BCK
BCK LAW, P.C.
ATTORNEYS AT LAW

The firm has attorneys also admitted to practice in District of Columbia, Idaho, New York and Vermont

271 Waverley Oaks Road, Suite 203
Waltham, Massachusetts 02452
617.244.9500

Facsimile: 802.419.8283
E-Mail: bckboston@bck.com
Website: www.bck.com

July 12, 2017

VIA ELECTRONIC MAIL
ORIGINAL BY HAND DELIVERY

Mark D. Marini, Secretary
Department of Public Utilities
One South Station, 5th Floor
Boston, MA 02110

Re: *D.P.U. 15-122*
Petition of NSTAR Electric Company and Western Massachusetts Electric Company, each d/b/a Eversource Energy, for Approval by the DPU of their Grid Modernization Plan.

Dear Secretary Marini:

Enclosed for filing please find the original and two (2) copies of the Cape Light Compact JPE's Initial Brief in the above-referenced matter. Also enclosed is a Certificate of Service.

Thank you for your attention to this matter. If you require further information or have any questions, please do not hesitate to contact me.

Sincerely,

Rebecca F. Zachas

Rebecca Zachas

RFZ/drb
Enclosures

cc: Tina Chin, Hearing Officer (via email and hand delivery)
Sarah Herbert, Hearing Officer (via email and hand delivery)
Service List in DPU 15-122 (via email and/or first class mail delivery)
Margaret T. Downey, Cape Light Compact JPE Administrator (via email and first class mail)

Vermont Office:
P.O. Box 205
Woodstock, Vermont 05091
Telephone: 802.457.9050
Facsimile: 802.419.8283
E-Mail: bckvt@bck.com

Mountain States Office:
P.O. Box 1527
Ketchum, Idaho 83340
Telephone: 617.584.8338
Facsimile: 802.419.8283
E-Mail: bckidaho@bck.com

COMMONWEALTH OF MASSACHUSETTS

DEPARTMENT OF PUBLIC UTILITIES

Petition of NSTAR Electric Company and	**)**	
Western Massachusetts Electric Company	**)**	**D.P.U. 15-122/123**
d/b/a Eversource Energy for Approval of their	**)**	
Grid Modernization Plans	**)**	

INITIAL BRIEF OF THE

CAPE LIGHT COMPACT JPE

Jeffrey M. Bernstein, Esq.
Rebecca F. Zachas, Esq.
Jo Ann Bodemer, Esq.
Kathryn M. Terrell, Esq.
BCK Law, P.C.
271 Waverley Oaks Road, Suite 203
Waltham, MA 02452
Telephone: (617) 244-9500
Facsimile: (802) 419-8283

July 12, 2017

TABLE OF CONTENTS

I. EXECUTIVE SUMMARY 2
II. PROCEDURAL HISTORY 4
III. RELEVANT LEGAL STANDARDS 5
A. Standards Adopted In Generic Orders. 5
B. The GMP Filing Requirements 6
IV. ARGUMENT 8
A. Eversource's IGMP Fails To Meet The Department's Requirements For A GMP 8
1. The IGMP does not provide AMF 9
2. The IGMP is inconsistent with the TVR structure for Basic Service 15
3. The IGMP does not provide data access 17
B. The IGMP Undermines The Competitive Markets 20
1. The IGMP denies benefits to competitive supply customers 22
2. Eversource has failed to enable the competitive market to the maximum extent possible 22
3. Eversource expects to attract over 26,000 current competitive supply customers back to Basic Service based on its IGMP 24
4. The proposed customer engagement and outreach plan ("CEO Plan") is designed to promote Basic Service 25
5. The IGMP will create a bias in the market 26
6. The IGMP results in an unjustified cross-subsidy 28
C. Eversource's Case Against Full AMF Is Flawed 28
1. Eversource's cost estimates lack support and detail 29
2. Eversource overstates the costs of full AMF and excludes important categories of benefits from its evaluation of full AMF 29
3. Eversource's projected participation rates are unreliable 31
4. Eversource's net benefits calculations are misleading 34
5. Full AMF lowers per-customer costs 35
6. Eversource's CEO Plan is inefficient and counterproductive 36
7. The bolt-on billing package is inefficient and counterproductive 37

D. Eversource's Flagrant Disregard Of Department Directives Is Not Justified.....40
E. Other Changes Needed For A Satisfactory GMP 44
1. Eversource should develop meaningful outcome-based metrics 44
2. Eversource should develop a strategic research and development plan, and consider a microgrid demonstration project.....46
3. Eversource should meaningfully involve stakeholders.....48
V. REQUESTED RELIEF.....50
VI. CONCLUSION.....51

COMMONWEALTH OF MASSACHUSETTS
DEPARTMENT OF PUBLIC UTILITIES

Petition of NSTAR Electric Company and	**)**	
Western Massachusetts Electric Company	**)**	**D.P.U. 15-122/123**
d/b/a Eversource Energy for Approval of their	**)**	
Grid Modernization Plans	**)**	

INITIAL BRIEF OF THE CAPE LIGHT COMPACT JPE

Pursuant to 220 C.M.R. §1.11(3)-(6), Procedural Notice, Service List, and Ground Rules dated May 26, 2016, and Memorandum setting forth the briefing schedule dated June 2, 2017, the towns of Aquinnah, Barnstable, Bourne, Brewster, Chatham, Chilmark, Dennis, Edgartown, Eastham, Falmouth, Harwich, Mashpee, Oak Bluffs, Orleans, Provincetown, Sandwich, Tisbury, Truro, West Tisbury, Wellfleet and Yarmouth, and Dukes County organized and operating collectively as the Cape Light Compact JPE, a joint powers entity organized pursuant to G.L. c. 40, §4A ½ and G.L. c. 164, §134 (the "Compact JPE"),[1] hereby submit this Initial Brief regarding the Incremental Grid Modernization Plan ("IGMP") filed on February 3, 2017 by NSTAR Electric Company and Western Massachusetts Electric Company, each d/b/a Eversource Energy ("Eversource" or the "Company"), with the Department of Public Utilities (the "Department"). Eversource seeks approval of its IGMP pursuant to the Department's combined decisions in *Electric Grid Modernization*, D.P.U. 12-76-B (June 12, 2014) ("Order 12-76-B") and D.P.U. 12-76-C (November 5, 2014) ("Order 12-76-C") and *Time Varying Rates*, D.P.U. 14-04-C (November 5, 2014) ("TVR Order"). The IGMP replaced Eversource's grid modernization

[1] As of July 1, 2017, the Compact is a joint powers entity organized pursuant to G.L. c. 40, §4A ½ and G.L. c. 164, §134. It was originally formed as a governmental aggregator under G.L. c. 164, §134 and organized through a formal Inter-Governmental Agreement signed by all the towns, as well as Barnstable and Dukes counties, pursuant to G.L. c. 40, §4A.

plan dated August 19, 2015, as updated on June 16, 2016 (the "Initial Filing"), and docketed as D.P.U. 15-122 (the "Proceeding").

I. EXECUTIVE SUMMARY

This Proceeding derives from a series of Department investigations to develop the policies and procedures for grid modernization in Massachusetts.[2] The Department expects these policies to transform the way energy is generated, delivered, and consumed, resulting in "a new energy future." See Order 12-76-B at 1. That future requires consistent opportunities for all electric distribution customers to access their usage via present-day information technology ("IT"), a diverse marketplace for energy savings and load management, and empowered customers who can take advantage of such opportunities and save money. *Id.*

The Compact JPE is excited about the possibilities that a modern grid, as envisioned in D.P.U. 12-76-B and 14-04-C, could bring its customers. With advanced metering, the Compact JPE could offer enhanced energy efficiency programs and introduce time-varying rates ("TVR") in its power supply program. Exh. CLC-DBG-1 at 8-12. These enhanced offerings will help reduce and shift demand, resulting in lower energy prices for customers.

Unfortunately, Eversource sees the future in far more retrospective terms. Its future entails twenty-year-old metering technology and an even older legacy billing system that cannot handle a full rollout of advanced metering. Tr. Vol. 1 at 91-94; AG-4-6; AG-6-7. Eversource's version of TVR is "a simple sign on the dryer" that says, "[d]o not use between 1 and 5 p.m." Tr. Vol. 1 at 41, lines 17-18. Its idea of providing near-real-time access to usage data is a vague

[2] This investigation was held in furtherance of the Department's responsibilities under the Green Communities Act, St. 2008, c. 169 ("Green Communities Act") (to support the development of energy efficiency, demand response, distributed generation, and renewable resources), the Global Warming Solutions Act, St. 2008, c. 298 ("Global Warming Solutions Act") (emissions reduction targets), and its responsibilities to ensure reliable electric distribution service. See Order 12-76-B at 8-9.

notion that "some contraption" could be attached to customer meters. Tr. Vol. 2 at 275, line 3. Instead of catching up with advancements in IT, Eversource prefers to sit by while technology further evolves. *See* Tr. Vol. 1 at 168-72. Instead of planning for a data-driven grid, Eversource is stalling, relying on expensive bolt-ons and other substitutions that do not comply with the Department's directives.

With this outdated mindset, Eversource submitted a plan that fails to meet the Department's minimum requirements for a grid modernization plan ("GMP"), that would harm the competitive market, and that would result in negative net benefits for ratepayers. The IGMP is, in large part, a glorified marketing campaign expected to result in the migration of over 26,000 customers from their competitive supplier to Eversource's Basic Service,[3] while remaining competitive supply customers would be denied new metering equipment. Tr. Vol. 2 at 237, line 23 to 238, line 5; RR-CLC-1; Tr. Vol. 2 at 226, lines 13-22. The IGMP also withholds the majority of grid modernization benefits from all electric ratepayers. Under the IGMP, almost all Eversource customers are left without advanced metering and market opportunities available to customers in other service areas. See Tr. Vol. 1 at 42-43. Though its aims are modest, the IGMP is not cost effective even in light of its limited objectives. It affords small benefits to a handful of Basic Service customers while costing *all* distribution customers $138.2 million.[4] Exh. CLC-FL-1 at 4, line 20 to 5, line 8; IGMP at 15; Tr. Vol. 1 at 38, lines 1-4. For these reasons, the IGMP must be rejected, and Eversource must develop and resubmit a plan compliant with the Department's minimum requirements for a GMP.

[3] "Basic Service" is used herein consistent with its definition in 220 C.M.R. §11.02.
[4] This figure excludes an additional $1.5 million annual spending on research and development. IGMP at 15.

II. PROCEDURAL HISTORY

Each of the electric distribution companies filed its first GMP with the Department on August 19, 2015.[5] On February 3, 2017, Eversource replaced its Initial Filing with its "updated and revised" IGMP, stating that the IGMP "reflects a narrowing of the scope of the Company's proposals in this docket, in coordination with the Company's grid modernization proposals recently presented in its base rate filing in D.P.U. 17-05." D.P.U. 15-122, Transmittal Letter at 1 (February 3, 2017). The Company's bifurcated grid modernization proposal is comprised of two components: (1) the Grid Modernization Base Commitment ("GMBC") as presented in D.P.U. 17-05; and (2) the IGMP as presented in the revised plan for review in this docket. *Id.*

The Company states that the GMBC "represents a base commitment" in grid-modernization investment and the GMBC includes many of the initiatives from its Initial Filing. *Id.* The Company described the IGMP as representing its "incremental proposals for grid modernization," and including the following:

> (1) a Customer Engagement initiative consisting of an innovative opt-in Time Varying Rate proposal; (2) enabling investments in Cyber Security and in a Customer Education and Outreach Plan; and (3) targeted research and development investments in furtherance of grid modernization objectives.

