offsetting gain from mitigating (non-existent) market power.

Stoddard Test. at 77:1-17.

In our protest (at 60-67), we argued that *all* de-list bids should be allowed to set price, because all such bids are mitigated, either by being held to net risk-adjusted going-forward costs, subject to review by the market monitor and the Commission, or by being below the 0.8 times CONE threshold that stakeholders and the Commission agreed did not merit review by the Internal Market Monitor. In response to filings from Dr. Patton and others, we revised our position in our Complaint, *New England Power Generators Assoc. v. ISO New England Inc.*, Docket Nos. EL10-50-000 & ER10-787-000, Complaint Requesting Fast Track Processing By NEPGA at 11-13 (Mar. 23, 2010), offering that if the Commission determined that current mitigation was insufficient to curb market power in small zones, then only *non-pivotal* Dynamic De-List Bids should be allowed to set price, assuming that the pivotal supplier test was revised as set forth above. We continue to believe that this is precisely the sort of narrowly-targeted mitigation that the Commission should consider if it determines that existing mitigation measures are insufficient once the change is made to model all zones all the time.

Finally, we conclude with a few points about why locational pricing has not occurred in New England. True locational pricing remains elusive. There are powerful political and consumer pressures against creating separate zones, which are likely to have higher prices. For this reason, states and load-dominated stakeholders should not be the parties deciding the criteria to establish new zones. That is a recipe to prevent locational pricing. Second, there is a strong predilection for market design elements that have the effect of aggressively and automatically mitigating supplier bids, particularly as areas become more constrained—which are exactly the circumstances when locational pricing would be likely to arise. Load parties often use the specter of market power to justify preventing locational pricing. But unless carefully targeted and properly structured, mitigation will undermine the locational price signal that is so crucial to a properly functioning market. Focused mitigation should be utilized to counter the unlawful exercise of market power, but otherwise the markets should be allowed to work.

Nevertheless, while ISO-NE in its June proposal envisions that Dynamic De-List Bids will be allowed to create price separation, it proposes an expansive new mitigation regime to accompany its proposal to always model zones. Dynamic De-List Bids (regardless of whether pivotal or non-pivotal) will only be allowed if they are below the opportunity cost "to sell capacity into the Rest-of-System in New York." ISO-NE Presentation at 53. This change is based on arguments that 0.8 times CONE—the current threshold—"is not representative of a resource's going forward or opportunity cost." *Id.*

While the details of this proposal are still in question, several flaws are immediately apparent. *First*, as set forth above, Dynamic De-List Bids were never intended to be linked to going forward or opportunity cost, but were instead designed to freely permit bids below a reasonable threshold (initially $6/kW-month) to reduce price volatility in a market with a vertical demand curve. If this option becomes a nullity, the market requires a sloped demand curve. *Second*, New York has a fundamentally different capacity market than New England (seasonal and monthly instead of annual, nearer term instead of three years forward, energy revenues ignored instead of being deducted). The demand curve in NYISO is also set only for three year periods at a time, and since FCM in ISO-NE is a three-year forward market, this means that in many years there will be no NYISO demand curve to use as an opportunity cost proxy. In short, this is not an apples to apples comparison. Basing permissible bids in New England on prices in New York may also have unintended consequences on market behavior in New York. *Third*, many New England market participants are not members of NYISO and thus do not participate in the extensive stakeholder process to reset the Demand Curves, including the development of demand curve assumptions and review of the modeling results, which under this proposal could have a large impact on pricing in ISO-NE. *Fourth*, the resulting bidding threshold is likely to be very low. *Fifth*, and perhaps most troubling, this new mitigation would apparently apply to all Dynamic De-List Bids, not just those that are pivotal within constrained zones. This is mitigation in the absence of any evidence of market power, and is unjust and unreasonable. *See generally* Stoddard Test. at 79:8-22.

