‘Around Market,’ ‘In Market,’ and FERC at a Crossroads

States impose their agenda and the administrative markets intervene in themselves as FERC holds the future of market interventions in its hands

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Mystic Closure Notice Leaves Room for Reversal

FirstEnergy Solutions files for bankruptcy after pushing for DOE emergency order

New York grid operator floats carbon pricing proposal

SENATE, No. 2313

STATE OF NEW JERSEY

218th LEGISLATURE

INTRODUCED MARCH 22, 2018

As gas plants struggle, California seeks new flexible capacity strategies

Mass., utilities cut ties with Northern Pass power line project

Exelon seeks new path for Texas gas plants via Chapter 11

May 2018

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EXECUTIVE SUMMARY

The Restructured Administrative Market Model (RAMM) has been trampled by interventions. The relative simplicity of the "energy only" or "energy plus capacity" market model has been superseded by a cascade of extra-market additions – both 'around market' and 'in-market' – that show no hint of slowing. Be they state ZEC- or REC-mandates from state legislatures or administrative agencies, MOPRs and RMR cost-of-service based contracts from within the markets themselves, or otherwise, the exceptions to market processes have swallowed the rule. The notion of the RAMM held that the RTO/ISO watchmaker would design and build the market mechanism and then superintend its functioning to yield competitive outcomes. That model lays in tatters, trampled by interventions. RAMM operators are developing 'in-market' solutions with abandon directed at resiliency, carbon emissions, and accommodation of state actions. States remain unsatisfied and undeterred, and continue to chase 'around market' solutions.

New Jersey and Connecticut are the latest states to adopt 'around market' solutions for nuclear generators, finding ever more creative ways to develop maintenance fees. The three 'around market' action types hold firm: (1) the maintenance fee (or backdoor capacity payment); (2) the prescriptive replacement capacity approach; and (3) vertical reintegration, or re-regulation. As mid-2018 approaches, the maintenance fee approach continues to thrive in states.

'In-market' solutions have become the favored mechanism to address resiliency, carbon emissions, and accommodation of state 'around market' actions. PJM is asking FERC for a universal 'in-market' solution for resiliency. Simultaneously, PJM has brought forward its *Valuing Fuel Security* initiative to conduct studies and ultimately make recommendations for capacity market reforms to ensure that the entire portfolio of generation resources could perform in "realistic but extreme contingency scenarios." NYISO seeks to incorporate a price on carbon into its market, while ISO-NE recently obtained FERC approval for its two-phase Competitive Auctions with Sponsored Policy Resources.

The Mystic Generating Station RMR is the latest 'in-market' solution, leaving FERC at a crossroads. Exelon announced it will retire the 2,000 MW Mystic Generating Station in 2022 "absent any regulatory reforms to properly value reliability and regional fuel security." In response, ISO-NE took an unprecedented step on May 1, 2018, and requested FERC approve a two-year cost based RMR contract for Mystic 8 and 9 not on the usual basis of electric reliability, but for fuel security purposes. FERC can grant the application and permanently signal to RAMM operators that 'in-market' solutions directed at fuel security, resiliency, state policy accommodation, carbon emissions or otherwise are welcome. Alternatively, FERC could seize the moment by confronting the continued use of 'around market' or 'in-market' bandages and addressing the difficult yet fundamental question of whether customers are best served by pretending these "electricity markets" are functioning markets.

FERC should end these market interventions once and for all. This would take extraordinary courage from FERC, but the only functioning regulatory constructs for electricity are vertically integrated markets or markets like SPP and MISO with planned utilities underneath and residual energy markets, both of which allow for rate-based, joint dispatch approaches. These approaches involve state regulators that can make decisions about fuel diversity, customer costs, and other imperative elements of the electricity business with key federal oversight on matters within FERC jurisdiction. FERC should stop the 'around market' and 'in-market' madness.

I. Introduction[1]

The relative simplicity of the "energy only" or "energy plus capacity" market model has been superseded by a cascade of extra-market additions – both 'around market' and 'in-market' – that show no hint of slowing. Be they state zero emission credit (ZEC) or renewable energy credit (REC) mandates from state legislatures or administrative agencies, minimum offer price rules (MOPR) and reliability must run (RMR) cost-of-service based contracts from within the markets themselves, or otherwise, the exceptions to market processes have swallowed the rule. The notion of the Restructured Administrative Market Model (RAMM) held that the RTO/ISO watchmaker would design and build the market mechanism and then superintend its functioning to yield competitive outcomes. That model lays in tatters, trampled by interventions.

The future of the RAMM has been at a tipping point for some time, but never has its future looked more dismal. Past months have seen the introduction and rejection of the Department of Energy's (DOE) Notice of Proposed Rulemaking (NOPR), known as the Grid Resiliency Pricing Rule, 'around market' actions in the courts, and the development of 'in-market' actions designed to achieve the same end as 'around market' actions. These actions continue to – purposefully or otherwise – ignore the fact hiding in plain sight: the RAMM is flawed and failing, and no model adherent is immune to its symptoms.

To be clear, this should not be viewed as a market failure, but a regulatory failure. The not well-concealed secret of the RAMM is that it was never a market in the emergent sense of willing buyers and sellers. Rather, the RAMM used auctions of various types and flavors to make resource decisions within a regulator-constructed model that created demand curves and exchange rules. In this, the RAMM is no more "competitive" than vertically integrated states' resource planning processes that run auctions between incumbents and independent power producers to minimize cost and evaluate other benefits for long-term resource planning.

One year ago, we posed three questions in a White Paper:

- Will markets be allowed to function without policy interventions into the price system, *i.e.*, are we capable of having a market structure that avoids the constant temptation to tweak, modify and therefore undermine the price formation?
- If not, where do states go from here?
- And, whither a FERC soon to be dominated by Trump Administration appointees?

The answers:

- First, no. Even the RAMM operators themselves are doubling down on the market interventions.
- Second, states cannot stop pursuing 'around market' solutions for both good and bad reasons having to do with political economy. The recent developments in New Jersey foretell another round of state 'around market' activity.
- Third, with regard to a fully constituted FERC, all signs point to going all-in on "markets" and embracing the notion that the RAMM is fine, despite the continuing proliferation of subsidies, price distortions, and concern over generator exits.

We contend the RAMM is not fine. The triumph of the market instrumentalists – the faction of the policy world that offers a prolific and full-throated embrace of the RAMM because they like the results – over the DOE NOPR does not mean markets are fine, or the political economy of the "markets" will abate. 'Around market' and 'in-market' actions abound to drive outcomes within the supposed market administrative construct.

[1] Thanks to our colleagues Robin Lunt and Hannah Bucher for their constructive advice and input.

The future of energy markets could be determined by a single application, currently pending before FERC, regarding a request by ISO New England (ISO-NE) for a two-year RMR contract for Exelon's Mystic Generating Station for fuel security reasons. The import of this decision cannot be overstated and, to our mind, it determines the future of the RAMM. The assertion of Mystic's existential import to the RAMM seems, at first blush, a bit precious. But it is not.

To get the reader there, this White Paper first addresses each of the state 'around market' action models and provides an update, then delves into the state of affairs at the new FERC and what is germinating from the markets themselves. We conclude the Mystic RMR application is the tipping point for the future of energy markets in the United States. For FERC, then, Mystic becomes its defining decision for the future of the RAMM.

II. The Semi-Annual 'Around Market' Solution Update

In our initial White Papers, we offered three 'around market' action types: (1) the maintenance fee (or backdoor capacity payment); (2) the prescriptive replacement capacity approach; and (3) vertical reintegration, or re-regulation. These constructs hold firm, though as we describe later in this White Paper, the RAMM operators are also studying and acting upon the playbook pioneered by Exelon, the undisputed "O.G."[2] of 'around market' solutions.

As mid-2018 approaches, the maintenance fee approach continues to thrive in states. Pending federal court challenges to both the New York and Illinois ZEC programs have not deterred states from adopting similar state programs (*e.g.*, New Jersey) or continuing to explore solutions to provide out of market compensation to select generators (*e.g.*, Connecticut). And if one were to prognosticate which state will be next, the Exelon earnings call is always a good place to start. Late last month Exelon CEO Chris Crane made clear Pennsylvania is the next frontier for the maintenance fee 'around market' solution.[3]

The prescriptive replacement capacity approach has proven difficult in practice, as Massachusetts' experience shows. Opposition to delivery infrastructure for hydropower, Massachusetts' primary preferred zero-emission replacement capacity for exiting nuclear plants, has put a wrench in this approach in New England.

Finally, Ohio continues to be ground-zero for 'around market' actions, with a Federal Power Act (FPA) Section 202(c) application pending before the DOE, where FirstEnergy Solutions Corp. (FES) has sought relief on behalf of certain coal and nuclear generators within PJM.

We begin with a catalogue of what has been happening across the markets.[4]

a. New Jersey – the Maintenance Fee Lives

New Jersey lawmakers passed a measure in April 2018 which, subject to the Governor's approval,[5] will carry on the ZEC legacy of its neighbor, New York, and also Illinois. New Jersey Governor Philip D. Murphy (D) framed nuclear energy as "the biggest bridge we have to [the

[2] For our less hip hop savvy readers, "O.G." means "Original Gangster," which according to Wikipedia owes its provenance to eventual Law & Order star Ice-T, or it identifies a criminal gang from Sweden. *See,* Original Gangster Home Page, Wikipedia, *available at* https://en.wikipedia.org/wiki/Original_gangster.