Id. The Company stated that the "essential difference" between the Initial Filing and the IGMP is that "certain elements of the original plan have been subtracted from the IGMP, and that the remaining elements in the IGMP are 'identical to their presentation' in the Initial Filing." *Id.* The IGMP "now constitute[s] the full scope of the Company's proposals in this docket," which are not part of the GMBC. *Id.*

[5] This date reflects a two-week extension granted to all of the distribution companies. Eversource subsequently submitted an update to its first plan on June 16, 2016, as permitted by a procedural order governing the proceedings. See D.P.U. 15-120, 121, 122, Procedural Notice, Service List, and Ground Rules (May 26, 2016). The June 16, 2016 filing simply updated the timing associated with its distribution management system (which is no longer proposed in this docket). D.P.U. 15-122, Supplemental Filing Cover Letter at 1 (June 16, 2016).

On March 30, 2016, the Compact JPE filed a timely Petition for Leave to Intervene in D.P.U. 15-122, which was granted on April 14, 2016, at a joint public hearing and procedural conference. The Office of the Attorney General ("Attorney General"), the Low-Income Weatherization and Fuel Assistance Program Network ("LEAN"), Acadia Center, Inc. ("Acadia Center") and the Conservation Law Foundation ("CLF") were also granted full party status.[6]

On May 16-17 and 30-31, 2017, the Department held evidentiary hearings, which included testimony from Karl Rábago, Frank Lacey, Margaret Downey, Austin Brandt and Kevin Galligan on behalf of the Compact JPE, as well as witnesses for the Company, the Attorney General, Acadia Center, and CLF.

III. RELEVANT LEGAL STANDARDS

A. Standards Adopted In Generic Orders.

The relevant legal standards in this proceeding derive from a series of generic proceedings to establish policies for *Modernization of the Electric Grid* (D.P.U. 12-76) and *Time-Varying Rates* (D.P.U. 14-04). Generic proceedings are intended for consideration of issues "across all distribution companies [in a manner that] would lead to a fair and consistent treatment of all the distribution companies in the Commonwealth." *Investigation into Rate Structures to Promote Deployment of Demand Resources*, D.P.U. 07-50-B, Order at 23-24 (2008) (citing *Boston Edison Company*, D.P.U./D.T.E. 96-23, at 55 (1998)). They are analogous to notice and comment rulemakings in which the Department adopts standards of general application and future effect:

[6] See Hearing Officer's Rulings on Petitions to Intervene of Energy Freedom Coalition of America, LLC and Utilidata, Inc., and Late-Filed Petitions to Intervene of Direct Energy and Retail Energy Supply Association, at 3 (May 26, 2016).

> A generic proceeding is also analogous to a rulemaking in terms of a petitioner's ability to challenge its general statements of policy. To challenge an agency rulemaking, a petitioner must claim that the agency action is illegal, arbitrary, or capricious. A party cannot meet his burden of proof merely by arguing that the record does not affirmatively show facts which support the regulation; instead, he or she must prove the absence of any conceivable ground upon which the regulation may be upheld.

Id. (citations omitted); *see also* G.L. c. 30A, §1.

Beginning in October 2012, the Department conducted approximately two years of generic proceedings and received wide input from stakeholders on a variety of grid modernization issues. See Order 12-76-B at 6. These proceedings were intended to "investigate policies that will enable Massachusetts electric distribution companies and their customers to take advantage of grid modernization opportunities;" "examine [the Department's] policies to ensure that electric distribution companies adopt grid modernization technologies and practices in order to enhance the reliability of electricity service, reduce electricity costs, and empower customers to adopt new electricity technologies and better manage their use of electricity;" and "solicit input from stakeholders that will guide the Department's approach to grid modernization over the short, medium, and long term." Notice of Vote and Order Opening Investigation, D.P.U. 12-76 at 1 (October 2, 2012). These proceedings resulted in a mandate that each electric distribution company file a ten-year GMP by August 5, 2015, and numerous binding "directives" with which the companies were required to "comply." Order 12-76-B at 5, 53; Order 12-76-C at 40; TVR Order at 21.

B. The GMP Filing Requirements.

Among these directives, the Department ordered the electric distribution companies to:

- submit ten-year GMPs outlining how the company proposes to make measurable progress toward four grid modernization objectives[7] (Order 12-76-B at 2);
- outline its timing and priorities for all their grid modernization planning and investment over the ten-year period (*id.*);
- include a five-year short-term investment plan ("STIP") for capital investments (*id.* at 3);
- include in the STIP an approach to achieving advanced metering functionality ("AMF") within five years of the approval of the GMP (*id.* at 3, 17);
- ensure stakeholder input into the development of the GMP (*id.* at 5);
- include a plan for educating customers and motivating them to become full participants in grid modernization (*id.* at 26);
- develop and propose a robust set of company-specific metrics, including infrastructure metrics and performance metrics, along with a common list of statewide metrics, including metrics for grid modernization goals that are not easily quantified (*id.* at 30, 33);
- solicit stakeholder input in developing both the statewide and company-specific metrics (*id.* at 33);
- address how customers and authorized third parties will be provided access to usage data (*id.* at 36);
- support the STIP with a comprehensive business case analysis, which identifies all quantifiable, difficult to quantify, and unquantifiable benefits and costs (*id.* at 17);
- conform its business cases analysis to the Grid Modernization Business Case Filing Requirements (Order 12-76-C at 2); and
- prepare its GMP in a manner consistent with the new Basic Service rate structure adopted in the order on TVR (TVR Order at 21).

The Department also made clear that the GMPs would be reviewed in separate adjudications to ensure that each is consistent with the Department's directives. Order 12-76-B at 51. This process is consistent with legal principles requiring administrative agencies to adhere to their own rules and enforce them consistently. *See, e.g., Royce v. Commissioner of Correction*, 390 Mass. 425, 427 (1983) ("Once an agency has seen fit to promulgate regulations,

[7] The four objectives are: (1) reducing the effects of outages; (2) optimizing demand, which includes reducing system and customer costs; (3) integrating distributed resources; and (4) improving workforce and asset management. Order 12-76-B at 2.

it must comply with those regulations"); *Town of Northbridge v. Town of Natick*, 394 Mass. 70, 76 (1985) ("An agency must follow its own regulations even in the face of inconsistent internal guidelines"); *Town of Falmouth v. Civil Serv. Comm'n*, 447 Mass. 814, 822 (2006) (courts may disturb an agency's interpretation of its own regulation when "patently wrong").

IV. ARGUMENT

The Compact JPE requests that the Department reject the IGMP and require Eversource to refile its GMP to meet its burden of complying with the standards and directives set forth above. Specifically, as discussed in this Section below, the IGMP: (A) fails to comply with the Department's GMP filing requirements; (B) undermines the competitive markets; (C) presents a flawed case against AMF; and (D) fails to justify its flagrant disregard for the Department's directives. In the refiled GMP, the Department should also require Eversource to improve the performance metrics, research and development, and stakeholder feedback components of its GMP, as discussed in Section IV(E).

A. Eversource's IGMP Fails To Meet The Department's Requirements For A GMP.

Eversource's IGMP fails to comply with nearly every directive from the Department and in fact contravenes the Department's vision for the modern grid. This Section does not address every count of non-compliance but focuses on the most glaring problems with the IGMP from the Compact JPE's perspective: (1) failure to provide AMF; (2) failure to support opt-out TVR; and (3) failure to provide usage data to third parties. After the considerable effort spent on the policy framework for grid modernization in Massachusetts, Eversource's first attempt at a GMP

is a great disappointment. The Department should require Eversource to go back to the drawing board and develop a plan that complies with all of its directives.

1. The IGMP does not provide AMF

The IGMP should be rejected because it fails to propose an approach to achieving AMF. The Department made clear that AMF is "the basic technology platform for grid modernization" and that "it should be a priority area for investment in the companies' GMPs." Order 12-76-B at 14. Yet Eversource, treating AMF only as a burden, hardly attempts to capture its transformative potential. Specifically, the IGMP does not: (a) achieve AMF for all customers on an opt-out basis; (b) provide the requisite functions of AMF; or (c) propose a five-year approach to full deployment. These elements are discussed in turn below.

a. the IGMP fails to achieve AMF for all customers on an opt-out basis

The IGMP should be rejected because Eversource has not complied with the Department's orders requiring that electric distribution companies' GMPs must "achieve [AMF] for all customers." TVR Order at 6; *c.f.* Order 12-76-B at 37 (noting the option to decline meter installation to address health concerns); *id.* at 47-48 (rejecting targeted opt-in approach for AMF). This AMF requirement was clearly not intended to apply only to Basic Service customers. See Order 12-76-B at 36 (discussing role for competitive suppliers and demand response aggregators). The Department specifically considered both opt-in and opt-out approaches but ultimately rejected a targeted opt-in approach for AMF. Order 12-76-B at 47-48. The Department defined an opt-out approach as "all customers" receiving a meter "except for those customers who notify the company that they wish to be exempted." *Id.* at 47. Noting that an opt-in approach "would diminish the benefits of grid modernization," the Department chose

an opt-out approach because it would advance "the objectives of grid modernization," and provide "appropriate flexibility to customers." *Id.* at 48.

To the contrary, under the IGMP, Eversource proposes to provide meters only to its own Basic Service customers who opt into Eversource's TVR rates. IGMP at 27; Tr. Vol. 2 at 226. Eversource does not propose a full AMF rollout on an opt-out basis. The IGMP excludes competitive supply customers from receiving a meter and participating in a TVR program with their supplier. Tr. Vol. 2 at 226, lines 13-22.

Rather than all customers receiving an AMF meter for an opt-out program, Eversource estimates that approximately 5 percent of its customers will participate in its proposed opt-in TVR program. IGMP at 33; Tr. Vol. 2 at 220. So only 67,658 customers out of its 1,353,159 residential and small commercial and industrial ("C&I") customers would have advanced meters over the next five years if participation is as projected. RR-DPU-1 (data as of December 2016). In the Company's own understated words, "our opt-in TVR approach doesn't enable [AMF] at every end point, every meter on the system." Tr. Vol. 1 at 124, lines 6-9. As such, on its face, the IGMP does not comply with the requirement to achieve AMF for all customers on an opt-out basis.

b. the IGMP fails to provide the requisite functions of AMF

Eversource has also not complied with the Department's directive to provide meters with specific functionality. The Department carefully defined the requirements of AMF: (1) the collection of customers' interval usage data, in near real time, usable for settlement in ISO-New England's energy and ancillary services markets; (2) automated outage and restoration notification; (3) two-way communication between customers and the electric distribution company; and (4) with a customer's permission, communication with and control of appliances.

Order 12-76-B at 3, n.1. Fundamentally, AMF must include two-way communication, which allows the exchange of both usage and pricing information between customers and their energy market representatives.[8] Order 12-76-B at 13-14; TVR Order at 3. The Department included two-way communication in the definition of AMF because this function "provides customers with the ability to make informed decisions about energy use and adopt cost-saving technologies and services." *Id.*

The record is somewhat ambiguous and inconsistent as to precisely the metering and communications equipment proposed for investment by Eversource and as to the precise capabilities of that equipment. It appears that there are four types of meters involved: cellular meters, network meters, AMR interval meters, and AMR non-interval meters. Tr. Vol. 2. at 356-58; *c.f.* Att. AG-1-2(e). However, none of these meters can provide the requisite functions of AMF.