ISO-NE also proposes changes to the mitigation of Static De-list Bids. Currently, the rules cap Static De-List Bids at a resource's net risk-adjusted going forward or opportunity costs based on the resource departing both the capacity and energy markets. ISO-NE asserts that no Static De-List resources have actually left the energy market, and thus that the "[b]ase assumption will be changed to assume that [a Static De-List] resource remains in the energy market" and "therefore [the] appropriate going forward cost is zero." ISO-NE Presentation at 54. If a resource commits to leave the energy market, it will be permitted to submit a Static De-List bid above zero, based on the "opportunity cost of selling to New York or of deactivating the resource." *Id.*

This again is rampant over-mitigation. Among other things, the assumption that de-listed resources will stay in the energy market has not been shown to be correct, and cannot be shown to be correct at this point since we have only been operating under the first FCA delivery year (from FCA #1) since June 1, 2010—30 days ago. The assumption that the appropriate going-forward cost to remain in the energy market is zero—that there is no difference in costs between being an energy provider and a capacity provider—is false. For example, ISO-NE's proposed rule fails to consider the supplier that wishes to exit the energy market for part of the year (to reduce staff at its facility during the shoulder seasons, or for other similar reasons).[30] The comparison to capacity prices in New York is flawed for the same reasons as stated above with

[30] Through a successful Static De-List bid (*i.e.*, no sale of capacity), the resource owners retains its option to deactivate (if economics prove as projected) or selectively participate in the energy market. This optionality has value.

respect to Dynamic De-List Bids. And again, this proposal apparently would apply everywhere, not just within constrained zones.

We will respond in more detail once we see the details of ISO-NE's proposal in its July 1 filing. But if mitigation is going to be applied in this sort of automated and heavy-handed manner, it begs the question why to even bother with the fiction of locational pricing in the capacity market? If a cost-based bid cannot be trusted to set price, although it has been reviewed and mitigated like the Static De-List Bids under the current rules, or a non-pivotal Dynamic De-List Bid (which is by definition not required to meet the local sourcing requirement and is below stakeholder-established minimum thresholds to reduce price volatility in a market without a demand curve), what can? Most troubling of all is that this mitigation overload on the supply side is occurring at the same time that the buy side advocates essentially free rein to undercut price with OOM supply that evades review.

ISO-NE and NEPOOL have recognized that "[t]he creation of Capacity Zones in the FCA is important because it enables import-constrained zones that have insufficient capacity to separate from the rest of the region in the FCA and have higher prices when necessary to attract new resources *or retain existing resources*." Filing Letter at 29 (emphasis added). They are correct. The mitigation should not be so draconian that locational price separation becomes impossible. If this occurs, the locational needs will remain—as today—unaddressed. As a direct result, the market will revert to a series of out of market, reliability-must-run-style payments, which is exactly what load wants but what the Commission thought it was acting to eliminate by accepting the FCM market design.[31]

[31] The Commission directed ISO-NE that "rather than focusing on and using stand-alone RMR agreements, [it] should incorporate the effect of those agreements into a market-type mechanism." *Devon Power*, 103 FERC ¶ 61,082 at P 29.

IV. THE COMMISSION SHOULD ADOPT A JUST AND REASONABLE CONE

In the Hearing Order, the Commission requested that parties brief the issue of whether the value of CONE should be reset. Hearing Order at P 18; *see also id*. at P 151 ("we will require the [parties] to address … the issue of the proper CONE value."). The Settlement, and the FCM, always anticipated that the value of CONE would correlate to the actual costs of new entry into the ISO-NE capacity market. The mathematic calculation included in the Tariff, by which the value of CONE is adjusted after each auction, was intended to ensure that CONE reflected market realities, yet the opposite has occurred. Stoddard Test. at 84:17-85:6. As a result, many of the functions in the market design that rely on a close correlation between the value of CONE and the true costs of new entry into the ISO-NE capacity market are badly impaired. To remedy this development, a true cost of new entry value should replace the current "utterly arbitrary" CONE, Stoddard Test. at 8:20-9:2, or, alternatively, modifications should be made to the Tariff in order to detach the relevant functions from the administratively set CONE value. The ISO-NE has announced that it plans to recommend eliminating references to CONE in the tariff and instead propose appropriate reference values for specific purposes. ISO-NE Presentation at 24. We will address the ISO-NE's recommendations once the specific details have been revealed and explained. Below we present evidence of the value of CONE.