[3] Exelon Q1 Earnings Call Transcript (Apr. 29, 2018) (comments of CEO Chris Crane that "[w]e continue to focus on optimizing value for ExGen business by seeking fair compensation for our carbon-free generation fleet in Pennsylvania as we have done with the ZECs in New Jersey, Illinois and New York"), *available at* https://seekingalpha.com/article/4168663-exelon-exc-q1-2018-results-earnings-call-transcript?part=single.

[4] While dense, this catalogue is necessary to show what has happened in just over a year since our last paper on this topic.

[5] The Governor has 45 days from the date of passage (April 12, 2018) to sign the bills into law or, in the alternative, issue a conditional or total veto on the legislation.

state's] clean energy future"[6] and the ZEC program, taken together with an ambitious renewable portfolio standard (RPS) (50 percent by 2030), has set the stage for New Jersey's emergence as a leader in aggressive 'around market' action.

New Jersey's ZEC program is housed within Senate Bill S2313, pursuant to which the state's nuclear power plants will receive approximately $300 million annually from ZEC credits purchased by the state's utility companies.[7] In order to qualify for the ZEC program, nuclear power plants must demonstrate to the New Jersey Public Utilities Board (NJPUB) that fuel diversity, air quality, and other positive environmental attributes would be placed at risk if a facility cannot fully cover its operational costs.[8]

If a nuclear plant is deemed eligible by the NJPUB, public utilities will be required to purchase ZECs from that facility on a monthly basis as well as authorized to recover the costs associated with the procurement of ZECs.[9] Under the terms of the bill, New Jersey utility companies will recover those costs in the form of a non-bypassable, irrevocable charge imposed on their distribution customers.[10] The charge, set at $0.004 per kilowatt hour (kWh), is intended to "reflect[] the emissions avoidance benefits associated with the continued operation of selected nuclear power plants."[11]

Every three years, the operators of an eligible facility must submit detailed financial information to reaffirm that the plant is still in need of the subsidy. The bill also provides an off-ramp if the ZEC charge becomes unaffordable for utility customers. At its discretion, the NJPUB may reduce the ZEC charge so long as it will still be "sufficient to achieve the State's air quality and other environmental objectives."[12]

New Jersey's two operational nuclear power plants, the 2,282 MW Salem Nuclear Generating Station and the 1,180 MW Hope Creek Nuclear Generating Station, account for 95 percent of the state's zero-emission, carbon-free electric generation resources.[13] The legislation emphasizes that, without the carbon-free energy produced by nuclear power plants, the state will be unable to meet its goal of 100 percent clean energy generation by 2050 as outlined in the "Energy Master Plan of New Jersey" and will fall well short of the state's goal to reduce greenhouse gas emissions (GHGs) by 80 percent by 2030.[14]

New Jersey's embrace of the maintenance fee approach illustrates state 'around market' actions are alive and well. Moreover, it shows FERC-directed or sanctioned 'in-market' actions taken as described below, and activities at the FERC, specifically the ballyhooed FERC technical conference held May 1-2, 2017, will not mollify states. States are distressed with the "market" outcomes affecting electricity generation options for their citizens, and they will continue to take action to correct for it.[15] Thus, with each

[6] Nick Corasaniti and Brad Plumer, *New Jersey Takes a Big Step Toward Renewable Energy (and Nuclear Gets Help, for Now)*, N.Y. Times (Apr. 12, 2018), https://www.nytimes.com/2018/04/12/nyregion/new-jersey-renewable-energy.html.

[7] Mike Catalini, *New Jersey passes $300 million nuclear subsidy*, Electric Light & Power (Apr. 13, 2018), https://www.elp.com/articles/2018/04/new-jersey-passes-300-million-nuclear-power-subsidy.html.

[8] S2313, 218th Leg., First Annual Sess. (N.J. 2018) at § 3(a).

[9] *Id.* § 3(i)(2).

[10] *Id.* § 3(j)(1).

[11] *Id.*

[12] *Id.* § 3(j)(3).

[13] Exelon's Oyster Creek facility is scheduled to be retired in October 2018. *See*, Press Release, Exelon Corporation, *Exelon Generation Announces Timeline for Retirement of Oyster Creek Generating Station* (Feb. 2, 2018), http://www.exeloncorp.com/newsroom/oyster-creek-retirement-2018. Exelon also owns 43 percent of the Salem substation and PSEG owns 57 percent of Salem and 100 percent of Hope Creek. *See*, PSEG Power LLC, *About Our Plants*, https://www.pseg.com/family/power/nuclear/plants.jsp (last visited May 3, 2018).

[14] N.J. Stat. Ann. § 26:2C et. seq. (2007).

[15] *See*, Docket No. AD17-11-000, State Policies and Wholesale Markets Operated by ISO New England Inc., New York Independent System Operator, Inc., and PJM Interconnection, L.L.C., *available at* https://www.ferc.gov/EventCalendar/EventDetails.aspx?ID=8663&CalType=%20&CalendarID=116&Date=&View=Listview.

correction comes another intervention in the RAMMs deployed in PJM, ISO-NE, and NYISO.

b. Connecticut – Slowly, Steadily, and Shrewdly

Connecticut is not as far down the 'around market' line as New Jersey, but it continues to move towards its own 'around market' outcome at a steady pace. The financial viability of Millstone, Connecticut's only operational nuclear power plant remains up for debate; nevertheless, Governor Dannel P. Malloy (D) has sent a strong signal prioritizing the role of nuclear in the state's clean energy portfolio.

Specifically, Malloy signed Executive Order No. 59 last summer, which directed the Public Utilities Regulatory Authority (PURA) and Department of Energy and Environmental Protection (DEEP) to conduct a resource assessment of the Millstone nuclear plant.[16] Following Executive Order No. 59, the Connecticut General Assembly passed Public Act 17-3 requiring DEEP and PURA to perform an appraisal of nuclear power generating facilities to assess the economic conditions of those facilities and the impact that early retirement may have on electric markets, fuel diversity, and the environmental goals set by the state.[17] Governor Malloy signed Public Act 17-3 into law in November 2017.

PURA and DEEP issued a report on their findings on February 1, 2018, and the agencies simultaneously released an outside assessment performed by the consulting firm Levitan & Associates, Inc. (LAI).[18] The PURA and DEEP report – as well as the LAI report – concluded Millstone's zero-carbon electricity generation is crucial to meeting emissions targets and plays a vital role in regional electricity generation. For example, the PURA and DEEP Report provided that:

> The hypothetical retirement of the Millstone Nuclear Units would have significant negative impacts on the region's electric grid with respect to fuel diversity, energy security, and grid reliability. The retirement of Millstone's 2,200 MW facility would not trigger the need for new capacity in Connecticut specifically, but it would cause the New England region as a whole to need new generation capacity. Replacement capacity procured through the ISO New England market would likely be natural gas-fired, exacerbating security and system reliability issues due to the region's over-dependence on natural gas.[19]

The PURA and DEEP Report also noted as follows:

> A variety of mechanisms can be utilized to provide revenue stability for new and existing zero carbon resources, including long-term power purchase contracts (such as authorized by June Special Session Public Act 17-3) and zero emissions credits (ZECs). At present, there are no mechanisms to retain Millstone and allocate the costs regionally. The ISO New England has indicated in this proceeding that Millstone would not be eligible for a reliability-must-run contract on a transmission security basis. In January 2018, FERC rejected a DOE Notice of Proposed Rulemaking (NOPR) that

[16] Exec. Order No. 59 (July 25, 2017) *available at* http://portal.ct.gov//-/media/32CB330A0E0.pdf.

[17] Public Act 17-3, S.B. No. 1501, 2017 Gen. Assem., June Spec. Sess. (Conn. 2017).

[18] Conn. Dep't. of Energy & Envtl. Prot. and Conn. Pub. Utils. Regulatory Auth., *Resource Assessment of Millstone Pursuant to Executive Order No. 59 and Public Act 17-3; Determination Pursuant to Public Act 17-3* (2018) (DEEP/PURA Report) *available at* http://www.dpuc.state.ct.us/DEEPEnergy.nsf.pdf; Levitan & Associates, *Resource Assessment on the Economic Viability of the Millstone Nuclear Generating Facilities* (2018) (LAI Assessment) *available at* http://www.dpuc.state.ct.us/LAI.Millstone.pdf.

[19] DEEP/PURA Report, p. 2-3.