Eversource admits that its IGMP does not comply with two-way communication or the collection of customer interval usage data in near real time usable for settlement in the ISO-New England energy and ancillary services markets. First, none of the proposed meters are capable of two-way communication. Tr. Vol. 1 at 124, lines 14-18 ("I do not believe any of [the meters] are capable of two-way communication. We've designed it for one-way."); Tr. Vol. 2 at 269, lines 10-11 ("our proposal does not assume two-way").

Second, for its opt-in TVR program, the Company devised no method for providing customers with their own usage data (Tr. Vol. 1 at 27, lines 4-6) and admitted that, in areas of the state with less reliable cellular service, "there would be situations where customers [opting into

[8] The Department observed that AMF "enable[s] a more flexible and reliable grid with attendant cost savings." Order 12-76-B at 13.

the TVR program] would not have real-time access" to their usage data. Tr. Vol. 1 at 38, lines 11-19. Such a situation does not result in empowered customers.

Further, the Company's definition of "near real time" is misleading. Eversource expects a one-day delay before customers could access their usage data. Tr. Vol. 2 at 272, lines 8-13. A one-day delay is simply not near enough to "real time" for customers to respond to price signals under a time-of-use ("TOU") rate with a critical peak pricing ("CPP") component. Day behind data will limit competitive suppliers' ability to offer financial incentives to customers, diminishing customers' ability to make informed decisions about energy use and adopt cost-saving technologies and services.

Moreover, the IGMP does not include collection of near-real-time usage data useable for settlement in the ISO-New England energy and ancillary services market. Tr. Vol. 2 at 265, line 10 (IGMP assumed 15-minute interval collection); Tr. Vol. 2 at 354, lines 16-20 (ISO-New England uses a 5-minute timeframe for their energy market).[9] The IGMP cost estimates are based on 15-minute data collection and "would adjust significantly" with shorter intervals. Tr. Vol. 2 at 266, lines 2-4.

Finally, Eversource's selection of meter types demonstrates its lack of commitment to offer meters that comply with the requisite meter functionality. For example, Eversource's proposal includes spending grid modernization dollars on "drive-by" meters. Tr. Vol. 1 at 24, lines 21-24. Eversource describes the drive-by meter as simply "the normal meter that we use"

[9] ISO-New England completed the transition to a 5-minute settlement interval on March 1, 2017, and it has been making public presentations on this transition in its Quarterly Settlements Issues Forum since March 2016. ISO-New England, Subhourly Settlements Project (last visited June 28, 2017) (https://www.iso-ne.com/participate/support/customer-readiness-outlook/subhourly-settlements-project). The transition was in part a response to a September 17, 2015, Notice of Proposed Rulemaking issued by the Federal Energy Regulatory Commission ("FERC") proposing to make a 5-minute settlement interval mandatory in the energy markets. *Joint Filing of ISO New England Inc. and New England Power Pool to Implement Sub-Hourly Settlements*, 152 FERC ¶ 61,218, 2 (June 2, 2016) (https://www.iso-ne.com/static-assets/documents/2016/06/er16-1838-000.pdf).

requiring a person to drive out to the customer's location to read the meter on a periodic basis. Tr. Vol. 1 at 26, lines 4-7. Eversource admits that "drive-by" meters are not "near real time" meters. Tr. Vol. 1 at 30, line 22 to 31, line 6. With their inability to meet all four functionality criteria, Eversource's selected meters are not well suited for the proposed opt-in program, much less so for an opt-out program that actually complies with the Department's grid modernization directives or enables a mature competitive marketplace for TVR.

Ultimately, none of these proposed meters meets the criteria for AMF and they would all limit opportunities for customers to engage and manage their energy usage.

c. the IGMP includes no approach to achieving AMF within a five-year timeframe

In addition, Eversource's proposal for partial deployment does not fulfill Eversource's obligation to include an approach to achieving AMF within a five-year timeframe. "A company's STIP must include an approach to achieving [AMF] within five years of the Department's approval of the GMP." Order 12-76-B at 3, 17. This requirement is not qualified or optional, though the Department allowed for companies to also file an alternative proposal to achieve that functionality within a longer timeframe. *Id.* at 3. Filing an alternative proposal does not relieve a company of including an approach to achieve AMF within the five-year timeframe (*id.* at 17 ("the company *also* may include . . .")); nor does it relieve a company of attempting to achieve that functionality at all (*id.* (". . . an alternative proposal that *would achieve* that functionality")). (Emphasis added). If an alternative is included, the company must provide sufficient information to allow for an adequate comparison of the plans. *Id.*

The IGMP simply does not include a five-year full AMF deployment plan, nor is it connected to any longer-term objective with a greater level of AMF in the future. Rather the IGMP appears to have been designed to limit advanced metering deployment as much as

possible. As found by Compact JPE witness Karl Rábago, "[t]he proposed TVR program provides little or no support to broader grid modernization beyond the period of the STIP. The TVR program and technology are not compatible with full AMF deployment." Exh. CLC-KRR-1 at 22, lines 15-17.

Eversource's opt-in TVR metering program is not a permissible alternative proposal, and does not provide a useful comparison, to the full deployment of AMF within five years. By design, the IGMP does not attain widespread AMF. Eversource makes no attempt to put together a plan for AMF deployment across its territory in five years or otherwise. Instead, Eversource would seemingly prefer to relax the language of D.P.U. 12-76-B to give itself free reign to not propose full AMF at all.

Nevertheless, Eversource states that "our proposal we believe does comply with the Department's directives, again, to propose [AMF] if cost-beneficial and, if not, to propose a solution otherwise." Tr. Vol. 1 at 124, lines 9-13. This testimony misreads the option to alternatively propose a longer timeframe for full AMF alongside the five-year proposal. Eversource concedes in the IGMP that the Department's "AMF requirements and TVR policy assume a full implementation of AMI, although it may not be an effective or cost justified approach." IGMP at 34. In other words, Eversource knew a full AMF proposal was required regardless of its business case outcomes. Indeed, the business case requirement is independent of the requirement to include an approach to achieving AMF within a five-year timeframe. Since the IGMP includes no approach for deploying AMF on a territory-wide basis, it does not meet the filing requirements and must be rejected.

Failure to include this "basic technology platform for grid modernization" is a fatal flaw in the IGMP. For the reasons set forth above, the Department should require Eversource to file a new GMP that meets each of these criteria for AMF.

2. The IGMP is inconsistent with the TVR structure for Basic Service

The IGMP further fails to implement TVR in a manner consistent with the Department's TVR requirements adopted in the generic proceedings. In D.P.U. 14-04-C, the Department held that "[t]he introduction of [TVR] for Basic Service is necessary and appropriate to advance our grid modernization objectives." TVR Order at 20. The Department then ordered:

> Following the deployment of [AMF], electric distribution companies will offer to Basic Service customers: (1) a default TOU rate with a CPP; and (2) an option to opt out of the default rate and choose a flat rate with a [peak-time rebate ("PTR")] component. The Department directs the electric distribution companies to prepare their [GMPs] in a manner consistent with this new Basic Service rate structure.

Id. at 21.

The IGMP is not remotely consistent with this new Basic Service rate structure. Ignoring the Department's directives, Eversource proposes the wrong TVR options using the wrong meters and the wrong approach (*i.e.*, opt-in).

First, the IGMP proposes an opt-in "TOU/CPP" rate, which includes off-peak, peak, and critical peak pricing periods ("Opt-in TOU/CPP"). IGMP at 18. Eversource defines the peak period as weekdays from 12 p.m. to 6 p.m., all other hours including weekends and holidays being off-peak. *Id.* There would be twelve CPP events per year, each lasting up to six hours during highest system-wide demand events. *Id.* at 19. Second, the IGMP proposes an opt-in "Targeted TOU" product, which allows customers to choose among three on-peak periods, weekdays 2-4 p.m., 3-5 p.m., and 4-6 p.m., respectively ("Opt-in Targeted TOU"). IGMP at 25. The Targeted TOU rate would be the same for each of these three tranches. CLC-2-23. In

addition, Eversource would continue to offer its default flat rate for Basic Service customers who do not opt-in to the TVR program.

At such a small participation rate where the default rate has no TOU component, these TVR options are "primarily punitive" or "all stick and no carrot," meaning participation comes at a relatively severe financial risk but has limited benefits. *See* Exh. CLC-FL-1 at 15-19. Adding to this risk, Eversource would design its TVR structure before it deploys any meters, without the benefit of baseline sub-hourly data, denying customers the opportunity to see their actual sub-hourly consumption prior to signing up. Tr. Vol. 1 at 51, lines 14-22. Without a proper baseline, it will be impossible to determine if opted-in customers are getting rewarded for reducing system peak demand or if they are just receiving a rate cut for their normal use at everyone else's expense.

Second, the IGMP cannot support the TVR framework because both the *design* of the specific rate and the eventual *implementation* of that rate depend on full AMF. As to design, a means of collecting baseline data on customer usage patterns and system loading below the substation level is important for carefully crafting the Basic Service TVR programs adopted in D.P.U. 14-04-C and for competitive suppliers to develop other TVR. The IGMP does not provide for that baseline. *See, e.g.*, Tr. Vol. 1 at 194, line 12 to 195, line 10 (explaining difficulties in measuring demand reduction achieved by the opt-in program absent a baseline study). As to implementation, Compact JPE witness Karl Rábago noted that one of the benefits of full AMF is its ability to carry out a TVR program on an opt-out basis. Exh. CLC-KRR-1 at 18, lines 4-5. The converse is also true: without full AMF, a default TOU rate is impossible to implement.

Finally, Eversource claims that its targeted opt-in TVR program provides for a "more cost-effective solution" and argued that it should not have to "burden the entire customer base with an opt-out program." IGMP at 16; Tr. Vol. 1 at 76, lines 16-17. However, the Department expressly rejected the targeted opt-in approach pushed by Northeast Utilities[10] in the generic proceedings. Order 12-76-B at 48. Then, after further "careful consideration of the issues raised by the stakeholders," the Department set forth the final policy framework. TVR Order at 2. In response to the Department's explicit TVR Order, Eversource made no effort to design a GMP in a manner consistent with this new Basic Service rate structure. Instead, Eversource focused its efforts on evaluating and developing an opt-in TVR program. IGMP at 48. It is impermissible for Eversource to try to take another bite at the apple and rewrite these rules in an adjudicatory proceeding where those very rules apply. Eversource was ordered to design a GMP consistent with the Department's TVR framework. The Company has simply not complied.

3. The IGMP does not provide data access

The IGMP further fails to meet the Department's directives to include a plan for providing timely, free-of-charge access to consumption data in support of the competitive electricity market. In D.P.U. 12-76-B, the Department emphasized that customers, authorized competitive electricity suppliers, and other service providers must have access to usage data for the benefits of grid modernization to be fully realized. Order 12-76-B at 34. It found that "[a]ccess to data will allow third parties, whether competitive electricity suppliers, demand response aggregators, or other service providers, to develop and market innovative products to

[10] NSTAR Electric Company and Western Massachusetts Electric Company were represented and fully participated as "Northeast Utilities" in that proceeding. Northeast Utilities and its operating companies have since combined with NSTAR Electric & Gas. The surviving entities were rebranded Eversource Energy. Unfortunately for Massachusetts customers, the Company's position on TVR is no different under its new name. Eversource is still fighting against a rate structure that the Department already carefully considered and formally adopted in 2014.

offer to consumers and allow ISO-New England to evaluate and manage the regional electric system more effectively." *Id.* at 36. To this end, GMPs must address:

> (1) how customers will be provided access to consumption data that can be easily understood; (2) the procedures for allowing an authorized third party to access customer usage data with the customer's permission; and (3) procedures for making aggregate usage data available to third parties and ensuring that it cannot be linked to any individual customer.