A. Due to the Interplay of the FCM Rules, CONE Is Unmoored From the True Cost of New Entry, Causing the Design of the Forward Capacity Market To Be No Longer Just and Reasonable

As CONE heads into its fourth FCA it is no longer performing the key function for which it was designed. When the Commission approved the FCM settlement, it found—on the basis of substantial evidence in the record—that CONE's initial value set in 2005, \$7.50/kW-month, would be "a reasonable estimate of the cost of new entry and basis for the beginning price in the FCM auctions." *Devon Power*, 115 FERC ¶ 61,340 at P 130. Current CONE suggests that the actual cost of constructing a peaker in ISO-NE has plunged from $7.50/kW-month to $4.918/kW-month. This is obviously not true, particularly given that the Handy-Whitman index indicates that generation construction in New England has *increased* over 50 percent since 2005, Bidwell Aff. at 43, and the value of the cost of new entry in comparable regions is significantly higher.

There is no sound basis for how CONE currently is set. The current level of CONE is the result of a purely mathematical calculation, unlinked from any market reality. Contrary to the intent of the FCM framework, the CONE value now has *no information* from any competitive supply offer about the actual revenue requirements of the resources supporting system reliability. Stoddard Test. at 85:1-3. CONE now is at an "utterly arbitrary level." Stoddard Test. at 8:20-9:2. Hence we offer an updated CONE analysis.

1. Evidence Demonstrates that the Current Value of CONE is Seriously Deflated

On the basis of a "bottoms up" calculation of the current true revenue requirements of a new entry peaker in ISO-NE, Mr. Ungate concludes that the true "gross" cost of new entry (*i.e.*, not net of margins available from energy and ancillary service markets) is $13.72/kW-month to $15.20/kW-month, depending on whether the generation would be located in Western Massachusetts or in Boston. *Testimony of Christopher D. Ungate on Behalf of New England Power Generators Association*, attached as NEPGA Exhibit 3 ("Ungate Test.") at 14:1 (Table 3).

Other indicators consistently demonstrate that ISO-NE's current CONE of $4.918/kW-month is out of whack. As the Internal Market Monitor has observed, $4.918/kW-month "is significantly below most estimates of the cost of new entry for generating resources." Internal Market Monitor Report at 8. CONE figures used in New York and PJM are substantially higher, notwithstanding that they are reported on a *net* basis (*i.e., less* net energy and ancillary service payments). The Commission has recently approved net CONE values of $6.70/kW-month in

PJM (Zone 4), $9.06/kW-month in PJM (RTO), and $8.92/kW-month in New York—respectively 59 percent, 84 percent and 81 percent above ISO-NE's current CONE value. Stoddard Test. at 82:11-13. The net CONE value for the constrained New York City zone is $11.93/kW-month. Stoddard Test. at 82:15-16.

The net CONE figures used in PJM and NYISO are of course not directly comparable to the gross CONE value used in New England. To convert the gross cost of new entry estimate for New England to a net cost of new entry, energy and ancillary services revenues would need to be deducted. For purely illustrative purposes, one could deduct the PJM offset of $1.12/kW-month discussed in the testimony of Mr. Stoddard, Stoddard Test. at 54:7-10, to derive an estimated net CONE value. These comparisons of CONE values between New England and other regions are stark and make no sense. Stoddard Test. at 82:16-17.

Moreover, the decoupling of CONE from the starting value for the auction is a recognition that CONE is potentially too low to provide sufficient incentives for capacity to remain in the descending clock auction, which in turn is a telling indication that CONE must certainly be too low to encourage new entry. Stoddard Test. at 83:15-84:1. Mr. Stoddard explains, "two times CONE is, in actuality, barely CONE itself—a result directly driven by the collective rules that remain in place in New England at this time." Stoddard Test. at 84:14-16.