> would have required the region to compensate nuclear facilities, among other things, on a cost-of-service basis. Promising concepts such as the Brookfield-Conservation Law Foundation Dynamic Clean Energy Forward Market are still under discussion. Meanwhile, the ISO New England has recently released a fuel security study that predicts the region would experience rolling blackouts if Millstone were unavailable in future winters, underscoring the regional dependence on the unit.[20]

At the same time, both the PURA and DEEP Report and the LAI Report concluded Millstone is likely to remain financially stable at least through 2035.[21] LAI's data showed even under "intentionally harsh market and operating assumptions," Millstone's financial prospects are positive.[22] Dominion Energy Nuclear Connecticut, Inc., a subsidiary of Virginia-based Dominion Energy (collectively "Dominion"), is the owner and operator of the Millstone facility and disputes these results and conclusions. Dominion claims the facility's profitability is low and the plant is at risk of retirement. While Dominion has provided some financial information to the agencies under protective order, DEEP and PURA remain unsatisfied with the information, noting in their report that the "late-filed, unsubstantiated summary data" submitted by Dominion fails to resolve any uncertainty surrounding Millstone's financial and operational future.[23]

Despite these disagreements around the future economics of Millstone, DEEP, PURA, and LAI agree retiring Millstone would impact the state's economic stability and environmental goals.[24] LAI's assessment laid out three case studies to evaluate the impact of Millstone's retirement: (1) the 0% replacement case ("Do Nothing"); (2) the 25% Replacement Case ("Do Something"); and (3) the 100% replacement case ("Do Everything"). These studies demonstrate the early retirement of Millstone would result in higher electricity costs for Connecticut ratepayers and an increase in carbon dioxide emissions throughout the state and the region. The Do Nothing scenario assumes Millstone's capacity would be replaced with natural gas "allow[ing] the markets to work" and would cost customers approximately $719 million dollars. Under the Do Something and Do Everything scenarios, electric distribution companies would be directed to procure renewable energy and demand side resources equivalent to one quarter or the full lost production from Millstone in the Do Something and Do Everything cases, respectively. Costs to customers could reach as high $5.5 billion under the Do Everything scenario.[25]

For now, DEEP and PURA recommend allowing Millstone to compete in DEEP's procurement process for new and existing zero-emission facilities. In the solicitation, existing zero-emission facilities like Millstone can submit information that proves it is "confirmed at risk."[26] If a facility meets its burden of showing it is "at risk," then both price and non-price evaluation factors, such as the facility's contribution to fuel diversity, grid reliability, and emissions avoidance come into play.[27] DEEP's request for proposals (RFP) was released on May 1, 2018, and petitions for an "at risk" determination were due by May 18, 2018. DEEP and PURA anticipate selecting the winners of the solicitation by late 2018 or early 2019.

With this approach, Connecticut has added a new page to the 'around market' playbook. Connecticut's competitive procurement solution through Public Act 17-3 is driven by the inability of Millstone to survive in ISO-NE and its ineligibility for a RMR contract on a transmission

[20] DEEP/PURA Report, p. 3.
[21] DEEP/PURA Report, p. 3; LAI Assessment, pp. ES-2, 122.
[22] LAI Assessment, p. 122.
[23] DEEP/PURA Report, p. 39.
[24] DEEP/PURA Report, pp. 39-40.
[25] LAI Assessment, pp. ES-5-7, 92.
[26] DEEP/PURA Report, p. 42.
[27] DEEP/PURA Report, pp. 41-42.

security basis. Connecticut has followed a two-step approach we would expect to see repeated in other states with troubled generators: (1) first peruse the RAMM tariff catalogue for an 'in-market' solution such as RMR that will spread the costs of a facility across customers throughout the RAMM; and (2) if no fit can be identified, proceed to the 'around market' solution and have in-state customers cover the costs.

Connecticut thus is following a roundabout path to the maintenance fee approach established in Illinois, New York, and New Jersey. Connecticut first makes the generators in question eligible for existing procurement processes, but then adds the "at risk" component allowing for consideration of additional factors for facilities that carry the burden of establishing the generator is in fact "at risk." Evaluating this process at face value, "at risk" generators would appear to have a leg up or incremental advantage over other generators based on their unique attributes. Connecticut has shrewdly crafted this 'around market' solution. It allows the state to stay within the safe space of competitive procurement and avoid the subsidy criticisms pushed on ZEC programs, all while achieving the same outcome: a new and consistent revenue stream that allows its nuclear generator to remain online.

c. *Massachusetts – Prescriptive Replacement Capacity Hits the Wall*

Moving north, Massachusetts has committed to an 'around market' solution of prescribing replacement capacity. This approach says "build these assets," as opposed to the "subsidize these assets" approach of the maintenance fee. Faced with the planned retirement of the Pilgrim Nuclear Power Station in June 2019, the Massachusetts Governor's office and the state legislature are backing an aggressive goal to fill the clean energy vacuum left in Pilgrim's wake by accelerating the development of offshore wind and hydropower projects.

Governor Charlie Baker (R) signed a bipartisan measure in 2016 directing utility companies to solicit and contract for 1,200 MW of clean energy (hydropower or another Class I renewable resource) by 2022 and 1,600 MW of offshore wind by 2027.[28] To help fulfill this mandate, Governor Baker's administration conducted a competitive solicitation for hydropower and transmission projects, ultimately selecting the Northern Pass project from Eversource Energy in January 2018. The Northern Pass project would have imported hydropower from Hydro-Quebec in Canada and run through New Hampshire along a 192-mile, 1,090 MW transmission line.[29] Northern Pass was the 'around market' backbone designed to deliver replacement zero-emission generation and firm up other renewable projects in the Bay State.

Close geographic confines in New England, however, render 'around market' solutions a neighborhood affair. Unfortunately for Massachusetts and H. 4568, New Hampshire did not view the Northern Pass 'around market' backbone as favorably as Massachusetts. The New Hampshire Site Evaluation Committee shot down the project at the end of March 2018, citing concerns about the loss of tourism dollars because of a transmission line that would essentially bisect the state.[30]

The runner-up in the competitive solicitation, a 145-mile, 1,100 MW transmission line submitted by Central Maine Power (a subsidiary of Avangrid) known as the New England Clean Energy Connect (NECEC) project, is next up to deliver 1,200 MW of hydropower. Estimated to cost $950 million, the NECEC project would also draw power from a Hydro-Quebec facility and run

[28] An Act Relative to Energy Diversity, H. 4568, 189th Gen. Court, Reg. Sess. (Mass. 2016).
[29] John Chesto, *Mass., utilities cut ties with Northern Pass power line project*, The Boston Globe (Mar. 28, 2018), https://www.bostonglobe.com/business/2018/03/28/northern-pass-power-line-short-circuited/fwF8ceb54ccFjDyx8T1ifJ/story.html.
[30] Annie Ropiek, *Site evaluation committee casts unanimous vote against Northern Pass project*, New Hampshire Public Radio (Feb. 1, 2018), http://nhpr.org/post/site-evaluation-committee-casts-unanimous-vote-against-northern-pass-project#stream/0.

through a partially constructed corridor eventually docking at a substation in Lewiston, Maine.[31]

While the NECEC project is supported by Maine Governor Paul LePage (R), it is also facing opposition from certain environmental and industry groups.[32] Environmental organizations favor a different form of prescriptive replacement that relies on offshore wind. Select industry groups, on the other hand, foretell the same outcome with round two of the 'around market' backbone in Massachusetts. For example, Dan Dolan, the President of the New England Power Generators Association (NEPGA) summed up the NECEC project as follows: "Massachusetts has moved from the fatally flawed Northern Pass to the fatally flawed Maine project that has not received a single state or federal permit."[33]

Despite the support from Gov. Baker and Gov. LePage, progress may be impeded or stalled before the DPU even has an opportunity to evaluate the NECEC. On May 4, 2018, the four chairs of the Maine Legislature's Committees on Environment and Natural Resources and Energy, Utilities and Technology delivered a letter to the DPU stating their opposition to the NECEC project. The lawmakers are concerned NECEC will not actually decrease GHG emissions in the region, may result in lost jobs and tax revenue in Maine, and may jeopardize the tourist economy of the Kennebec Gorge, a whitewater rafting and fishing area located near the proposed transmission line.[34] These concerns echo those voiced by the New Hampshire Site Evaluation Committee – which could turn out to be a bad omen for the future of hydropower as the backbone for the prescriptive replacement capacity approach in Massachusetts.

Massachusetts' offshore wind program is moving forward in tandem with the state's hydropower solicitation. Determined not to meet the same fate as the doomed Cape Wind project, advocates believe the opportunity to add 1,600 MW of offshore wind power to the state's grid is an important one. For example, a report delivered by the Environment America and the Frontier Group noted the cost of new offshore wind has fallen by 27 percent in the last five years.[35] An assessment by the Department of Energy's National Renewable Energy Laboratory (NREL) found that because offshore wind can generate power at night and is immune to seasonal barriers to operation, it has the potential to complement existing renewable energy by reducing the demand for costly peak power.[36] However, not all stakeholders share this optimistic point of view. NEPGA's Dolan stated the offshore wind solicitation "represents the single biggest step away from a competitive electricity market ever taken in New England."[37]

Setting aside concerns about the viability of New England's electricity market, developers are eager to capitalize on the potential of offshore wind. Three developers submitted bids to the state when the first RFP in a multi-stage procurement process was released in June 2017.[38] Bay State Wind (backed by Eversource and the Danish firm Ørsted), Deepwater Wind (National Grid and FirstLight Power Resources), and Vineyard Wind (Avangrid Renewables and the Danish firm

[31] WBUR News & Wire Services, *Mass. and utilities ditch N.H.-Routed Northern Pass for hydro project through Maine*, WBUR (Mar. 28, 2018), http://www.wbur.org/bostonomix/2018/03/28/mass-ditches-northern-pass.
[32] *Id.*
[33] *Id.*
[34] Michael Kuser, *Maine lawmakers signal opposition to NECEC*, RTO Insider (May 6, 2018), https://www.rtoinsider.com/iso-ne-necec-clean-energy-solicitation-91865/.