Id.; see also TVR Order at 15.

The IGMP does not meet these data access obligations. Eversource does not provide a final proposal to allow customers to view their meter data but instead states that it is "considering several options." IGMP at 28. Eversource does not detail these options but states that a customer participating in one of its opt-in TVR programs would have to sign up for an "enhanced service" to have real-time access to his or her own meter data at an additional cost to that customer. *Id*. Eversource does not propose any procedures to allow either customers or competitive suppliers access to usage data. CLC-2-1. The Company believes that it must have complete control over the transfer of any data and says that customers would not be allowed to use a third-party provider for a data transfer service. See CLC-4-24. While it is not clear if Eversource has thought about how it would administer such transfers, these statements imply situations where Eversource could block or delay access to data, provide incomplete or unusable data, or impose burdensome fees.

Data access is crucial for competitive suppliers to participate in, and for the full realization of, a modernized grid. Without providing data access at reasonable costs, Eversource effectively erects a barrier against competitive suppliers' participation not only in grid modernization but also more generally in the competitive marketplace. The Compact JPE is very concerned about the availability of customer usage data, which would allow it to offer a TVR

power supply product and would be of great value to its energy efficiency and demand response programs.[11] See TVR Order at 3 ("… the policy framework we adopt today will benefit all customers by … providing appropriate incentives for distributed resources such as … targeted energy efficiency and demand response"); Exh. CLC-DBG-1 at 10, lines 1-6, 20-21; Exh. CLC-FL-1 at 31.

However, Eversource delivers a one-two punch to the competitive market: (1) its IGMP fails to meet the Department's requirements to propose data access procedures in sufficient detail; and (2) in D.P.U. 17-05, Eversource has proposed exorbitant increases in data access fees.[12] If Eversource's IGMP is approved, the competitive market, including the Compact JPE, would be denied opportunities to contribute to the objectives of optimizing demand and integrating distributed resources.

In sum, the IGMP does not meet the requirements for AMF, TVR, and meter data access. These requirements are neither optional nor trivial. As summarized by Mr. Rábago, the IGMP "fails to honor the spirit and direction of the Department's guidance" and it "will not advance grid modernization in [Eversource's] service territory in a meaningful way." Exh. CLC-KRR-1 at 8, line 6. Accordingly, the Department must reject the IGMP in its entirety as it fails to meet the straightforward requirements of the Department's grid modernization framework.

[11] Indeed, throughout the course of D.P.U. 12-76, the Compact maintained its position that "investment in advanced metering and the associated data-related infrastructure must give customers the power to choose." D.P.U. 12-76, Comments of the Compact (July 24, 2013).

[12] Currently, Eversource charges an annual fee of $161.64 if a customer wants on-line access to its monthly usage data. D.P.U. 17-05, Exh. ES-RDP-14 (Part 4) at 100, 150, 169; Exh. CLC-FL-1 at 31-32. In D.P.U. 17-05, Eversource is proposing to increase that fee to $300 per year and to charge up to $847.42 per request for "Load Pulse Data Access." D.P.U. 17-05, Exh. ES-RDP-12 (Part 2) at 44; Exh. CLC-FL-1 at 32. To put those costs in perspective, it would cost approximately $40 million or $114 million if the Compact requested on-line access or real-time pulse data for its power supply customers, respectively. Exh. CLC-FL-1 at 32. In addition, in D.P.U. 17-05, Eversource has proposed changes to its tariff provisions relating to metering equipment that would prevent customers and competitive suppliers from attaching any type of external device to Company meters in an effort to acquire usage data without paying these exorbitant fees. D.P.U. 17-05, Exh. ES-RDP-12 (Part 2) at 9-10.

B. The IGMP Undermines The Competitive Markets.

In addition to not meeting the minimum requirements of a GMP, the IGMP should be rejected because it undermines the competitive retail market for power supply, in violation of Massachusetts law. The General Court began to dismantle the vertically integrated utility with the passage of "An Act Relative to Restructuring the Electric Utility Industry in the Commonwealth, Regulating the Provision of Electricity and Other Services" (the "Restructuring Act"), G.L. c. 164, Acts of 1997. Customer empowerment is at the core of the Restructuring Act.

As indicated by the Joint Committee on Electric Utility Restructuring in an initial report to the House and Senate, restructuring was meant "to allow a retail electricity market to develop where consumers could purchase their electricity from any generating company selling on the market, rather than remain a completely captive customer of their utility." 1996 Senate Doc. No. 2472. Among its goals at that time, the committee specifically sought to "[d]etermine means of empowering residential customers to receive comparable benefits to large industrial customers including . . . providing for demand aggregation at the municipal level for customers with smaller demand." *Id.*

Thus, the Restructuring Act sought to create a generation market that would "encourage innovation, efficiency, and improved service from all market participants" and declared that "customer choice" would be a primary element. St. 1997, c. 164 §1(f), 1(l). As a result, an electric distribution utility's Basic Service is a last-resort supply; it is not an alternative competitive supply option. *City of Lowell*, D.P.U. 12-124 at 58 (2012). Basic Service is not a profit source for the distribution companies, the price being purely a pass-through cost. *Investigation into the Provision of Basic Service*, D.P.U. 15-40 at 1, n.2 and 4 (April 9, 2015)

(citing G.L. c. 164, §1B(d)) ("The basic service rate is a "pass through" of the market costs of electricity supply to customers; electric distribution companies do not earn a return on or derive a profit from providing basic service."). In effect, distribution companies are not themselves (and should not be) competitors in the power supply market.

The Department has a statutory duty to require electric distribution companies to accommodate choice of suppliers by retail customers. G.L c. 164, §1A. The Department is also charged with establishing rules and regulations to *promote* effective competition. G.L c. 164, §1F. Adhering to these duties, the Department made clear that it expects competitive retail markets to drive grid modernization, ordering that there must be "an opportunity for competitive suppliers to develop a variety of [TVR] products and for manufacturers to develop new technologies to help customers to manage their electricity costs" (TVR Order at 3) and that "the companies bear responsibility for enabling achievement even of those to the maximum extent possible." Order 12-76-B at 9; *see also Investigation by the Department of Public Utilities on its own motion into Electric Industry Restructuring*, D.P.U. 95-30, Order at 15 (August 16, 1995) ("D.P.U. 95-30 Order") ("Ultimately, customers served by the electric industry should be able to choose among a range of service providers, services, pricing options, and payment terms.").

The IGMP is contrary to the Restructuring Act because it (1) offers an exclusive benefit to Basic Service customers, (2) fails to enable the competitive market to contribute to grid modernization, (3) assumes a migration of competitive supply customers back to Basic Service, (4) recruits customers back to Basic Service through a marketing campaign for TVR, (5) creates a bias towards Basic Service in the market, and (6) is funded by distribution ratepayer dollars, resulting in an unjustified cross-subsidy. Each of these issues, as more fully explained below, is contrary to the spirit of restructuring. In marketing exclusive benefits to Basic Service customers

and encouraging customers to migrate back to Basic Service, as if competing itself to supply their power, Eversource has forgotten its role as the supplier of last resort and is attempting to rewrite the statute and regulatory underpinnings of the competitive generation market.

1. The IGMP denies benefits to competitive supply customers

The IGMP violates the Restructuring Act by offering benefits exclusively to customers who sign up for a Basic Service product. Eversource admits that competitive supply customers would be ineligible for the meters it would provide through its Basic Service opt-in TVR program. Tr. Vol. 2 at 226. In order to receive a new meter and have more granular interval usage data, customers must first make a commitment to stay on the Basic Service program for a full year. Tr. Vol. 1 at 44-49 (twelve-month enrollment), 50, line 21 to 51, line 2.

Thus, contrary to the original purpose of restructuring, customers interested in managing their TOU would remain a captive of their utility. As a regulated distribution company, Eversource should be compelled to treat all customers similarly and may not discriminate among customers based on whether they are on Basic Service or competitive supply. Exh. CLC-FL-1 at 9. Approval of the IGMP would permit Eversource to consolidate vertical market power, monopolizing both time-varying power supply and the necessary metering. Instead Eversource should be required to provide AMF to all customers on a non-discriminatory basis regardless of their supplier.

2. Eversource has failed to enable the competitive market to the maximum extent possible

By not offering AMF to all customers, Eversource has failed in its obligation to enable achievement in the competitive market to the maximum extent possible. Competitive markets play an important role in the Department's vision of "advancing the statutory requirements and policy goals of further development of energy efficiency, renewable energy resources, demand

response, electricity storage, microgrids, and EVs" because they widen the range of competitively-priced resources for the modern grid. See Order 12-76-B at 9. This breadth of potential value is the apparent reason that the distribution companies bear responsibility for enabling achievement of aspects of grid modernization beyond their direct control to the maximum extent possible. *Id.* The ability of competitive suppliers to develop and offer TVR-based power supply products and many other distributed energy resources ("DER") and services depends on widespread deployment of AMF, as is laid out in the Department's orders. See CLC-DBG-1 at 7-9.

However, during the evidentiary hearings, Eversource suggested that a competitive supplier or municipal aggregator could pay for the installation of an Eversource-owned meter and that it would be "up to them" to develop the necessary communications networks to support its meters. Tr. Vol. 2 at 362, line 23 to 363, line 14; 310, lines 3-5. Meters are a distribution service. Eversource acknowledges that it is required to furnish every (non-street lighting) customer with some type of meter in order to bill the customer. Tr. Vol. 2 at 361, lines 9-15. In maintaining the distribution companies' status as regulated monopolies under the Restructuring Act and defining their service territories, the legislature acknowledged that having duplicate distribution systems would be economically and structurally inefficient. G.L. c. 164, §1B(a). It would be similarly wasteful here to install multiple meters at a customer's premises and to build out multiple communications networks. Competitive supply customers would have an enormous and unnecessary burden to fund both Eversource's meter and communications network through distribution rates, in addition to their supplier's meter. Eversource's proposals are inefficient and would violate a fundamental obligation of its franchise.

It would also be anti-competitive and wasteful to require power suppliers and aggregators to undertake these distribution service projects. The Department has in recent years taken steps to remove barriers to participation in the competitive supply market. See e.g., *Initiatives to Improve the Retail Electric Competitive Supply Market*, D.P.U. 14-140 at 1 (December 11, 2014). Requiring power suppliers and aggregators to fund the cost of these meters would add a barrier to the detriment of retail competition generally as well as customers who would be unable to benefit from the variety of service offerings the market could otherwise provide.

Thus, Eversource must develop a GMP that facilitates innovation, efficiency, and improved TVR power supply options and other products and services from all market participants.

3. Eversource expects to attract over 26,000 current competitive supply customers back to Basic Service based on its IGMP

Contrary to the Department's directive that Basic Service is only a means of last resort supply not to be used as an alternate competitive supply option, Eversource expects a migration of competitive supply customers back to Basic Service to meet its projections. Tr. Vol. 2 at 237; EVERSOURCE-IGMP App. 7 at 16 (showing 5% participation as 68,660 customers, as revised February 3, 2017, and assuming that number of opt-ins to reach 5%); RR-CLC-1 (showing most up-to-date customer counts as of June 14, 2017, broken down by Basic Service, competitive supply, and municipal aggregation; 5% of all three categories totaling 68,935).[13]

[13] Eversource's Director of Revenue Requirements (Massachusetts), Douglas Horton, testified that the Company expects five percent of customers currently enrolled in a competitive supply or municipal aggregation program to enroll in the [Basic Service] TVR program: "What we're suggesting is that, of the 700,000 customers who today take service from a competitive supplier, 5 percent of those customers and 5 percent of those taking service under [Basic Service] will opt to take service from this -- or elect to participate in this [TVR] offering." Tr. Vol. 2 at 237, line 23 to 238, line 5. This testimony is consistent with assumptions stated in the IGMP and in discovery. See e.g., EVERSOURCE-IGMP App. 7 at 16 together with Att. RR-CLC-1 (showing approximately 69,000 customers are expected to enroll, meaning 5% of those currently on Basic Service plus 5% of those currently enrolled in competitive supply and municipal aggregation).