We asked Mr. Ungate to analyze this cost of new entry in New England for illustrative purposes to provide some order of magnitude for understanding how far afield the New England CONE figure has strayed from actual, real world costs. In his analysis, Mr. Ungate considered the cost to build the GE Frame 7FA heavy duty frame combustion turbine unit, a generation unit that is commonly found in New England—current CONE values for both PJM and NYISO in the Rest of State (to establish the NYCA Curve) are based on the GE 7FA. Ungate Test. at 4:3-7.

The use of GE 7FA technology for Mr. Ungate's estimate is not meant to determine the technology that should be used to set CONE for ISO-NE markets, but to provide a comparison to current ISO-NE CONE values. Ungate Test. at 4:7-10. Mr. Ungate analyzed the construction costs for the construction of two proxy units—a new greenfield two-unit simple-cycle combustion turbine peaking plant in Boston, MA, as representative of a large urban center, and Springfield, MA, as representative of a smaller city. Ungate Test. at 5:13-16, 7:6-7. He based his estimate on current costs of development, labor, materials and equipment, and took into account representative financing terms that would apply to a new peaking merchant capacity project. Ungate Test. at 2:14-19.

Mr. Ungate relied on financing assumptions provided by Mr. Stoddard. Ungate Test. at 13:5-6. Mr. Stoddard explained that CONE values should be determined based on financing assumptions consistent with the risk profile of a new merchant unit, not that reflecting the financing of a unit with a long-term contract where the buyers, rather than sellers, will bear the long-term market risk. Stoddard Test. at 88:8-89:17. According to Mr. Stoddard, a conservative estimate for a debt/equity ratio for a merchant generation project in the current financial climate would be 45 percent debt and 55 percent equity. Stoddard Test. at 91:13-15. In addition, he found 15 percent to be an appropriate and conservative estimate of the cost of equity for a merchant project. Stoddard Test. at 92:2-7. He concluded further that the yield on B-rated corporate bonds, currently 8.84 percent, provides a reasonable estimate for the cost of debt for a project financed merchant project. Stoddard Test. at 92:8-18. Mr. Stoddard determined that a 20-year amortization period would be an appropriate amortization period for purposes of Mr. Ungate's analysis. Stoddard Test. at 92:19-93:8.

Mr. Ungate's bottoms-up study of construction costs parallels the analysis submitted by ISO-NE witness, John J. Reed, in the initial FCM proceeding. *See Devon Power LLC*, Docket No. ER03-563-030, Exhibit ISO-3, Prepared Direct Testimony of John J. Reed at 3:22-4:1 (Sept. 3, 2004). In preparing that analysis, Mr. Reed also used a frame combustion turbine as the proxy unit as he developed an estimate of the cost of new entry into the ISO capacity market. The Commission embraced Mr. Reed's analysis and concluded that the $7.50/kW-month value for CONE was supported by "substantial evidence." *Devon Power*, 115 FERC ¶ 61,340 at P 130. Given that the present-day equivalent of the initial CONE of $7.50/kW-month is now $11.50/kW month, Bidwell Aff. at 43, Mr. Ungate's conclusions are further validated by Mr. Reed's earlier results.

2. Effect on the Market

Failure to update CONE to a value that reflects a reasonable estimate of the actual costs of building new generation to meet the long-term needs of ISO-NE, and its locational zones, is likely to force prices well below competitive levels, eviscerating the ability of the market design to produce fair and reasonable outcomes and precluding any reasonable chance that new capacity needed for reliability purposes will be added through market-based outcomes. Stoddard Test. at 83:8-14. We understand that ISO-NE plans to propose certain reforms to address the fact that CONE has drifted away from its intended purpose in the FCM. As noted, we will respond to these general notions after more details have been provided by ISO-NE in its opening brief..