[35] Gideon Weissman, Rachel J. Cross, and Rob Sargent, Environment America and Frontier Group, *Wind Power to Spare: The Enormous Potential of Atlantic Offshore Wind*, p. 2 (2018) (Environment America Report) *available at* https://environmentamerica.org/sites/environment/files/reports/.pdf.
[36] *Id.* at 7.
[37] Shira Schoenberg, *Gov. Charlie Baker signs hydropower wind energy bill into law*, MassLive (Aug. 8, 2016), http://www.masslive.com/politics/index.ssf/2016/08/gov_charlie_baker_signs_hydrop.html.
[38] Massachusetts Dep't. of Energy Resources, Request for Proposals for Long-Term Contracts for Offshore Wind Energy Projects (June 29, 2017), *available at* https://macleanenergy.files.wordpress.com/2017/02/section-83c-request-for-proposals-for-long-term-contracts-for-offshore-wind-energy-projects-june-29-2017.pdf.

Copenhagen Infrastructure Partners) each submitted bids for projects capable of generating between 200 and 800 MW of power that also include transmission and storage components. Vineyard Wind submitted its proposal on an accelerated timeline, having already applied for federal and state permits, and claimed that construction would begin in 2019 and be capable of delivering power by 2021.[39] The Massachusetts Department of Energy Resources and the state's distribution companies are expected to announce the winning bid or bids by May 23, 2018 and the contracts must be executed by July 2, 2018 and submitted to the Massachusetts DPU by July 31, 2018.[40]

The state of 'around market' play in Massachusetts illustrates two points. First, reliance on new generation resources as part of any 'around market' solution has risk with tangible emission impacts if new zero-emission resources cannot be brought to market. Second, even in an environment with relatively broad support for zero-emission resources, opposition to delivery infrastructure remains as significant as ever. The Massachusetts experience shows the barriers with the prescriptive replacement capacity approach. Put simply, it is much easier to subsidize what already exists than start a string of fights about building something new. It bears watching whether this experience forecloses this 'around market' avenue and drives states toward the maintenance fee approach or even the vertical re-integration approach.

d. Ohio – the 'Around Market' Birthplace Stays at the Bleeding Edge

Ohio was – and continues to be – the most likely candidate to follow the vertical reintegration approach. The past few months have seen a bankruptcy filing from merchant FES and a request to the DOE pursuant to Section 202(c) of the Federal Power Act to obtain temporary relief for ailing nuclear and coal generators in Pennsylvania, Ohio, and throughout PJM. FES has actively pursued a number of solutions including legislative and regulatory fixes as well as federal relief through their support of the Grid Resiliency Pricing Rule.[41]

While Ohio leads the nation in 'around market' attempts to preserve its affected coal and nuclear generators, the efforts have failed to provide any relief. In 2016, FERC issued a ruling on AEP and First Energy Power Purchase Agreements (PPAs) that were designed to support these generators through a distribution rider that would allow retail customers to cover the gap between generator costs and the PJM revenues. FERC found that the PPAs violated FERC affiliate power sales restrictions, despite the state commission approval.[42]

State legislation introduced last year is stalled in committee[43] and the DOE NOPR was met with

[39] Marcy C. Serreze, *3 competing offshore wind developers submit bids to produce electricity for Massachusetts utilities in Clean Energy RFP*, MassLive (Dec. 20, 2017) http://www.masslive.com/news/index.ssf/2017/12/competing_offshore_wind_bids_s.html.

[40] Letter from Angela M. O'Connor, Chairman of the Massachusetts Dep't. of Public Utilities re: Long-Term Contracts for Offshore Wind, D.P.U. 17-103, Notice of Extended Selection Date (Apr. 25, 2018), *available at* http://170.63.40.34/DPU/FileRoomAPI/api/Attachments/DPU_Reply_Letter_to_EDC_42518.pdf.

[41] By way of disclosure, one of the co-authors here has submitted an affidavit to FERC on behalf of FES.

[42] *Order Granting Complaint*, 155 FERC ¶ 61,101 (2016); *Order Granting Complaint*, 155 FERC ¶ 61,102 (2016).

[43] House Bill 381 was introduced in October 2017. Under the terms of a zero-emissions nuclear resource (ZENR) program, the bill would allow electric distribution companies to collect a charge set at $2.50 from residential customers and the lesser of $3,500 or 5% of commercial and industrial customer bills. The bill was referred to committee on October 17, 2017, but the committee has taken no action since that date. *See*, H.B. 381, 132nd Gen. Assem., Reg. Sess. (2017).

Senate Bill 128 and its companion, House Bill 178, were introduced April 2017. These bills also established a ZENR program which would require electric distribution utilities to purchase zero-emissions nuclear credits (ZENCs) and recover the purchase costs through a nonbypassable rider imposed on retail electric service customers. The bill included criteria for qualifying zero-emission nuclear a resounding defeat at the FERC in January 2018. As a result, FES remains on course to retire its two Ohio nuclear facilities, Davis-Besse and Perry, as well as its twin-reactor Beaver Valley plant in western Pennsylvania within the next three years. The FES bankruptcy filing and FPA Section 202(c) request represent the latest, and perhaps last, hope of an 'around market solution' for the Buckeye state.

A report prepared by the Brattle Group on behalf of the organization Nuclear Matters offers an assessment of the impacts the early retirement of FirstEnergy's nuclear plants could have on the region and the PJM market more broadly.[44] The report determined the closure of FirstEnergy's nuclear facilities, in addition to the impending retirement of Exelon's Three Mile Island facility, may result in the addition of over 21 million metric tons of CO_2 emissions annually and contribute to a significant increase in electricity prices in Ohio and Pennsylvania.[45]

If and when these plants are removed from the grid, replacing their capacity and clean energy could be a costly and decades-long venture. The report emphasizes the total zero-emission energy generated by these facilities is greater than all of the wind and solar generated in PJM's current portfolio. If PJM loses this source of clean energy, the Brattle Group estimates that it will take 16 years of accelerated renewable energy deployment to break even on the level of zero-emissions generation that would have been achieved by maintaining the nuclear plants and continuing to add renewables at the current rate of 2.4 million MWh each year.[46] Moreover, the Brattle Group estimates replacing the FirstEnergy and Exelon plants with a fleet of renewables would cost between $1.9 billion and $2.2 billion annually. While the report did not take into account the cost of maintaining or subsidizing the nuclear plants, these stark numbers may be enough to sway state or federal regulators to provide some measure of relief.

Against this backdrop, FES will work its way through bankruptcy proceedings, while First Energy Corp. charts a course toward a re-regulated future. FES and FirstEnergy Nuclear Operating Company (FENOC) filed petitions for Chapter 11 bankruptcy on March 31, 2018. One month later, FES and FENOC reached an agreement in principle with creditors to fully release FirstEnergy Corp. and its remaining subsidiaries from all claims associated with the bankruptcy.[47] Shortly thereafter, FES filed a Certification Letter with the U.S. Nuclear Regulatory Commission (NRC) on April 25, 2018 formally notifying the NRC of its decision to retire its nuclear facilities.

On an earnings call on April 23, 2018 FirstEnergy Corp.'s CEO Chuck Jones voiced his confidence in the company as it moves away from the competitive generation market and makes a transition to a fully regulated entity, but maintained the importance of nuclear power in the region stating he will "continue personally to advocate for regulatory or legislative solutions, including FES's application for an emergency order under the Federal Power Act that recognizes the attributes of fuel secure baseload generation."[48]

Absent relief for FES, FirstEnergy Corp.'s intentions appear clear: exit the merchant business and internally adopt the ultimate 'around market'

facilities both as an in-state or out-of-state resource. The nonbypassable rider was to be set so that no retail service customer would see their bill increase by more than 5% when compared to June 2015. The bills were referred to committee on April 26, 2017 and May 1, 2017, respectively. *See*, S.B. 128, 132nd Gen. Assem., Reg. Sess. (2017); H.B. 178, 132nd Gen. Assem., Reg. Sess. (2017).

[44] Dean Murphy and Mark Berkman, The Brattle Group, *Impacts of Announced Nuclear Retirements in Ohio and Pennsylvania* (2018) (Brattle Group Report), *available at* http://files.brattle.com/files/13725_nuclear_closure_impacts_-_oh_pa_-_apr2018.pdf.

[45] Brattle Group Report, pp. 3, 8.

[46] *Id*. at 6.

[47] Press Release, FirstEnergy, *FirstEnergy Announces Agreement in Principle with Creditors in FirstEnergy Solutions' Chapter 11 Proceedings* (Apr. 23, 2018), http://investors.firstenergycorp.com/file/Index?KeyFile=393127798#gsc.tab=0.

[48] FirstEnergy Q1 2018 Earnings Call Transcript, *available at* https://seekingalpha.com/article/4164971-firstenergy-fe-ceo-charles-jones-q1-2018-results-earnings-call-transcript.

solution of vertically reintegrating its business. The next question is whether its home state of Ohio follows suit.

III. Gas Generators Continue to Struggle

In our prior White Paper, we posited that:"[t]he baseload exit problem in organized electricity markets [RAMM] has two discrete phases. The first development is the bankruptcy or closure, or threat of bankruptcy and closure, of power plants. A follow-on phase then ensues involving emergency state action to preserve the baseload capacity, with significant associated costs, political and otherwise." We further provided "[i]f gas-fired generation is indeed entering the bankruptcy or threat of bankruptcy phase of this problem, the next question is when does the second phase begin? Said another way, the waiting game is on [to] see if: (1) an 'around market' solution is developed to preserve gas-fired generation in organized electricity markets or (2) whether the threat of gas exits triggers a re-regulation push in any state."