This migration back resulting in loss of business for competitive suppliers is unfair to the competitive marketplace, fundamentally inconsistent with the Restructuring Act, and clearly not what the Department contemplated in requiring full AMF for all customers. For the Department to allow such a migration would be the very antithesis to it promoting effective competition pursuant to G.L. c. 164, §1F.

The competitive market has been working, as evidenced by a steady decline in Basic Service over the last five years.[14] RR-DPU-4. If Eversource is successful, the migration would reverse the flow of some of that success. The balance of the playing field would heavily tip in Eversource's favor given that competitive suppliers could not offer a similar TVR product with a meter financed through other customers' rates and with a guaranteed return such as Eversource is proposing for itself. The Department has an obligation to support the continued success of the competitive supply market and must not allow this migration under Eversource's TVR proposal.

4. The proposed customer engagement and outreach plan ("CEO Plan") is designed to promote Basic Service

Further inverting its role as the supplier of last resort and erecting additional barriers to competition for the competitive market, the IGMP proposes its $19 million CEO Plan. IGMP at 48-60. The stated goal of the plan is "to create awareness of and drive customer participation in the opt-in TVR programs." *Id.* at 58.

The majority of the $19 million budget would be for television ads, used in conjunction with other mediums designed for maximum customer reach. Exh. EVERSOURCE-PMC-1 at 10, lines 21-22; IGMP at 53. Current Basic Service customers and "ineligible" customers alike

[14] According to data collected from investor-owned distribution companies and reported on Mass.gov, approximately 70 percent of all load and almost 40 percent of all residential load in Massachusetts had migrated to a competitive supply option as of October 2016. Exh. CLC-FL-1 at 33. This declining trend in Basic Service customers is expected under the restructured market. See D.P.U. 15-40, Vote and Order Opening Investigation, at 6 (April 9, 2015) ("[T]he Department anticipates an increase in participation in the competitive supply market…").

would inevitably see these ads. DPU-6-4. The first theme of this campaign would be that "Eversource is investing in its system to support TVR offerings for customers on an opt-in basis." IGMP at 59. Another would be that "TVR offer[s] an opportunity for customers to lower, potentially significantly depending on load characteristics and behavior, their monthly electric costs." *Id.* If, after seeing these ads, customers contact Eversource wanting advanced meters, Eversource "would welcome them to convert to Basic Service." Tr. Vol. 1 at 43, lines 20-21.

This CEO Plan is primarily a recruitment program for Basic Service funded on the backs of all distribution customers and disguised as education. Exh. CLC-FL-1 at 28, lines 16-18. The message for customers is that if they want to engage with the modern grid, have advanced metering, or take advantage of TVR, they must switch back to Basic Service. As Compact JPE witness Frank Lacey observed, Eversource's participation in the retail market is disturbing and potentially extremely disruptive. Exh. CLC-FL-1 at 28, lines 1-2. The $19 million allocated to this campaign would be a waste of distribution ratepayer dollars and would harm the competitive marketplace.

5. The IGMP will create a bias in the market

The introduction of two new Basic Service products, in addition to Eversource's regular flat Basic Service rate, will create an unacceptable bias in favor of Basic Service and create unnecessary risks for distribution customers. Mr. Lacey describes the distortive effect of these offers in his testimony:

> Eversource has proposed two retail products which are demonstrably flawed. The offer alone will create a bias in the market. But to the extent any customers enroll in the product, it will create further distortion in the market. It is highly unlikely that the rate designers will predict every [customer's] reaction to the TVR products perfectly accurately. Because Eversource is

> proposing to be held harmless from pricing errors and hedging errors, with respect to this product, any errors are passed along to all other customers, including customers who have opted out of Basic Service. The TVR products, as outlined by Eversource, place the risk of failed rate design on all customers, including customers supplied by entities other than Eversource.

Exh. CLC-FL-1 at 28, lines 2-11. This bias is particularly harmful to the competitive market when suppliers are unable to offer their own time varying power supply rates. In addition, the risk of Eversource making pricing and/or hedging errors would be high without territory-wide interval usage data available for developing these two TVR products with precision. In this context, the introduction of two new Basic Service products is wholly incompatible with the Department's TVR Order.

In addition, competitive supply customers who have opted out of Eversource Basic Service may pay higher distribution rates depending on Basic Service customers' response to Eversource's TVR offerings. Exh. CLC-FL-1 at 23-25. Mr. Lacey explained that:

> If every customer failed to modify its behavior in the exact manner planned by the rate design team (or all customers in aggregate so failed), then a cost difference would be generated and that difference would be assessed to all customers, including customers who have opted out of basic service. This is troubling to all customers, especially those who have opted to move away from Eversource's products.

Exh. CLC-FL-1 at 23, line 19 to 24, line 2. Eversource proposes to reconcile TVR through the Basic Service reconciliation, which would "continue to be recovered from *all customers*." IGMP at 25 (emphasis added). In the event that Basic Service customers do not respond to TVR, competitive supply customers would then be inappropriately on the hook and subject to higher distribution rates to reconcile those costs.

6. The IGMP results in an unjustified cross-subsidy

The IGMP also results in an unjustified cross-subsidy, whereby all electric customers would be financing Basic Service supply benefits through distribution rates. *See* D.P.U. 97-95 at 94 (defining cross-subsidization). Though categorically excluding competitive supply customers from participating in grid modernization under the IGMP, Eversource proposes to recover all costs associated with the IGMP through distribution rates. Tr. Vol. 1 at 38, lines 1-4. Under the IGMP, a competitive power supply customer wanting to participate in a TVR program not offered by Eversource would pay a *pro-rata* share of the Basic Service opt-in TVR meters through their distribution rate, plus the full cost of that customer's own meter. Tr. Vol. 2 at 250, line 20 to 251, line 18; 252, lines 12-15; 310, lines 3-5; 364, line 12 to 365, line 21. As a result, power supply customers would subsidize Basic Service benefits. Eversource has not justified this cross subsidy because it has presented an analysis of its IGMP showing negative net benefits for customers and which would not meaningfully advance the goals of grid modernization.

For the reasons discussed in this Section IV.B, the IGMP should be rejected because it would jeopardize the competitive marketplace and upend the Restructuring Act. Eversource should not be allowed to use grid modernization investment and initiatives to stem the tide of customers leaving Basic Service for competitive supply in an attempt to rebuild its Basic Service foothold, particularly at the expense of distribution ratepayers.

C. Eversource's Case Against Full AMF Is Flawed.

The IGMP is fundamentally an attack against full AMF, in spite of the Department's directives. To this end, Eversource submits a highly flawed business case, concluding that full AMF is not cost effective for its territory and proposing a piecemeal, haphazard approach to upgrading its meters and IT systems. As discussed below, there are many problems with

Eversource's case against full AMF. A more strategic, large-scale approach would maximize value and result in lower costs per AMF-enabled customer.

1. Eversource's cost estimates lack support and detail

First, there is little to no detail or support for the cost estimates in the IGMP, which is reason enough to reject it. See Tr. Vol. 2 at 218, lines 8-23 (Eversource responding "[n]o, I don't believe we have" to Department's question on whether Eversource submitted the cost/benefit model to the Department). Eversource states that it came up with estimates for its IT capital projects by "[a] top/down rough order of magnitude estimating approach." Att. AG-1-7(d); see also AG-6-6 (describing cost estimates as "high level"). Eversource relies on "no studies, reports or additional documentation supporting these costs because the Company has not yet [as of February 1, 2017] evaluated detailed requirements and solution design process." DPU-1-6. Nor did Eversource solicit formal requests for information or otherwise seek out high-volume pricing information from vendors in order to leverage economies of scale, relying mainly on internal interviews with its own employees. CLC-4-10; DPU-1-22; DPU-1-11; AG-1-3. The complete lack of support for the costs is perhaps a symptom of a much larger malady, the fact that "the Company did not conduct a detailed project analysis and design." DPU-1-6. Ultimately, Eversource has not provided sufficient cost documentation and detail for any meaningful review.

2. Eversource overstates the costs of full AMF and excludes important categories of benefits from its evaluation of full AMF

Second, even with such little detail, experts for multiple parties concluded that the cost-benefits analysis of full AMF contains exaggerated costs and omits important benefits. Most obviously, Eversource improperly includes stranded costs in the total cost estimates. IGMP at

36; Order 12-76-C at 25-28 (directing the companies to exclude the undepreciated value of existing assets from their presentations of costs and benefits); *see also* Exh. AC-1 at 15, line 8.

It is also telling that Eversource thinks that AMR meters can capture "80% of the benefits of AMI." Tr. Vol. 1 at 83. As discussed by Mr. Rábago, this thinking fails to account for "the full range of benefits, programs and services that would be enabled [by full AMF]." Exh. CLC-KRR-1 at 7, lines 6-8. He concludes "that it is very likely that Eversource's business case analysis significantly undervalues the potential benefits of AMF deployment." *Id.* at 17, lines 14-15.

Eversource's cost-benefit assessment ignores recognized benefits, making it ineffective on its face. *See, e.g., id.* at 10-18 (discussing benefits from energy efficiency, Demand Reduction-Induced Price Effects, improved reliability, improved customer service, and carbon emissions reductions); Exh. AC-1 at 4 (citing public health, environmental, and economic benefits; avoided costs from distribution, transmission, and large-scale generation investments; good local jobs); Exh. CLC-DBG-1 at 8-17 (describing examples of AMF bringing customer benefits through third-party efforts). *See also* Ahmad Faruqui et al., *The Costs and Benefits of Smart Meters for Residential Customers* at 13-14 (The Edison Foundation, July 2011) (listing operational and customer benefits of smart meters for four utility profiles, having varied prior metering infrastructure).[15]

Eversource also overlooked the value of AMF data itself. Eversource complains of high costs for storing data from full AMF (*e.g.*, Tr. Vol. 2 at 311, line 15 to 313, line 23) but somehow reaches the conclusion that there are zero benefits associated with the data. See IGMP at App. 9. For the Company alone, there would be implications for its rate design, forecasting,

[15] This report is available in the U.S. Department of Energy's Smartgrid.gov resource library at: https://www.smartgrid.gov/document/costs_and_benefits_smart_meters_residential_customers.html.

energy efficiency and demand response programs, outage reporting, storm recovery planning, and its interconnection studies. Eversource's inability to perceive any value in AMF data to compare to its cited costs is unrealistic and reflects negatively on its competence as a business in an information age. See *Boston Edison Company*, D.P.U. 85-266-A/85-271-A at 10 (June 26, 1986) (utility must recognize that the "industry is changing, not as a result of regulation, but as a direct result of economic and technological forces").