Today, however, we show that the current CONE value makes it impossible for CONE to serve the various FCM functions for which it was intended. As noted by Mr. Stoddard, "there are many other elements of the FCM design that also rely on CONE that are just as broken if the administratively set level of CONE is badly out of line with the true level of CONE. In addition to the starting price, CONE serves several functions in terms of setting auction parameters … as long as CONE is skewed, none of these rules work as intended." Stoddard Test. at 93:20-94:2. NEPGA Exhibit 2-H includes a list of some of these uses of CONE in the tariff.

Each of these parameters plays an important role in steering the market towards competitive outcomes and providing long-term price stability near the long-run economic cost of new capacity. Stoddard Test. at 94:5-7. As Mr. Stoddard explains, if CONE is not set to a level that appropriately reflects this long-run expected price, these built-in stabilization mechanisms may actually push the market towards inefficient pricing, resulting in inefficient and undesirable market outcomes. *Id.* at 94:7-9. The alternative to resetting CONE would be to revisit each use of CONE and consider what changes, if any, are required to ensure that the rule operates reasonably. *Id.* at 94:9-11. Such a change would, in effect, make CONE irrelevant. *Id.* at 94:11-12.

Mr. Stoddard notes there are three rules that are the most problematic in terms of the impact of an artificially-low value for CONE (Stoddard Test. at 94:12-15):

- The threshold for Internal Market Monitor Review for OOM resources does not work as intended. As discussed above, only bids below $3.69/kW-month (0.75 times CONE) are at risk of being flagged as potentially being OOM resources. The review threshold, distorted by CONE, fails to capture those instances where uneconomical supply is being injected into the market.

Id. at 94:16-95:19.

- The threshold for Internal Market Monitor Review for de-list bids does not work as intended. As the value of CONE has plummeted, so too has the triggering value for a cost-based review of de-list bids. Capacity suppliers facing high risk-adjusted going-forward costs will be required to forgo the option of the Dynamic De-list and instead forced to file Static De-List Bids for review by the Independent Market Monitor in order to be able to bid these costs into the market. This increases the administrative burden both on suppliers and the Internal Market Monitor, and increases risks for suppliers.

Id. at 95:20-96:16.

- The Quantity Rule does not work as intended. This rule, which defers purchasing replacement capacity for high priced de-list bids from the FCA to

> the reconfiguration auction, unduly complicates the FCA design and suppresses efficient pricing. Mr. Stoddard agrees with ISO-NE's proposal to eliminate the Quantity Rule.

Id. at 96:17-98:16.

In addition, an artificially low value for CONE causes (a) payments under the Inadequate Supply and Insufficient Competition rules—intended to set prices at a level sufficient to signal a need to new resources to enter and compete in subsequent FCA—to be too low, and (b) the price cap applied for replacement resources also to be too low. *Id.* at 98:18-23. For these two issues, Mr. Stoddard recommends the CONE benchmark be replaced by the net cost of a new benchmark generation resource. *Id.* at 99:5-16.

Furthermore, an artificially low value of CONE causes the collateral requirements for resources participating in FCM to be lower than intended when the rule was set, creating the potential for inadequate credit requirements. *Id.* at 98:23-99:2. Mr. Stoddard testifies that the benchmark should be set at the clearing price of the auction in which the resource obtained its capacity supply obligation, as it is this price that would be paid to the resource, not some notional benchmark at CONE or any other value. *Id*. at 99:17-20.

B. To be Just and Reasonable, CONE Should be Reset to Reflect the True Cost of New Entry for the FCM

According to the Commission, "*only if market participants can expect prices that provide a reasonable opportunity to recover the costs of needed investment*" can properly constructed capacity markets encourage reliable and efficient levels of investment. *New York Indep. Sys. Operator*, 122 FERC ¶ 61,211 at P 105 (emphasis added). CONE should be reset to a legitimate current value in order to allow all market participants to expect prices that provide an opportunity for investment cost recovery.