The two phases of baseload exits and 'around market' developments hold true, and gas remains in the troubled waters of the bankruptcy phase with increasing frequency. California remains the forefront of the gas problem in organized electricity markets, but Texas seems to be following on California's heels.

a. California – It's Hard Out There for Natural Gas

California gas generators have moved into the phase of seeking an 'around market' or 'in-market' lifeline to stay solvent. In perhaps the most obvious conclusion offered in this White Paper, it is a tough time to be a fossil generator in California as gas follows coal down the path of economic unviability.

The California Independent System Operator (CAISO) is facing a number of challenges that point to an uncertain future for natural gas generators in the state. Oversaturation of renewables, excess natural gas capacity, and the potential shortfall of flexible generation resources have left CAISO and California regulators in a bind as they work to develop a solution that can meet the state's clean energy and emission reduction goals.[49] Natural gas operators like Calpine and Dynegy have been forced to retire their Sutter and Moss Landing power plants while La Paloma Generating Company, which operates the La Paloma natural gas plant, filed for bankruptcy in 2016.

Neither existing nor new gas plants are exempt from the struggle in California. Just in recent months, Calpine withdrew its application for its new 255 MW Mission Rock Energy Center and Glendale, a municipal utility, is walking away from a gas generation project.[50] In March, NRG Energy announced it will close three generators, the Etiwanda Generating Station (June 1, 2018), Ormond Beach Generating Station (October 1, 2018), and the Ellwood Generating Station (January 1, 2019), respectively.[51] The plants are owned by GenOn Energy Inc., which is owned by NRG Energy and declared bankruptcy in June 2017.[52] All units were closed due to "economic reasons."[53] The "market" outcome that squeezed high fixed cost nuclear and coal-fired power plants hits gas too, particularly in states with extensive renewable penetration.

California's response to the gas illness in CAISO is to administer medication to keep

[49] Herman K. Trabish, *As gas plants struggle, California seeks new flexible capacity strategies*, Utility Dive (June 27, 2017), https://www.utilitydive.com/news/as-gas-plants-struggle-california-seeks-new-flexible-capacity-strategies/445760/.
[50] Julian Spector, *Glendale shelves $500 million gas plant to examine clean alternatives*, GreenTech Media (Apr. 17, 2018), https://www.greentechmedia.com/articles/read/glendale-shelves-500-million-gas-plant-to-examine-clean-alternatives#gs.1P=4fG0.
[51] Samantha Masunaga, *NRG subsidiary to close three power plants in Southern California*, L.A. Times (Mar. 9, 2018), http://www.latimes.com/business/la-fi-nrg-plants-20180309-story.html.
[52] *Id.*
[53] *Id.*

patients comfortable, but there will be no long-term medical miracles. Consistent with this plan, regulators and CAISO are attempting to develop a plan for the "orderly phase out of natural gas generation," which will have to "include a mechanism for maintaining the financial viability of natural gas plants."[54]

One CAISO solution was the Temporary Suspension of Resource Operations (TSRO) initiative. Introduced in May 2017, the program would have allowed generators not needed for reliability to shut down for long periods when they are not profitable. The TSRO program would have also established a type of capacity payment to those plants if CAISO denied their request for TSRO status.[55] Ostensibly developed in response to the La Paloma bankruptcy filing, the TSRO was a fleeting remedy that was ultimately tabled in October 2017 due to "intractable differences in stakeholder positions" on key details of the proposal.[56]

An 'around market' solution for gas generators has not developed in California, nor is there any reasonable likelihood that the state will take such action. As such, recent months have seen gas generators turn to an old stalwart to stay online – the RMR contract. While not an 'around market' solution like ZECs or Massachusetts' H. 4568, the RMR construct was essentially 'around market' before there was 'around market.' The RMR provides generators with a contract under which "CAISO has the right to call upon a generator to provide energy, black start services or voltage support to meet reliability needs. The ISO compensates the generator for keeping capacity available for dispatch, with costs allocated to benefitting load-serving entities."[57] An RMR contract therefore is an 'in-market' cousin of the maintenance fee approach used by the states in 'around market' contexts.

Calpine – recently acquired by an affiliate of Energy Capital Partners and a consortium of other investors, including Access Industries Inc. and Canada Pension Plan Investment Board – has aggressively sought RMR contracts for its 593 MW Metcalf plant and its smaller Feather River, and Yuba City plants.[58] The out-of-market RMR payments created fissures in the California regulatory world, with CAISO approving the contracts and the California Public Utilities Commission, other generators, and traders opposing the contracts.[59] The dispute resulted in a settlement, approved by FERC on April 30, 2018, with each generator's classification changing from Condition 2 to Condition 1.[60] A Condition 2 generator is eligible for full revenue requirements recovery while a Condition 1 generator is eligible for only a portion of revenue requirements recovery.[61] In addition, each generator is subject to a must-offer requirement.

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[54] Ivan Penn and Ryan Menezes, *Californians are paying billions for power they don't need*, L.A. Times (Feb. 5, 2017) http://www.latimes.com/projects/la-fi-electricity-capacity/.

[55] California ISO, *Temporary Shutdown of Resource Operations: Draft Final Proposal*, p. 15 (Sept. 6, 2017), *available at* http://www.caiso.com/Documents/DraftFinalProposal-TemporaryShutdownofResourceOperations.pdf.

[56] California ISO, *Temporary shutdown of resource operations*, http://www.caiso.com/informed/Pages/StakeholderProcesses/CompletedClosedStakeholderInitiatives/TemporaryShutdown_ResourceOperations.aspx (last visited May 14, 2018).

[57] Robert Mullin, *CAISO Seeks Reliability Designations for Calpine Peakers*, RTO Insider (Mar. 7, 2017), https://www.rtoinsider.com/caiso-reliability-calpine-39817/.

[58] Press Release, Calpine Corporation, *Consortium Led by Energy Capital Partners Completes Acquisition of Calpine Corporation; Announces Management Roles and Board of Directors* (Mar. 9, 2018), http://electricenergyonline.com/article/energy/category/mergers-acquisitions/58/687070/consortium-led-by-energy-capital-partners-completes-acquisition-of-calpine-corporation-announces-management-roles-and-board-of-directors.html.

[59] Jason Fordney, *CAISO, Stakeholders Debate RMR Revisions*, RTO Insider (Feb. 4, 2018), https://www.rtoinsider.com/cpuc-rmr-cpm-ratepayer-costs-85524/.

[60] *Letter Order*, Docket No. ER18-240-00, 163 FERC ¶ 61,073 (2018); *Letter Order*, Docket No. ER18-230-001, 163 FERC ¶ 61,072 (2018).

[61] Jason Fordney, *FERC Approves CAISO-Calpine RMR Settlements*, RTO Insider (May 1, 2018) ("The Metcalf settlement reduces the plant's annual fixed revenue requirement from about $72 million to $43 million through

This controversial outcome has sparked an effort by CAISO to review and potentially modify its RMR contract approach and capacity procurement mechanism (CPM) designations.[62] The process contemplates two phases over the next 18 months. Phase 1 will take up "RMR items that require immediate attention and implementation," namely imposing a must-offer requirement on RMR generators.[63] Phase 2 takes the longer view and considers the interrelationship of RMR and CPM frameworks, with the possibility of integrating the two into a single "procurement mechanism" in the words of CAISO.[64]

Whether CAISO's RMR survives in its current form or not, the Calpine experience illustrated deep divides surrounding the use and utility of this construct within CAISO. The future of RMR is unclear, but one thing that the dispute unambiguously established is that the RMR construct is not a panacea for gas generators in CAISO. At the very least, the RMR controversies set up a scramble for regulatory favor within CAISO. Winners get RMR contracts; losers fail. This is traditional – and definitely necessary – regulatory rentseeking, one of the hazards 'markets' were supposed to avoid.

b. Will Texas Be the Next California?

As California works to find a cure for its struggling gas generators, we turn to Texas, where phase one of the baseload exit problem in organized electricity markets is going strong.

Generation affiliates of Exelon, the standard-bearer of 'around market' solutions in New York and Illinois, filed for Chapter 11 bankruptcy in November 2017. ExGen Texas Power LLC (ExGen) and its affiliate ExGen Texas Power Holdings LLC cited "historically low prices" and "challenging market conditions" in Texas' ERCOT system as the catalyst for its decision to file for bankruptcy.[65]

The bankruptcy affected five of Exelon's natural gas generating stations in Texas – Handley, Colorado Bend I, ExTex LaPort, Mountain Creek, and Wolf Hollow I. Together, these plants account for more than 3,400 MW of capacity in the state.[66] In April, the Public Utility Commission of Texas approved a transfer of the ownership interests of the ExGen assets to a group of secured lenders.[67]

This decision marks a key development in the state of natural gas markets, which despite tipping the scales of wholesale capacity prices for years, are now suffering from the early symptoms of market fatigue that plagued nuclear and coal.