Outside the Company, the benefits of full AMF could be multiplied through competitive entities, energy efficiency providers, and aggregators. See Exh. CLC-DBG-1 at 8; Exh. CLC-FL-1 at 13-14. Among the benefits of AMF, which the IGMP wholly fails to address, are:

- Access to interval metering and near-real-time data reporting would allow competitive suppliers to offer TVR products and would encourage load shifting without the need for expensive workaround products to enable demand response and behavioral programs. Exh. CLC-DBG-1 at 12-13.
- AMF data for customers across Massachusetts would be of significant value to the development of tailored energy efficiency programs. Exh. CLC-DBG at 10.
- Access to interval-level metering data for customers (of all rate classes) would allow the evaluation of customer usage patterns both within a particular service territory as well as in comparison with other territories. *Id.*
- Full deployment of AMF would improve the ability to geo-target energy efficiency and demand response programs to provide both grid-facing and customer facing benefits that could potentially reduce or defer customer costs associated with distribution infrastructure. Exh. CLC-DBG at 15.
- Full AMF would enable a wider variety of conservation and demand management markets and accelerate adoption of new technologies. See Exh. CLC-FL-1 at 12-13 (citing free nights and weekends, pre-paid electricity, demand response, peak-saver, and advanced thermostat programs).

3. Eversource's projected participation rates are unreliable

Third, Eversource's participation rate assumptions are not realistic. On one hand, the IGMP leaves significant doubt as to whether Eversource can achieve five percent participation in its opt-in TVR program due to the design of its TVR offerings. Eversource's Opt-in TOU/CCP

offering, having long on-peak periods and twelve CPP events each year, would be subject to very high pricing. IGMP at 18-19. TOU/CPP participants would see a 64 percent bill increase, on top of new data access fees, if they failed to modify consumption. Exh. CLC-FL-1 at 15, lines 1-19; 16, Table 1. Eversource's Opt-in Targeted TOU offering has a shorter on-peak period and no CPP component (IGMP at 21-23), but it lacks any incentive for customers to bear this increased pricing risk all year long. Exh. CLC-FL-1 at 20, lines 10-12. Targeted TOU participants would have to permanently ensure that 93.5 percent of their electricity usage was outside of the peak period to prevent their bill from increasing. *Id.* at 21, Table 2. For both offerings, participants must commit to Basic Service TVR for one full year. Tr. Vol. 1 at 44-49.

Given these designs, Mr. Lacey concludes that five percent of Eversource's eligible customers would not enroll in one of these TVR programs due to the "primarily punitive" nature of the offerings and the lack of tools for customers to successfully manage their loads. Exh. CLC-FL-1 at 15-17. If Eversource achieves its five percent, that perceived success could be a sign that the participants need not alter their consumption to get a financial advantage from one of the offerings, for example residential customers who work during peak periods or recreational/community facilities that operate during evenings and weekends. Since TVR meters would not be installed in advance of enrollment (Tr. Vol. at 1 50, line 21 to 51, line 2), Eversource would have no way of knowing if these offerings influenced loads. With no baseline data, Eversource's five percent opt-in rate prediction is baseless.

On the other hand, Eversource underestimates AMF acceptance rates, assuming it knows "the right type of customer" to benefit from grid modernization. See IGMP at 63. Eversource repeatedly portrays its customer base as too disinterested, inattentive, unable, and unwilling to engage with a modern grid. See IGMP at 40, 42; Exh. EVERSOURCE-PMC-1 at 13, lines 6-7,

at 13, n.1; AG-4-21; Tr. Vol. 1 at 39, lines 15-18, at 55, lines 12-15, at 77; Tr. Vol. 2 at 235, line 23 to 236, line 1, at 259, lines 8-9.

These characterizations by Eversource of their customers are unfair and unsubstantiated. For example, Ms. McLean-Conner asserted during the evidentiary hearings that Eversource has "many customers" opposed to smart meters who send complaint letters "on a regular basis." Tr. Vol. 1 at 77, lines 3-10. According to Company records, the actual tally of all customers who have contacted the Company to voice opposition to advanced meters is 42 – a miniscule 0.003 percent of its residential and small C&I customer base. RR-CLC-3. The Compact JPE's longtime Administrator, Margaret Downey, has an opposite impression of customers.

> [E]specially on the Cape and Vineyard . . . a lot of the businesses, they're looking for the next step. They've accomplished energy efficiency, they've put on renewables, and they are ready. These customers are savvy and they understand the markets and they're ready to move to the next level that requires . . . a foundation based on the meter and the platform.

Tr. Vol. 3 at 432, lines 11-19. Beyond business customers, Ms. Downey testified that she has observed that many residential customers on Cape Cod and Martha's Vineyard want to better track their energy use and take advantage of opportunities to save money on their energy bills. Exh. CLC-DBG-1 at 17, lines 3-6.

Eversource's biases towards customers are reflected in its cost-benefit analysis, which assumes a 56 percent participation rate in the "opt-out" scenario. IGMP, App. 9 at 1. As an initial matter, though, this assumption is *not* an estimate of customer acceptance of AMF; it is based on predicted participation rates in a "TVR Opt-Out program" modeled after its Opt-In TVR program. *Id.* To the extent that Eversource implies that its opt-out analysis reflects a lack of interest in AMF, that notion is contradicted by participation rates from other advanced metering programs across the country and in Massachusetts. In a recently completely pilot study

in Worcester, National Grid deployed 14,633 AMI meters and had only 1,242 meter opt-outs during deployment, a 92 percent participation rate. CLC-2-35. Comparably high participation rates resulted from opt-out advanced meter deployments in Michigan, California, and Vermont. See Exh. CLC-1 at 47-48 (reporting second-year retention rates at 88% for DTE Energy, 89% for Green Mountain Power, and 93% for Sacramento Municipal Utility District); *id.* at 25 (comparing 93% versus 15% participation from opt-out and opt-in recruitment, respectively).

Ultimately, the participation rate assumptions are not well supported and are clouded by Eversource's biases about its customers. As a result, it is impossible to meaningfully compare Eversource's opt-in TVR program to the full deployment of AMF on an opt-out basis.

4. Eversource's net benefits calculations are misleading

Fourth, Eversource presents a benefit comparison chart that defies logic. See "Table 12 - Cost/Benefit Analysis Opt-in vs. Opt-out," IGMP at 63. This chart shows an "Opt-in Approach 20% participation" scenario with benefits of $83.4 million, an "Opt-in Approach 5% participation" scenario with benefits of $33.4 million, and an "Opt-out Approach" with benefits of $42.6 million (*i.e.*, benefits in row one, before netting against costs). *Id*. By showing two opt-in scenarios in this chart, Eversource recognizes that there are contingency factors at play, such as customer interest and load profiles. Yet Eversource only shows one opt-out scenario without indicating any specific participation rate, implying that any opt-out program would have half the benefits of the 20 percent scenario.

It is obvious from the level of benefits shown in the chart that Eversource has used different contingency factors in the opt-out scenario versus in the 20 percent scenario.[16] To

[16] The calculations underlying this chart are not especially transparent, and information requests seeking explanations have elicited incomplete responses and have raised some red flags. See CLC-2-41 (including only CPP/TOU program assumptions); CLC-4-35 (including only CPP/TOU program assumptions for residential

produce an opt-out scenario with half the benefits at more than twice[17] the participation, the opt-out scenario must necessarily assume lower levels of customer response than the 20 percent opt-in scenario. Otherwise, the opt-out benefits would include all of the $83.4 million benefits from the first 20 percent of participants plus additional benefits from the rest of the participants. Thus, Eversource's chart is not comparing apples to apples and should be disregarded. Put simply, "[t]he Company's Benefit-Cost Analysis for full AMF cannot be relied upon." Exh. AG-PA-1 at 49, line 11.

5. Full AMF lowers per-customer costs

Fifth, full AMF is less expensive on a per-customer basis, as is reflected even in Eversource's own high-level costs estimates. Compare:

- Under the IGMP, Eversource proposes to spend $73 million on initial IT investments and $5 million on initial cybersecurity to bring advanced metering to approximately 69,000[18] customers. Att. AG-1-7(d). That represents an investment of approximately $1,100 per upgraded customer under the IGMP.
- For full AMF, Eversource estimates a total cost of $500 million for these same categories of initial IT investments and cybersecurity to bring advanced metering to approximately 1.3 million customers. Att. AG-4-2(a), "IT Capital Costs" tab. That represents an investment of approximately $400 per upgraded customer under full AMF.

Thus, even Eversource understands that there would be cost savings through a full-scale deployment, aside from expanding and multiplying the benefits.

In support of its position that a targeted opt-in approach is more cost-beneficial, Eversource emphasizes that participants in opt-in TVR programs reduce their demand more than those in opt-out TVR programs. IGMP at 40. For this point, Eversource repeatedly refers to the

---

customers); Tr. Vol. 1 at 103, lines 3-8 (confirming that the cost-benefit analysis assumed *fewer* residential participants in an opt-out scenario than an opt-in scenario).

[17] An appendix reveals that the model uses a 56 percent participation rate for this opt-out approach. IGMP, App. 9 at 1.

[18] *I.e.*, five percent of 1,378,694, using the updated customer counts in Att. RR-CLC-1, which comes to 68,934. See IGMP at 16-17. At a maximum, the IT proposed in the IGMP could accommodate only 75,000 customers. AG-4-6.

U.S. Department of Energy ("DOE") Smart Grid Investment Grant ("SGIG") program, especially results in the Sacramento Municipal Utility District ("SMUD"), which tested both opt-in and opt-in programs. *See e.g.*, CLC-2-40 ("SMUD opt-in customers had demand reductions per customer that were twice as large as they were for opt-out customers"). However, Eversource was selective about what information it took from these reports and from SMUD. See Tr. Vol. 1 at 85, lines 11-18 (admitting that the company only based one assumption on SMUD). Indeed, SMUD saw peak period demand reductions higher for its opt-in program, according to the DOE reports. Exh. CLC-1 at 67.[19] Nevertheless, the DOE still concluded that "SMUD's opt-out offers were more cost-effective for the utility than their opt-in offers in all cases." *Id*. That finding is of course consistent with Eversource's own cost estimates showing that meters and IT systems would be more cost effective on a per-customer basis. The economically rational conclusion is that full AMF is the better approach.

6. Eversource's CEO Plan is inefficient and counterproductive

With an opt-in program expected to achieve 5 percent participation, Eversource's $19 million CEO Plan is wildly inefficient and imprudent. In the generic proceedings, the Department stressed that:

> marketing, education and outreach are vital to ensuring that customers are well informed and engaged in: (1) their options for managing their energy consumption; (2) the tools and technologies that will assist them; and (3) the benefits associated with reductions in consumption and/or shifting consumption away from high-cost times.

Order 12-76-B at 26. The Department's objective with customer education is to "ensure that customers do not reject [TVR] because they find them to be confusing or inherently risky." *Id.*

[19] This exhibit is the DOE's *Final Report on Customer Acceptance, Retention, and Response to Time-Based Rates from the Consumer Behavior Studies* for the SGIG program (2016). The Company relied on an interim version of this report at the time it developed the IGMP. Tr. Vol. 1 at 84, line 24 to 85, line 1; IGMP at 40, n.10; CLC-2-40.

The Department directed the distribution companies to include a "marketing, education and outreach plan … with a timeline and strategies, for educating customers and motivating them to become full participants in grid modernization." *Id.* However, the CEO Plan includes a $19 million budget to recruit customers to and educate them about a particular TVR program that Eversource expects will be unpopular. Thus, it would have the exact opposite effect of what the Department intended, turning at least 95 percent of customers away from TVR because of Eversource's proposed program design.