1. The Appropriate Value for True CONE is the Cost of a New Peaker

A reset CONE must reflect the all-in costs associated with building and financing a new gas-fired combustion turbine peaking unit, net of expected earnings from the sale of energy and other products. Stoddard Test. at 85:8-86:16. Demand Response resources or other limited classes of additions to the resource base will, at some point, be exhausted, at which point new peaking capacity will be the long-run marginal entrant. *Id.* at 85:13-15. In its order approving the Settlement, the Commission found the initial $7.50/kW-month CONE to be reasonable on the basis, in part, of the ISO-NE's estimated cost of entry for a new peaker unit. *Devon Power*, 115 FERC ¶ 61,340 at P 101. The cost of new entry of a new peaker is the appropriate measure because these units only sell energy when its marginal energy cost equals the system marginal cost and thus the peaker's capital cost is its incremental capital cost, or cost of new entry. Bidwell Aff. at 39. "Using the Net CONE value for a peaker is … a reasonable proxy for the Net CONE of any efficient technology (and more reliably estimated, since the most difficult portion to estimate—the future E&AS earnings—is small relative to the capital costs)." Stoddard Test. at 86:14-16. Moreover, consistency in relying on the peaking technology as the benchmark avoids the problem of systematically under compensating new entrants, which would occur with a shifting benchmark. *Id*. at 86:17-87:10.

2. Demand Response or Other Limited Assets Are Inappropriate Benchmarks for CONE

The FCM is agnostic as to what type of capacity clears in the FCA. However, demand response or other limited assets (*e.g.*, subsidized renewable power, unit upgrades/re-powerings) would not be appropriate benchmarks for establishing a system-wide CONE for several reasons: *First*, the amount of capacity that can be added through low-cost upgrades is limited and in the long run will be exhausted. Stoddard Test. at 87:15-18. *Second*, even though some demand resources may also have relatively low costs, physical generation is needed on the system for reliability because there are finite limits to the amount of peak demand that can be met by reductions in load. *Id*. at 87:21-23. *Third*, the price of demand resources reflects the price at which customers elect not to have capacity supply purchased on their behalf, but does not reflect the cost to meet that incremental demand with new capacity. *Id*. at 87:23-88:2. Costs of Demand Response curtailments are opportunity costs, not construction costs. Analytically, these costs are not comparable to generation new entry construction costs and should not be measured and quantified as if they were the same. *Accord New York Indep. Sys. Operator*, 131 FERC ¶ 61,170 at P 132 ("There is no connection between the net CONE of a new large generation unit and the net CONE of a demand response resource because the CONE of a demand response SCR includes its lost opportunity costs relative to the SCR's primary business."). Finally, to the extent some new resources appear to be low-cost, those resources should be treated as OOM. Stoddard Test. at 88:3-5.

3. *The Standard of Review for OOM and APR Mitigation Could be Based on Technology-Specific Estimates of Net Cost of Entry*

As Mr. Stoddard explains, there are two reasonable fixes to the artificially low review-trigger for OOM yet each require the use of "recent, reliable and reasonable estimates of costs to build new capacity." *Id*. at 95:3-4. *First*, one could increase CONE to a level that actually reflects the cost of building new generation, in line with PJM and NYISO. *Id*. at 95:4-6. *Second*, as an alternative and likely preferred approach, ISO-NE could adopt asset-class-specific standards of review for new resource offers, as PJM does in its Minimum Offer Price Rule. *Id*. at 95:6-8. The Internal Market Monitor would periodically develop a benchmark CONE for a range of various technologies. *Id*. at 95:8-10. A proposed project's offer price would be compared to the estimated asset class for its type, if applicable, or to CONE if the entry is not within an asset class for which the Independent Market Monitor has established a benchmark. *Id.* at 95:11-14. This class-specific approach could work in contexts beyond the realm of OOM review and the APR and would ensure that offers from all resources were evaluated against a relevant benchmark, even if the value of CONE diverged from that resource's actual costs. *Id.* at 96:14-16. Mr. Stoddard notes that the ISO-NE may be proposing to reset the threshold for OOM resources based on unit class benchmarks for estimated CONE and that he supports such a proposal in concept. *Id.* at 95:16-19. Evaluating the costs of Demand Response resources is particularly challenging, *id.* at 87:23-88:2, but of critical importance. *See supra* Sections II.B.4, II.D.