Reading between the lines, we see Exelon's bankruptcy filing as a clarion call in ERCOT. While Exelon has so far been successful in obtaining favorable 'around market' solutions for its generating facilities in other jurisdictions, it is difficult to imagine a world in which our

2020 if it retains its RMR status and makes the plant operator responsible for routine repairs and capital expenses. Under the agreement, the plant will recover $8 million in 2018 capital items in 12 installments of $675,000 beginning on Jan. 1, 2018. If the RMR agreement is extended, capital recovery would remain at about $8 million per year. The settlement also grants the plant $8 million in 2019 and 2020 if the revised agreement is not renewed and the unit shuts down. The Feather River and Yuba City settlements would reduce each plant's 2018 revenue to about $3.5 million from the previous $4.4 million, with a 2% hike for 2019 and 2020, if the RMRs are renewed"), *available at* https://www.rtoinsider.com/caiso-rmr-reliability-must-run-calpine-pge-91686/.

[62] California ISO, *Review of Reliability Must Run and Capacity Procurement Mechanism: Issue Paper and Straw Proposal for Phase 1 Items* (Jan. 23, 2018), http://www.caiso.com/Documents/IssuePaperandStrawProposal-ReviewReliabilityMustRunandCapacityProcurementMechanism.pdf.

[63] *Id.* at 3.

[64] *Id.* at 3.

[65] Press Release, Exelon Corporation, *Statement on Exelon Generation Texas Power LLC* (Nov. 7, 2017), http://www.exeloncorp.com/newsroom/statement-on-exelon-generation-texas-power-llc.

[66] Edward Klump, *Exelon seeks new path for Texas gas plants via Chapter 11*, E&E News EnergyWire (Nov. 8, 2017), https://www.eenews.net/energywire/2017/11/08/stories/1060065963.

[67] Public Utility Commission of Texas, Docket No. 47836, Order, p. 6 (Apr. 13, 2018).

traditional conceptions of 'around market' solutions take hold in Texas. It is clear, however, that gas plants are a problem in need of a solution. Texas, like California, may be the next battleground where regulators and market operators clash over the appropriate mechanism to achieve this end.

IV. FERC and the Future: The 'In-Market' Solution

FERC's 5-0 decision to reject the DOE NOPR firmly established the agency's position with regard to baseload exits and issues in the markets using the RAMM construct. Put simply, that position is merely an extension of where FERC has previously been. FERC's view is that the RAMM is fine and to the extent market interventions are necessary, the RAMM operators should not be shy – they should intervene.

a. The DOE NOPR Order Frames the State of Play

FERC's order on the DOE NOPR grounds this position. The order recounts the history of how the Commission expressly encouraged the development of competitive power markets:

> Thus, for more than two decades now, support for markets and market-based solutions has been a core tenet of Commission policy. A result of this approach has been that in regions with organized markets, the Commission has largely adopted a pro-market regulatory model, wherein the Commission relies on competition in approving market rules and procedures that, in turn, determine the prices for the energy, ancillary services, and capacity products (where applicable). Under this pro-competition, market-driven system, owners of generating facilities that are unable to remain economic in the market may take steps to retire or mothball their facilities.[68]

The fundamental problem is that the DOE NOPR order starts from the premise of the market instrumentalists – *i.e.*, markets are working. Yet, the rhetoric of "competition" and "markets" belies the reality of what exists beneath the surface. The RAMM is an administrative construct as opposed to an emergent market, and the rules of the game are subject to change. The order acknowledges this (albeit in FERC parlance):

> As part of its ongoing oversight of wholesale electric markets, the Commission continues to evaluate its current rules and has issued several orders to ensure that our rates in our markets remain just and reasonable and not unduly discriminatory or preferential. For example, the Commission has acted to remove barriers to the integration and participation of variable energy and demand response resources, as well as revising or expanding compensation opportunities for various grid services, such as frequency regulation.[69]

Carrying out its charge to move, adjust, and rearrange the administrative construct as necessary, the Commission has recently issued orders to reform the limitations of price formation in markets addressing uplift, settlement increments, and shortage pricing and offer caps.[70] Continual tweaks to these fundamental energy market rules demonstrate that these "markets" are – at best – a work in progress with significant

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[68] *Order Terminating Rulemaking Proceeding, Initiating New Proceeding and Establishing Additional Procedures*, Docket Nos. RM18-1-000 and AD18-7-000, 162 FERC ¶ 61,012 at ¶ 9 (Jan. 8, 2018) (FERC Order on DOE NOPR).

[69] FERC Order on DOE NOPR, ¶ 10.

[70] *Uplift Cost Allocation and Transparency in Markets Operated by Regional Transmission Organizations and Independent System Operators.* Order No. 844, 163 FERC ¶ 61,041 (2018); *Settlement Intervals and Shortage Pricing in Markets Operated by Regional Transmission Organizations and Independent System Operators*. Order No. 825, 155 FERC ¶ 61,276 (2016).

limitations. Beyond "markets," the Commission also has stewardship over reliability, and the order recognizes that the "market" approach sometimes does not result in reliability. "[T]he Commission has held that out-of-market actions may be warranted in certain instances to address demonstrated reliability concerns. The Commission has approved these actions, however, on a limited basis, only as a last resort, and only after there has been a specific showing of an immediate reliability need."[71]

The ultimate outcome of the DOE NOPR order was to defer to the RAMM operators for solutions to the ongoing issues of baseload power exits. It opened a FERC administrative proceeding that deferred to the RTOs and ISOs, stating:

> As the DOE Grid Study documented, we have seen a variety of economic, environmental, and policy drivers that are changing the way electricity is procured and used. These changes present new opportunities and challenges regarding the reliability, affordability, and environmental profile of each region's electric system. These changes may impact the resilience of the bulk power system. As we navigate these changes, the Commission's markets, transmission planning rules, and reliability standards should evolve as needed to address the bulk power system's continued reliability and resilience.[72]

The premise of the docket punted to the RTOs and ISOs to define and address resilience, rather than looking at the fundamental question of whether the RAMM model met resilience and fuel diversity goals:

> The goal of this proceeding is: (1) to develop a common understanding among the Commission, industry, and others of what resilience of the bulk power system means and requires; (2) to understand how each RTO and ISO assesses resilience in its geographic footprint; and (3) to use this information to evaluate whether additional Commission action regarding resilience is appropriate at this time.[73]

Chairman Kevin McIntyre made the inquiry more plain in comments on May 8, 2018, stating "Is there such a thing as a recognizable resilience attribute that one can easily, or at least in terms that are manageable, recognize and identify? If the answer to that is yes, which would sure be convenient, then we just need to go about the simple business of figuring out how to compensate it."[74]

RAMM operators have reacted swiftly. There is a divide, however, between whether this should be top-down or bottom-up. Nevertheless, RAMM operators agree on one thing – the 'in-market' solution is the way to go. From the RAMM perspective, of course, this makes all the sense in the world. If they cannot heal themselves to present politically palatable energy outcomes, the states have demonstrated a willingness and ability to act in their stead. Moreover, the engineering model of a "market" is the *telos* of the RAMMs, so they had better deliver that "market" outcome or faith in the model might be at an end.

b. PJM – Anxious for a FERC Directive, but Embracing 'In-Market' Either Way

PJM stands alone and, anxious to get an 'in-market' resilience solution up and running, asked the FERC to direct RAMM operators to develop an 'in-market' solution. Specifically, PJM's comments provided as follows:

> PJM requests that the Commission direct PJM to submit a filing proposing any necessary Tariff revisions required

[71] FERC Order on DOE NOPR, fn. 14.
[72] FERC Order on DOE NOPR, ¶ 17.
[73] FERC Order on DOE NOPR, ¶ 18.
[74] Gavin Bade, *McIntyre links fuel security questions with resilience proceeding*, Utility Dive (May 8, 2018), https://www.utilitydive.com/news/mcintyre-links-fuel-security-questions-with-resilience-proceeding/523087/.

> to implement resilience planning criteria, and develop processes for the identification of vulnerabilities, threat assessment and mitigation, restoration planning, and any related process or procedures needed to advance resilience planning, including any related procedures that PJM proposes to utilize in order to provide the proper level of transparency while also maintaining the security of the critical infrastructure together with any mitigation plan. As the stakeholder process responds best to deadlines, PJM would ask that the Commission provide for a filing by RTOs on these matters within nine to twelve months after the issuance of Commission direction to RTOs on this issue.[75]

FERC has yet to take any such top-down action, and Chairman McIntyre's May 8, 2018 comments suggest FERC is looking to the RAMM operators to intervene in themselves. PJM has preemptively answered the bell on that soft directive. In PJM, proposals have been brought forward to correct issues in the market.