The TVR programs would have limited value, would reach a narrow set of customers, would require a great deal of investment, would have a huge opportunity cost, and would not engage the large majority of customers in the modern electric grid. Exh. CLC-KRR-1 at 29. Eversource plans to spend $19 million to engage only about 5 percent, or about 69,000, Eversource customers. See Exh. CLC-KRR-1 at 35; Tr. Vol. 1 at 170 (Ms. Connor noting that "it's extremely unlikely" the Company will achieve more than a 5 percent participation). Accordingly, 95 percent of Eversource's customer base will remain unengaged. Exh. CLC-FL-1 at 4-5. It remains unclear whether the $19 million campaign effort will engage any more than the 5 percent or if it is needed to achieve the 5 percent. See Tr. Vol. 1 at 86-87 and 166-70.

7. The bolt-on billing package is inefficient and counterproductive

Seventh, another waste of ratepayer dollars in the IGMP is Eversource's proposal to invest approximately $98 million to purchase a "bolt-on" to its current billing system that could accommodate up to approximately 75,000 customers with advanced meters. AG 4-6; see AG 6-7. A simple evaluation of the proposal's costs per customer clearly demonstrates that the full replacement of the Company's current billing system, rather than the proposed band-aid, would be more cost effective and would accommodate all customers.

Regardless, Eversource acknowledges that upgrades to its nearly 30-year-old computer system would be necessary under either its proposed IGMP or full AMF deployment for all customers. IGMP at 29. Eversource did not have any estimates for necessary upgrades should additional customers opt-in to the proposed TVR program. Tr. Vol. 1 at 92-93. Eversource states that "we have figured out a way to accommodate, you know, a 5 percent, maybe a little larger. But when you start to go beyond that, we would need to start investing in larger systems." Tr. Vol. 2 at 311.

With full AMF deployment, Eversource states that it would have no choice but to entirely replace its current computer billing system at an estimated cost of $373 million. AG-4-2 at Attachment A. Inexplicably, however, this estimated billing system investment includes the costs of replacing the Eversource computer information system ("CIS") and meter data management systems for its Connecticut and New Hampshire customers. AG-8-6. By removing the per-customer costs associated with customers outside the Commonwealth, the billing system investment costs are reduced to $143 million.[20] RR-DPU-2.

Eversource corroborates the fact that it would be more cost effective to replace its billing system to accommodate all customers with advanced metering and opt-out TVR than the 69,000 customers it expects to participate in its opt-in program. Its costs estimates show that its opt-in approach is $90 more expensive per customer ($377 per customer with opt-in versus $110 per customer with opt-out).[21]

[20] Eversource notes that it is unable to upgrade its Massachusetts computer billing system without upgrading its billing system for its entire service area, including Connecticut and New Hampshire. RR-DPU-2. To avoid cross-subsidization, Massachusetts customers should pay no more than their *pro-rata* share of any costs that Eversource may incur to upgrade its billing systems, and the Department should ensure that Eversource does not pass Connecticut or New Hampshire's share onto Massachusetts ratepayers or attempt to recover duplicatively.

[21] The opt-in per-customer cost calculation generously assumes that Eversource achieves its predicted participation of 69,000 customers at a total cost of $26 million. AG-4-6. The opt-out per-customer cost calculation assumes

Finally, as noted by the Compact JPE, Eversource's reluctance to invest in a new CIS and meter data management system has hindered the competitive market for years. Tr. Vol. 3 at 455-56; see also *NSTAR Electric Company Retail Access*, D.P.U. 08-52 (2014) (noting over $2 million fee for billing system upgrades to allow competitive suppliers bill access); *see also* D.P.U. 17-05, Tr. Vol. 11 at 2353, lines 14-18 (billing system cannot handle "a little opt-out box" for customers to get a privacy statement when signing up for an account). As noted by the Compact JPE Administrator, "all roads and all conversations seem to lead back with the inadequacy … of their legacy system and their inability to give us as a customer the data that is required to advance and move forward on grid modernization, TVR [and] energy efficiency items." Tr. Vol. 3 at 456.

In the GMBC, Eversource proposes to develop new coding for its current billing system to allow for automated complex billing at a cost of $9 million. D.P.U. 17-05, Tr. Vol. 8 at 1646; D.P.U. 17-05, Exh. ES-GMBC-2 at 65. The reason for this upgrade is to help Eversource meet its existing obligations to bill net metering customers accurately. D.P.U. 17-05, Tr. Vol. 8 at 1647, lines 11-14 ("What's happening today is the net metering requires us to have a billing specialist personally look over each one of those bills."). Although this manual process should certainly be modernized, the proposed upgrade in the GMBC would only "be used and useful until the time that such a holistic change occurred in the CIS [as required for] opt-out [TVR] and we completely transformed the CIS system." D.P.U. 17-05, Tr. Vol. 10 at 2122, line 21 to 2123, line 2. See also id. Tr. Vol. 8 at 1646, line 15 to 1647, line 3 (indicating that the GMBC upgrade would not support TVR billing). In both proceedings, Eversource's grid modernization proposals move it farther from meeting the Department's policy of

---

advanced metering is provided to 1.3 million total residential and C&I customers at a cost of $143 million. Att. AG-4-2(a), "IT Capital Costs" tab; RR-DPU-2.

implementing opt-out TVR by sinking ratepayer funds into add-ons that cannot handle full AMF or opt-out TVR.

As the Department itself noted, there is a "chicken-and-egg" situation here. Tr. Vol. 2 at 301. Without the necessary IT systems in place, Eversource is unable to comply with the Department's directive to deploy AMF within five years. The Compact JPE submits that the continued expenditure of millions of dollars to keep a nearly 30-year-old computer billing system operational but incapable of supporting a modern grid for Eversource's entire customer base is not a prudent use of ratepayer funds. Rather, the Department should direct Eversource to invest in the necessary IT systems to support the widespread deployment of advanced meters.[22]

Ultimately, Eversource's evaluation of full AMF is misleading and self-serving. Eversource opposed full AMF in the generic proceedings, and it reaches the same conclusion in its IGMP after a planning process based almost entirely on its own internal conversations.

D. Eversource's Flagrant Disregard Of Department Directives Is Not Justified.

The IGMP should be rejected because it blatantly ignores the Department's directives as discussed above. See *supra* Sections III.B. at 6-7 and IV.A. at 8-19 (e.g., full AMF, opt-out TVR, stakeholder input in GMP, data access for competitive supply).[23] These directives were crystal clear. See Exh. CLC-KRR-1 at 6 (finding the Department provided "clear guidance" for a GMP). They resulted from a prolonged grid modernization investigation and full stakeholder

[22] A portion of the funds identified by Eversource as part of its GMBC in D.P.U. 17-05 could be used to fund a new CIS and data management system that is designed for full AMF and opt-out TVR from the outset.

[23] See Exh. CLC-KRR-1 at 8, lines 3-5 and at 16, lines 6-8 (finding that Eversource's IGMP "fails to honor the spirit and direction of the Department's guidance for grid modernization and TVR," and "does not serve the objectives set out by the Department"); see also Exh. AG-PA-1 at 8, line 15 to 9, line 6, 49 (noting that aspects of the IGMP are "the opposite of the Department's intention"); Exh. AC-1 at 3, lines 7-13, 13 lines 9-11, 14 lines 17-19, 15 lines 6-7, 16 lines 4-5 (noting indications that the IGMP is not consistent with DPU orders despite clear direction).

process in which all three Massachusetts electric distribution companies participated. See Order 12-76-B at 6, n.4.

Despite the clear directives from the Department, Eversource decided against filing a compliant IGMP (see *supra* Section IV.A. at 8-19), even though Eversource plainly understood those directives. See IGMP at 33-34, 38-39; D.P.U. 14-04-C, Eversource Motion for Reconsideration at 1-4, 7-8 (November 25, 2014) ("Motion for Reconsideration"). In the Company's own words, "the combination of [the TVR Order and Order 12-76-C] requires electric companies to accommodate the implementation of TVR as part of their GMPs regardless of whether the installation of AMF is justified by a benefit-cost test." Motion for Reconsideration at 3. The Department denied that Motion for Reconsideration, expressly stating that the "Department fully expects that the GMPs filed by the electric distribution companies will be consistent with directives in D.P.U. 12-76-C [regarding business case filing requirements]."[24] Order D.P.U. 14-04-D at 8 (December 16, 2014).

There is no basis for Eversource to deviate from the Department's directives. In its IGMP, Eversource suggests that it is free to disregard the filing requirements because the Department allowed it to "present evidence and argument relevant to the Department's review" of its GMP. IGMP at 33 (citing Order 14-04-D at 8). This argument misapprehends the principles of agency rulemaking and adjudication. Eversource may not altogether ignore the Department's directives simply because parties to individualized adjudicatory proceedings may present evidence and argument.

As a regulated entity, Eversource cannot set its own grid modernization policy but is instead bound and governed by the policies established by the Department. See D.P.U. 12-76,

[24] Those directives included, among other things, common assumptions for the distribution companies to use in their assessments of TVR. *Id.*; Order 12-76-C at 20-23.

Vote and Order Opening Investigation (October 2, 2012) ("Vote and Order"). The Department has general supervisory authority over the electric companies pursuant to G.L. c. 164, §76, which requires the Department to "keep itself informed … as to [those companies'] compliance with the provisions of law and the orders, directions and requirements of the department…" The Department must require Eversource to comply with its D.P.U. 12-76-B, 12-76-C and 14-04-C directives, which apply equally to all electric distribution companies. Eversource's decision to file an IGMP that does not comport with those Department directives flies in the face of the Department's authority to regulate the activities of public utilities and the electric grid. That decision is inconsistent with the Department's stated grid modernization objectives for the Commonwealth.

In the Vote and Order undertaking its investigation and eventually setting new policy directives for the electric distribution companies, the Department recognized that its responsibilities under existing mandates (e.g., reliability, storm events, ratepayer costs) and new statutes (e.g., the Green Communities Act and Global Warming Solutions Act) included modernizing the grid. Vote and Order at 1-4. Among others, the Department noted its "responsibilities regarding ratepayer costs," for which grid modernization "offers the potential to save customers money by shifting demand to off-peak periods" and in turn to decrease ratepayers' bills and avoid investments in new generation, transmission, and distribution resources. Vote and Order at 2.

Eversource should not be allowed to contravene the Department's state-wide grid modernization policy and should be required to refile a plan that is consistent with those policies. Unlike Eversource, National Grid filed a GMP that complies with the principal directives (i.e., full AMF throughout their service territories, opt-out TVR). See D.P.U. 15-120, Exh. PTZ-1 at

5, 7-8 (August 19, 2015); GMP at Sections 1.4 and 12.2 (August 19, 2015). Eversource's non-compliance with those principal directives results in vast differences between the GMPs across the Commonwealth's service territories and may lead to the delay or lack of grid modernization benefits for customers and competitive market participants in Eversource's territory relative to customers in other distribution companies' territories. Such an outcome would be unfair, unjust, and contrary to the principles of the Restructuring Act. *See* D.P.U. 95-30 Order at 30 (principles underpinning the establishment of the electric industry structure and regulatory framework include providing the broadest possible customer choice and ensuring full and fair competition in generation markets).

Should the Department approve the deficient IGMP, ratepayers in Eversource's service territory would be harmed (e.g., lack of or delayed grid modernization benefits as compared with other service territories) and it would send an improper signal that utilities need not follow Department orders. *See, e.g., Investigation into Preparation and Response of Fitchburg Gas & Electric Company*, D.P.U. 09-01-A at 126, 132-33, 136, 142, 158, 185 (November 2, 2009) (finding that directives contained in prior DPU order were binding on utility and that deficiencies in utility's service stemmed from disregard for prior directives and orders); *Boston Edison Company*, D.P.U. 85-266-A/85-271-A at 14 (June 26, 1986) (the utility cannot disregard its public service obligation and "is accountable to its ratepayers and the Department").