4. *The Reset Value of a True Cost of New Entry*

CONE should be reset to a value that reasonably represents the full cost of new generation resources in the locational capacity zones and Rest of Pool, net of expected earnings from the sale of energy and other products. Stoddard Test. at 82:3-8. This could be easily achieved: The Commission could require ISO-NE to reset CONE using a bottoms up accounting analysis, as NYISO and PJM do and as ISO-NE did prior to the FCM. *Id.* at 85:3-6. We have provided such an accounting analysis demonstrating the cost of entry of merchant generation in New England in the context of current costs and actual market conditions.

C. *The ISO-NE Proposals*

We are encouraged that ISO-NE plans to propose certain reforms to address the fact that CONE is now far afield from its purpose in the FCM. Until we can comment more specifically, we offer these general observations: Any proposed revisions of ISO-NE that include benchmarks specific to various resource classes *must* include legitimate valuations. In other words, the setting of new benchmarks or a reset of CONE are not undertakings for a stakeholder process that results in a lowest-common denominator or sector-domination. The most reliable, efficient and rational course would be for ISO-NE to adapt benchmarks according to the template provided by those that PJM has already developed.

Also, for the reasons discussed above, it is essential that the valuations for a new peaker be understood, recognized, and, where appropriate incorporated, into the tariff. The peaker cost is vital to a functioning FCM, as well as the key to classifying Historic OOM in FCA #1, FCA #2, and FCA #3. Mr. Ungate's analysis is important because it provides substantial evidence of the true cost of generation entry into the New England markets using realistic current inputs and based on valid assumptions.

Regardless of whether CONE is reset, revised or eliminated altogether, one principle must not be lost: a just and reasonable and fully functioning competitive electricity market must support, on average and over time, and in addition to the expected earnings from the sale of energy and other products, the incremental capital cost of generation, *i.e.*, the cost of new entry. Bidwell Aff. at 7, 15. Without this underpinning, any capacity market, including the FCM, ultimately will fail.

CONCLUSION

For the foregoing reasons, NEPGA[32] respectfully submits that the Commission should ensure just and reasonable capacity prices in ISO-NE by requiring the effective mitigation measures discussed herein.

Respectfully submitted,

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[32] NEPGA is a private, non-profit entity that advocates for the business interests of non-utility electric power generators in New England. NEPGA's member companies represent approximately 28,000 megawatts of electrical generating capacity throughout the New England region. The comments contained in this filing represent the position of NEPGA as an organization, but not necessarily the position of any particular member with respect to any statement, concept, issue or position expressed herein.

* NEPGA requests that all further correspondence, communications and other documents relating to these dockets be served upon these individuals electronically at aoconnor@nepga.org and Paul.Wight@skadden.com.

NEPGA RESPONSES TO ISSUES ADDRESSED
IN THE COMMISSION'S HEARING ORDER
ON FORWARD CAPACITY MARKET REVISIONS AND RELATED COMPLAINTS,
131 FERC ¶ 61,065

Issues Relating to Alternative Price Rule (APR)

1) Triggering conditions, if any, for the APR.

Q What are the appropriate conditions that should trigger mitigation under the APR? Hearing Order at P 77.

A NEPGA discusses appropriate conditions that should trigger mitigation under the APR, including: (1) an appropriate definition of OOM, including resources bid below cost by a net purchaser (*see* II.B.1); (2) review of all capacity offers, not just those below an administrative CONE threshold (*see* II.F.2); (3) a capacity clearing price set at the competitive measure of the cost of new entry (*see* II.B.2); (4) OOM bids must not influence the price paid to existing competitive new resources (*see* II.C); (5) OOM resources must be mitigated regardless of claimed intent or type of resource (*see* II.C); and (6) OOM resources must be mitigated until they become in-market (*see* II.C).