Following recent Capacity Performance reforms designed to ensure that resources paid in the capacity markets were actually available when needed,[76] PJM is now studying the need to address portfolio wide ability to perform. The *Valuing Fuel Security*[77] effort will conduct studies and ultimately make recommendations for capacity market reforms to ensure that the entire portfolio of generation resources could perform in "realistic but extreme contingency scenarios." The *Valuing Fuel Security* initiative follows a March 2017 Reliability Report that found that "The PJM system can remain reliable with the addition of more natural gas and renewable resources. However, an increased reliance on any one resource type introduces potential fuel security risks not recognized under existing reliability standards."[78]

The *Valuing Fuel Security* 'in-market' action has been met with disdain by sizeable and vocal factions of the policy community, which is hardly surprising given the vitriol the DOE NOPR encountered during its 15-minute turn as the star of the energy policy world. For example, in comments filed in FERC's docket on PJM's capacity market proposal, the Electricity Law Initiative at Harvard Law School, asserted PJM's proposal "would jeopardize the viability of a program of cooperative federalism" as "states did not sign up to have a regional system operator pick and choose among their generation procurement programs. . . ."[79] Environmental advocates joined in disavowing PJM's tariff revisions as "lack[ing] internal consistency and economic rigor."[80] Joint comments filed by the Sustainable FERC Project, Sierra Club, Natural Resources Defense Council, and Environmental Defense Fund argue "PJM would make FERC the policeman of the countless policies that potentially affect the competitive markets," and warned these new market constructs would "thrust the Commission into the impossible role of arbitrating which among the ubiquitous forms of federal, state, and local preferences that shape market behavior must be unwound from the wholesale market in order to protect 'competition.'"[81]

The market instrumentalist reaction has thus been true to form. As a reminder, for market

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[75] *Comments and Responses of PJM Interconnection, L.L.C.*, Docket No. AD18-7-000, p. 38 (Mar. 9, 2018), *available at* http://pjm.com/-/media/documents/ferc/filings/2018/20180309-ad18-7-000.ashx.

[76] *Order on Proposed Tariff Revisions*, Docket Nos. ER15-623-000 *et. al.*, 151 FERC ¶ 61,208 (2015).

[77] PJM, *Valuing Fuel Security* (2018), *available at* http://www.pjm.com/-/media/library/reports-notices/special-reports/2018/20180430-valuing-fuel-security.ashx.

[78] *Id.* at 2.

[79] *Comment of the Harvard Electricity Law Initiative*, Docket No. ER18-1314, pp. 1, 2 (May 7, 2018), *available at* https://elibrary.ferc.gov/idmws/file_list.asp?document_id=14667213.

[80] *Protest of Clean Energy Advocates*, Docket No. ER18-1314, pp. 33-34 (May 7, 2018), *available at* https://elibrary.ferc.gov/idmws/file_list.asp?document_id=14667502.

[81] *Id.* at 33.

instrumentalists, market interventions and the so-called markets themselves are all just means to a desired end, one where renewable generators win, coal generators lose, natural gas generators are tolerated as a bridge fuel, and the future of nuclear depends on whether the market instrumentalist in question is on the anti-nuclear subcommittee (*i.e.*, nuclear is an impending national disaster waiting to happen) or the pro-nuclear subcommittee (*i.e.*, nuclear is the backbone to any and all low- to zero-carbon futures in this country). Market instrumentalists are right in one respect, however, and that is the recent PJM actions raise questions. Here is the fundamental one: Is the PJM proposal about saving PJM or is it about benefitting customers? The 'in-market' solution has the looks of a Band-Aid developed to preserve the RAMM structure at all costs.

c. The Other RAMM Operators – We Got This

Other regional U.S. grid operators – including the RAMM operators ISO-NE and NYISO – bristled at the notion that FERC should craft a universal standard or direct tariff changes. But to be sure, this is not an objection to market interventions. Rather, the objection rested on the notion that 'in-market' interventions should come from the operators and not the regulators. The joint comments provided "the Commission should reject PJM's requests and allow individual RTOs/ISOs to pursue the resilience-related issues and initiatives they have identified in their region through collaborative efforts with their stakeholders and pursuant to the timeframes they have established."[82] Because, the story goes, the RAMM operators are best suited to intervene in the market they designed and control: "[T]he record demonstrates that RTOs/ISOs have different resilience issues and priorities, and requiring all RTOs/ISOs to follow PJM's proposed schedule on the issues pertinent to PJM will undermine each RTO/ISO's efforts to address the specific challenges within its region."[83]

Of the two RAMM operators signing the joint comments, no one can accuse them of using these comments to kick the can down the road. Rather, ISO-NE was busy looking at an 'in-market solution' tied to fuel security and resilience during the pendency of the post-DOE NOPR administrative proceeding involving Mystic 8 and Mystic 9. Mystic 8 and Mystic 9 are two combined cycle gas units with a capacity of 703 MW and 714 MW, respectively, in Charlestown, Massachusetts.[84]

The story begins – as many 'around market' and 'in-market' stories do – with an announcement from Exelon. On March 29, 2018, Exelon Generation, the owner and operator of the Mystic Generating Station, filed a notice with ISO-NE stating that it would retire Massachusetts' Mystic Generating Station on June 1, 2022, "absent any regulatory reforms to properly value reliability and regional fuel security."[85] Exelon Generation asserted that under the current rules in ISO-NE, the facility is unable to recover future operating costs, which include the cost of securing fuel.[86] In its announcement, Exelon got straight to the point:

> Exelon Generation today announced it has filed with the ISO New England Inc. (ISO-NE) to retire Mystic Generating Station's Units 7, 8, 9, and the Jet unit on June 1, 2022. Absent any regulatory reforms to properly value reliability and regional fuel security, these units will not participate in the Forward Capacity Auction scheduled for February 2019. . . .

[82] *Comments of California Independent System Operator Corporation, ISO New England Inc., Midcontinent Independent System Operator, Inc., New York Independent System Operator, Inc. and Southwest Power Pool, Inc.*, Docket No. AD18-7-000, p. 2 (May 8, 2018), *available at* https://elibrary.ferc.gov/idmws/file_list.asp?document_id=14667538.

[83] *Id.*

[84] Exelon, *Mystic Generating Station*, http://www.exeloncorp.com/locations/power-plants/mystic-generating-station (last visited May 14, 2018).

[85] Press Release, Exelon Corporation, *Exelon Genertion Files to Retire Mystic Generating Station in 2022, Absent Any Regulatory Solution* (Mar. 29, 2018), http://www.exeloncorp.com/newsroom/exelon-generation-files-to-retire-mystic-generating-station-in-2022.

[86] *Id.*

> ISO-NE recently stated that it may propose interim and long-term market rule changes to address system resiliency in light of significant reliability risks identified in ISO-NE's January 2018 fuel security report. Changes to market rules are necessary because critical units to the region, like Mystic 8 and 9, cannot recover future operating costs including the cost of securing fuel. To the extent that changes are timely filed and approved by the Federal Energy Regulatory Commission, Exelon Generation may reconsider the retirement of the Mystic units.[87]

Following its playbook carefully crafted and refined through the ZEC battles, Exelon deftly left open the possibility of reconsidering its decision – so long as ISO-NE can develop a solution or new set of rules to compensate the facility appropriately. In sum, an 'in-market' solution could prompt reconsideration.

In response to this announcement, ISO-NE took an unprecedented step on May 1, 2018.[88] The RAMM operator requested FERC approve a two-year cost based RMR contract for Mystic 8 and 9 not on the basis of local reliability, but for fuel security purposes, in part to retain the Everett Marine liquefied natural gas (LNG) import terminal (commonly known as Distrigas) that supplies Mystic 8 and 9. Specifically, the ISO stated, "[s]hould Distrigas also retire, the region's risk of reserve depletion and load shedding would increase, as would the length and severity of such events."

ISO-NE recognizes it must intervene to properly value fuel security in a region that increasingly relies on natural gas generators but has not expanded pipeline capacity. ISO-NE argued that a reliability threat "is posed by the region's increasing reliance on natural gas-fired generation despite essentially static regional natural gas pipeline capacity."[89] The ISO specifically asks for a waiver from the tariff directive to study reliability and transmission solutions to the closure of the generating units because the basis for the RMR is not reliability but rather fuel security.[90]

Further, and telling of the direction ISO-NE is heading, in its FERC application ISO-NE admits the need for additional market intervention (now defined as "market redesign"):

> The ISO believes that the fuel security issues for which it seeks to retain Mystic 8 & 9 can only be addressed through the development of an appropriate market mechanism. The ISO may implement a market-based fuel security solution as soon as 2020 if that solution is decoupled from the capacity market, or as late as 2024 if that solution is part of the Forward Capacity Market. However at this time, it is unclear what form this solution will take, and therefore it is difficult to predict when the market may reach a sufficient level of maturity to resolve the fuel security issues that require Mystic 8 & 9's retention.[91]

The application highlighted the temporary nature of the RMR contract while the ISO works toward a broader solution: "Exelon's required two-year term for the cost-of-service agreement will ensure the availability of Mystic 8 and 9 until the ISO and its stakeholders develop, and market participants have an opportunity to make any investments needed to implement, a market-based fuel security solution for the region." To translate that, it means the relief requested is designed to serve as an 'in-market' patch until a more comprehensive 'in-

[87] *Id.*

[88] S&P Global, *ISO-NE seeks US FERC permission to keep Exelon units online for fuel security*, S&P Global Platts (May 4, 2018), https://www.platts.com/latest-news/electric-power/houston/iso-ne-seeks-us-ferc-permission-to-keep-exelon-10403818.

[89] *Petition of ISO New England Inc. for Waiver of Tariff Provisions*, Docket No. ER18-1509, p. 2 (filed May 1, 2018).

[90] *Id.* at 4.

[91] *Id.* at 24.

market' solution can be developed by the ISO that can stifle baseload exits such as the threatened Mystic retirement.[92]

d. ISO-NE and NYISO – Embracing the 'In-Market' Solution All Around

'In-market' actions are not just *en vogue* with regard to fuel security and resilience. 'In-market' actions are emerging as the RAMM certified approach to accommodate 'around market' actions, too. Again, we turn north to ISO-NE and NYISO where RAMM operators are also looking to incorporate state and environmental policy goals.