Q How can APR mitigation be constructed so that load is able to hedge its capacity obligation while not distorting the capacity market clearing price? Hearing Order at P 77.

A This issue was addressed by the possibility of self-supply in the June 15, 2010 ISO-NE draft proposal of a revised APR and in the brief (*see* II.F).

Q How might APR mitigation accommodate appropriate OOM capacity introduced for resource adequacy or to satisfy public policy goals? Hearing Order at P 77.

A All OOM bids must be mitigated regardless of intent or type of resource (*see* II.C.2); mitigating OOM bids does not conflict with legitimate objectives (*see* II.E).

2) Treatment of OOM resources that create capacity surpluses for multiple years.

Q How should Historic OOM be treated? Hearing Order at P 82.

A ISO-NE should apply the same OOM test for new resources approved as part of this paper hearing to all new entry from FCA #1 through FCA #3 (*see* II.D.2). All OOM should be mitigated until it would have entered a competitive price (*see* II.C.3).

Q Should mitigation be applied for a period that accounted for the magnitude of the surplus introduced by the OOM capacity? Hearing Order at P 84.

A Historic OOM should be fully mitigated until load growth and retirements have caught up to the amount of the surplus (*see* I.D.2).

Q Should APR mitigation be lifted if offers from the OOM resource cleared in a FCA without replacing a lower cost in-market capacity resource? Hearing Order at P 84.

A All OOM should be mitigated until it would have entered the FCM at a competitive price (*see* II.C.3).

3) Appropriate price adjustment under APR.

Q Are further changes necessary to the price adjustment aspects of the APR? Hearing Order at P 87.

A Yes (*see* II.F).

<u>Modeling of Capacity Zones</u>

1) Whether zones should always be modeled.

Q Should zones always be modeled? Hearing Order at P 135.

A Yes (*see* II.B).

2) Whether all de-list bids should be considered in the modeling of zones.

Q Should all de-list bids be considered in the modeling of zones? Hearing Order at P 135.

A If market power concerns persist, then only non-pivotal dynamic de-list bids should be allowed to set price, assuming that a correct definition of the pivotal supplier test is applied (*see* III.C).

3) Whether a pivotal supplier test is necessary.

Q Is a pivotal supplier test necessary? Hearing Order at P 135.

A A pivotal supplier test is preferred over an expansive new mitigation regime, but the current pivotal supplier test requires modification (*see* III.C).

4) Whether revisions to the current mitigation is necessary in order to model all zones.

Q Are revisions to the current mitigation rules necessary in order to model all zones? Hearing Order at P 135.

A No, but if market power concerns persist, then only non-pivotal dynamic de-list bids should be allowed to set price, assuming that a correct definition of the pivotal supplier test is applied (*see* III.C).

Proper Value of CONE

Q Should the value of CONE be reset? Hearing Order at P 151.

A Yes (*see* IV.A).

Q What is the appropriate value for CONE going forward?

A An appropriate value for CONE going forward is provided in the testimony of Christopher D. Ungate (*see* NEPGA Exhibit 3)

UNITED STATES OF AMERICA
BEFORE THE
FEDERAL ENERGY REGULATORY COMMISSION

ISO New England Inc. and New England Power Pool	)	Docket No. ER10-787-___
New England Power Generators Association Inc.	)	
	)	
v.	)	Docket No. EL10-50-___
	)	
ISO New England Inc.	)	
PSEG Energy Resources & Trade LLC, *et al.*	)	
	)	
v.	)	Docket No. EL10-57-___
	)	
ISO New England Inc.	)	

CERTIFICATE OF SERVICE

I hereby certify that I have this day caused to be served copies of the foregoing document upon each person designated on the official service list as compiled by the Office of the Secretary in the captioned proceedings, in accordance with the requirements of Rule 2010 of the Commission's Rules of Practice and procedure, 18 C.F.R. § 385.2010.

Dated at Washington, D.C., this 1st day of July 2010.

/s/ Carl Edman

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