NYISO recently issued a straw proposal[93] from their Integrating Public Policy Task Force to incorporate a price on carbon into its market. This initiative has been driven by the goal to "substantially contribute to achieving New York State's public policies." While NYISO will not set the price for carbon, "all internal suppliers participating in the wholesale energy markets would be subject to carbon charges in the wholesale energy market equal to the product of the applicable carbon price and their point-of production carbon emissions."[94] NYISO plans to finalize carbon pricing integration and implement this in their tariff in 2020. This 'in-market' measure is undoubtedly designed to accommodate state-level preferences for zero-emission generation sources in New York and may provide a roadmap to other RAMM operators seeking to develop an 'in-market' approach to provide greater value to zero-emission resources.

In a similar vein, ISO-NE recently obtained FERC approval for a complicated two-phase auction that pays retiring units a severance payment of sorts to allow new state policy sponsored generation units to replace the retiring units' capacity supply obligations. The collection of market reforms, referred to as Competitive Auctions with Sponsored Policy Resources (CASPR), are an elaborate effort to preserve the illusion of fuel neutral markets in a state policy driven resource regime.[95] Simplified, CASPR allows eligible state sponsored generators to bid to take the place of retiring resources in future capacity markets after paying the retiring resources what amounts to a severance payment for retiring. While this is in some ways an elegant solution to the capacity glut (and associated price depression) that comes from state mandated and sponsored resources coming online outside of the ISO-NE market, it reveals yet another way in which exogenous factors intervene in convoluted "market" outcomes.

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[92] Some stakeholders are already weighing in. New England Power Pool (NEPOOL) Participants Committee has not taken any formal position on the ISO-NE request with regard to Mystic, but emphasized that going forward this needs to be done through the stakeholder process. *Limited Comments of the New England Power Pool Participants Committee*, Docket No. ER18-1509, p. 2 (filed May 17, 2018) ("To be clear, because NEPOOL did not vote on, nor take any formal action with respect to, the issues raised before the Commission in this proceeding, NEPOOL takes no substantive position on the ISO-NE Request. NEPOOL submits these limited comments though for two key reasons. First, NEPOOL reports on the ISO's engagement with regional stakeholders prior to submitting its Request. Second – without taking a position on the immediate waiver request – NEPOOL emphasizes the importance that any future changes to the Tariff or Market Rules to address system reliability issues be explored through the long-standing, Commission-approved NEPOOL Participant Processes, which will minimize the need for subsequent waivers of the filed rate for that purpose. ISO-NE has committed to employ the Participant Processes for such changes and NEPOOL stands willing and ready to work collaboratively with ISO-NE and State officials to address the region's fuel security risks through the competitive wholesale markets."), *available at* http://www.nepool.com/uploads/ER18-1509_NEPOOL_Comments.pdf.

[93] NYISO, *Carbon Pricing Straw Proposal: A Report Prepared for the Integrating Public Policy Task Force* (Apr. 30, 2018), *available at* http://www.nyiso.com/public/webdocs/markets_operations/committees/bic_miwg_ipptf/meeting_materials/2018-04-23/Carbon%20Pricing%20Straw%20Proposal%2020180430.pdf.

[94] *Id*. at 5.

[95] *Order on Tariff Filing*, Docket No. ER18-619-000, 162 FERC ¶ 61,205 (2018).

V. Conclusion – All Eyez on FERC

Over 20 years ago, the late, complicated, and great Tupac Shakur named his fourth studio album *All Eyez on Me*, and that is where we find ourselves in the 'around market' and 'in-market' debate – at a crucial moment, with All Eyez on FERC. The post-DOE NOPR administrative proceeding has elicited reams of information and pages upon pages of advocacy. RAMM operators are developing 'in-market' solutions with abandon directed at resiliency, carbon emissions, and accommodation of state actions. PJM is asking FERC for a universal 'in-market' solution for resiliency. States remain unsatisfied and undeterred and continue to chase 'around market' solutions through their legislative and administrative organs. But in a strange way, all of this really culminates at FERC with ISO-NE's Mystic RMR application.

Mystic is the defining moment for this FERC. While in theory Mystic only involves a two-year RMR contract, in reality it is a referendum on market operators intervening in themselves. The requested waivers for the Mystic RMR eliminate the pretense of competitive outcomes and reach beyond the normal RMR scope of local reliability concerns and transmission solutions in order to preserve not just a natural gas generator, but the infrastructure (an LNG terminal) supplying fuel to the generator. In making the request, ISO-NE admits its market model cannot provide long-term fuel secure resource adequacy for the region but it wants the opportunity to be both a "market" and an integrated resource planner for important energy infrastructure, even if it is not within its jurisdiction. The plight of New England, with its limited access to and increasing dependence on natural gas to generate electricity, is a sympathetic one. Yet, this is not so different than an ISO proposing to contract with a generator to keep a coal mine in business, a scenario much less politically palatable to the market instrumentalists.

FERC has reached a fork in the road. Taking one path, the agency can embrace the Mystic RMR by granting it. This will send the ultimate signal to RAMM operators, building on FERC's order on CASPR, FERC's order on the DOE NOPR, and Chairman McIntyre's comments on May 8, 2018, that 'in-market' solutions directed at fuel security, resiliency, state policy accommodation, carbon emissions or some combination thereof are welcome at 888 First Street NE. It will validate and unleash a torrent of stakeholder processes, technical conferences, comments, open meetings, press conferences, and Twitter wars as self-interventions and 'in-market' solutions erode any remaining resemblance that the RAMM operators have to an actual market.

Alternatively, FERC can reassess where it has been in the past 18 months, going back to the run-up to the famed May 2017 technical conference on 'around market' solutions. Outgoing PJM Board of Managers Chairman Howard Schneider succinctly summarized the state of play as he retired on May 16, 2018:

> It's incredible because [RTO markets], they're make-believe markets. Every time something goes wrong, there's another bell that [gets added] on, another whistle that goes. . . . There's always a revision to an artificial market . . . . as something develops in a marketplace, they make the change that's necessary to cure that particular thing, which then leads to another change, which leads to another change. So they're always evolving markets; they're never rigid.[96]

The ever-increasing 'in-market' and 'around market' interventions and this type of sentiment from a RAMM insider should lead FERC to question whether the appropriate response to issues in the RAMM is to place an 'around market' or 'in-market' bandage on the problem in the name of valuing some attribute, and whether customers are really best served by continuing to pretend these "electricity markets" are functioning markets

[96] Rory D. Sweeney, *Retiring PJM Chair Schneider Reflects on 21 Years at the Helm*, RTO Insider (May 15, 2018), https://www.rtoinsider.com/pjm-board-of-managers-howard-schneider-92617/.

without severe problems and interventions coming from all directions. And FERC could reach the conclusion that Secretary of Energy Rick Perry recently arrived at: "I think it's really important for people to understand, in general terms, there is no free market in the energy industry."[97]

This answer, that says we are no longer going to pretend the RAMM is fine and healthy and it is time to move away from fully restructured markets in the name of preserving fuel diversity and obtaining the best outcomes of customers, would be unpopular – at best. Market instrumentalists will be furious. "Free-market" champions will be livid. "Deregulation" champions will be astonished and demoralized. Many environmentalists will be irate. It would, as an aside, achieve ever fleeting bipartisan consensus in people from both sides of the political spectrum being mad at FERC.

But FERC would be right. The RAMM is broken and it is not getting fixed. No 'in-market' solution, whether designed to address "fuel security," "resiliency," "two-phase auctions," RMR situations, or otherwise is going to fix the baseload exit issues that continue to plague every RAMM operator. No 'around market' solution, whether designed to develop a new state-level acronym and product like a ZEC or expand a competitive solicitation to let nuclear participate, will solve the RAMM's fundamental problems.

These continued interventions from states and RAMM operators alike should cease, but it would take extraordinary courage from FERC to draw this line in the sand, especially given their recently restated "market" conviction.

The only functioning regulatory constructs for electricity are vertically integrated markets or markets like SPP and MISO with planned utilities underneath and residual energy markets, both of which allow for rate-based, joint dispatch approaches.[98] These approaches appropriately involve state regulators that can make decisions about fuel diversity, customer costs, and other imperative elements of the electricity business with key federal oversight on matters within FERC jurisdiction. FERC should embrace this fact and put an end to the 'around market' and 'in-market' madness. It is time to give up the ghost on the RAMM. All Eyez on FERC.

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[97] Timothy Cama, *Perry: There is no free market in the energy industry*, The Hill (Oct. 6, 2017), http://thehill.com/policy/energy-environment/354270-perry-there-is-no-free-market-in-the-energy-industry.

[98] We hasten to reiterate what we have said in previous White Papers: the question is one of comparative institutional inadequacies. As we stated in our White Paper in February 2017, "[t]he debate between traditionally regulated markets (i.e., vertically integrated states) and market-regulated markets (i.e., restructured states giving rise to organized electricity markets) is not regulation versus deregulation. It is not free markets versus a command system. And it is not partisan, Democrat versus Republican. It is a debate between two different regulatory schemes, each with its own imperfections and political economy defects."

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