Accordingly, the Department should reject Eversource's IGMP for blatantly disregarding the Department's filing directives for its IGMP and should take other steps as it finds necessary to keep the electric distribution companies accountable to the Department.

E. Other Changes Needed For A Satisfactory GMP.

In addition to the fundamental deficiencies discussed in Sections IV.B. and IV.C., the Compact JPE wishes to briefly underscore the importance of improving three other aspects of the IGMP in a subsequent refiling: (1) performance metrics; (2) research and development efforts; and (3) stakeholder involvement.

1. Eversource should develop meaningful outcome-based metrics

First, Eversource needs to improve its metrics. The development of both infrastructure and performance metrics through the GMPs is the essential means for the distribution companies to make "measurable progress" toward the Department's grid modernization objectives. See Order 12-76-B at 2.

As Karl Rábago recommended, these metrics should tie as closely as feasible to goals and outcomes. Exh. CLC-KRR-1 at 26, lines 17-18. Illustrating this point during the evidentiary hearings, Mr. Rábago gave examples of deployment-focused metrics in contrast to their outcome-based counterparts. "[W]e'd want to measure not smart meters deployed but customer bills reduced; not communications-capable meters installed but number of customer interactions, searches for personal data, downloads of billing information, showing that they actually used the capability, [not just] that the deployment of that technology occurred." Tr. Vol. 3 at 425, lines 14-20. Mr. Rábago also noted the importance of tracking the number of third-party service offerings in a jurisdiction with a competitive retail market. Tr. Vol. 3 at 426, lines 3-13. On the whole, useful performance metrics track "active interaction by customers with the grid, active engagement of customers by third parties, new kinds of products and services being offered, and ultimately the gold standard, reduced bills." Tr. Vol. 3 at 426, lines 14-19.

Eversource's proposed metrics do not sufficiently tie to the grid modernization objectives. Rather they reflect a common utility mindset of "getting their budgets spent" or "get the program done." See Tr. Vol. 3 at 424 (Mr. Rábago describing the utility mindset). Eversource proposes to measure "customers reached through marketing" (IGMP at 69), which would track the number of people who see or hear ads from the CEO Plan, regardless of whether those people learn anything or they take any action. Similarly, Eversource proposes to measure TVR signups (*id.* at 68), which will not inform the Department about demand optimization. TVR enrollment says nothing about customers' response to TVR price signals. Nor does enrollment indicate if Massachusetts is achieving flatter demand curves, lower energy and capacity prices, lower greenhouse gas emissions from wholesale generation, investment in energy efficiency, or adoption of smart appliances. In effect, the metrics in the IGMP "will not provide much relevant information to understand how [TVR] advance the Department's objective to optimize demand." Exh. AC-1 at 9, lines 27-29.

In order to satisfy the GMP filing requirements concerning metrics, the Department should take steps to ensure that Eversource's next filing includes meaningful outcome-based metrics. Whether through a generic proceeding, stakeholder process, or retaining a professional specializing in metrics design, the Department can help neutralize Eversource's utility mindset. More broadly, the Department should use the process endorsed by Mr. Rábago in the immediate future to (1) choose metrics for each goal, (2) create an open process to set targets using stakeholder input, and (3) eventually consider tying utility revenue to performance in key areas. Exh. CLC-KRR-1 at 25-27 (citing Energy Innovation white paper "Getting the Most Out of Grid Modernization").

2. Eversource should develop a strategic research and development plan, and consider a microgrid demonstration project

Second, Eversource needs to improve its research and development plan before ratepayer funds are committed to that effort. The Department required the distribution companies to propose a research, development, and deployment ("RD&D") plan "focused on the testing, piloting, and deployment of new and emerging technologies to meet the four grid modernization objectives." Order 12-76-B at 28. In evaluating Eversource's RD&D plan, the Department should adopt recommendations by Compact JPE witness Jordan Gerow to develop microgrid pilots. Exh. CLC-JRG-1 at 4-5.

Eversource included a section in its IGMP on RD&D, but that discussion shows that its RD&D effort is still nascent. Eversource intends to develop "research partnerships with universities and/or research centers" and has "initiated a dialogue" with several organizations. IGMP at 72-73. Its goal is "to create dedicated efforts to fund R&D that helps Eversource advance the four grid-modernization objectives by identifying technologies, processes and systems that can be rolled into the GMP in the future years." *Id.* at 72. To this end, Eversource asks for blanket funding of $1.5 million per year to co-sponsor research projects that it has not yet developed. *Id*. at 73. Eversource has so far identified five general areas of interest, but it has not selected which one it will pursue and does not identify any specific hypotheses or technological challenges it seeks to understand in any of these areas. *Id*. at 74-75. Eversource is also not proposing any new or unique pilot or demonstration project. *Id.* at 77; *see also* Exh. CLF-CG-1 at 32 (energy policy expert Caroline Golin, PhD, pointing out other details missing from RD&D proposal). The RD&D proposal is aimless and is primarily a high-level budget that is categorically dedicated to research without any concrete goals or plan at this stage. Without more, it would be imprudent to commit ratepayer dollars to the RD&D plan.

Recognizing the "essential role" of customer-sited solutions in achieving the goals of grid modernization, Jordan Gerow, a policy expert from the Pace Energy and Climate Center, recommends focusing research and development on microgrids, which would allow Eversource to "target all of the benefits [of grid modernization] at once." Exh. CLC-JRG-1 at 4-5. He testified that "[m]icrogrids represent the most complete demonstration of customer engagement in energy management, self-generation, and responsiveness to grid conditions." *Id.* at 6, lines 15-17. The wide variety of research opportunities on microgrids includes: demonstrating their use as refuge centers, thereby reducing health and safety risks posed by major storms; quantifying various distribution system benefits; reducing energy usage and costs; reducing emissions; and promoting local economic development. *Id.* at 11-12. A final RD&D plan could include testable hypotheses in many of these areas at a single project site. Eversource in fact recognizes this value, including microgrids as one of its possible research categories and further indicating an interest in a possible pilot project to study "deployments of multiple technologies targeted to a certain geographic area." IGMP at 75-76. The research need not be limited to safety concerns but should also test the value that a host of DER could provide in complex, dynamic configurations, such as distributed solar, fuel cells, combined heat and power systems, small wind, biomass, and geothermal resources, smart inverters, batteries, customer-facing and grid-facing devices, and new energy efficiency and demand response technologies.[25] See CLC-JRG-1 at 10, lines 1-8.

Importantly, authorizing spending on a microgrid demonstration project would be much more beneficial to customers and market participants than allowing Eversource to build its own

[25] See TVR Order at 3 ("… the policy framework we adopt today will benefit all customers by … providing appropriate incentives for distributed resources such as … targeted energy efficiency and demand response).

grid-scale batteries, a proposal that is currently under review as part of the GMBC in D.P.U. 17-05. Eversource is currently targeting Martha's Vineyard for one of these battery sites and has cited certain locational constraints, aging diesel generators, DER integration, reliability issues, and peak load growth as reasons for that selection. See D.P.U. 17-05, Initial Filing, Exh. ES-GMBC-1 at 71-72, 78-81 (January 17, 2017). However, for those very reasons Cape Cod and Martha's Vineyard would be a "particularly valuable location for a microgrid demonstration." CLC-GRG-1 at 16, lines 11-12 (citing locational constraints identified in the GMBC); *see also id.* at 18-23 (listing site selection criteria, including capacity limitations, complementary loads, load management potential, and age of backup generation).

Allowing Eversource to build large batteries across the Commonwealth would pose major risks to the competitive marketplace and would be inconsistent with state and federal energy policies. *See* CLC-FL-1 at 34-41. On the other hand, a single microgrid demonstration project would serve a market enabling function, would allow Eversource to investigate multiple technologies at a single site, and would allow Eversource to pursue all four grid modernization objectives in its RD&D plan.

As Eversource finalizes its RD&D focus and develops a detailed and actionable plan, the Department should adopt Mr. Gerow's recommendation and direct Eversource to "fully develop specific pilots that employ combinations of [DER] in a specific location, particularly microgrids." Exh. CLC-JRG-1 at 8, lines 8-11.

3. Eversource should meaningfully involve stakeholders

Finally, Eversource should better utilize stakeholder input to inform the IGMP in a meaningful way. The Department instructed the electric distribution companies to ensure stakeholder input into the development of their GMPs. Order 12-76-B at 5-6. They were

required to: (1) establish a clear and effective process to solicit stakeholder input during GMP development; (2) clearly communicate this process to stakeholders; and (3) include in its GMP a summary of the solicitation process, the stakeholder input provided, and the integration of stakeholder input into the company's GMP. *Id.* at 51.

Eversource did not adequately involve stakeholders in the development of its IGMP. Eversource held an information session on April 14, 2015 (which the Compact JPE attended), to provide stakeholders "with information about Eversource's goals and priorities for grid modernization and to seek input on the priorities, benefits, and trade-offs of meeting the Department's grid modernization objectives." IGMP at 69. However, this information session was not the equivalent of a design charrette, and stakeholders' comments are not thoroughly documented in the two-page overview in the IGMP. See RR-CLC-2 (citing Tr. Vol. 1 at 73); Att. RR-CLC-2; IGMP at 70-71.

In the future, Eversource should meaningfully bring the stakeholders into the design process and include greater detail and transparency into the content and use of the stakeholder feedback that informed the plan, indicating:

(i) all stakeholder suggestions;

(ii) how each suggestion is being acted upon in the proposal;

(iii) potential harm and benefits to stakeholders implicated by the proposal, as compared to alternative proposals; and

(iv) actions the Company is proposing to maximize the value of its investments by enabling stakeholders to contribute to the goals of grid modernization.

V. REQUESTED RELIEF

Based on the foregoing arguments and authorities, the Compact JPE respectfully requests the following relief:

1. Reject the IGMP and require Eversource to refile a GMP, which:
    a. achieves full deployment of AMF within a five to ten year time period;
    b. makes AMF available to all distribution customers, does not impose fees of any kind on competitive suppliers or municipal aggregators in support of AMF, and does not discriminate in any way on the basis of a customer's choice of retail supplier;
    c. includes one or more vendor-prepared cost estimate(s) for a new billing and meter data management system that can support full deployment of advanced meters in Eversource's Massachusetts service area;
    d. includes a system for approved third-party suppliers and municipal aggregators to settlement quality (as defined by ISO-New England) interval usage data in near real time, both in the aggregate and, with the customer's permission, at the individual level, upon adoption of privacy and cybersecurity protocols;
    e. includes a process for competitive entities to participate in customer education and outreach;
    f. focuses customer education on AMF, monthly energy usage patterns, demand response, and savings opportunities under TVR; and
    g. allows for opt-out TVR at the end of the implementation period.
2. Require Eversource to refile a compliant plan within 120 days of the Department's order, or by such other deadline as the Department finds reasonable;
3. Find that, from the date of the Department's final order in this proceeding forward, it shall be imprudent for Eversource to invest in any new metering equipment that is inconsistent with the full deployment of AMF;
4. Deny cost-recovery associated with drive-by AMR meters, or other metering equipment not consistent with an approved plan for achieving full AMF, if purchased after the date of the Department's final order in this proceeding;
5. Require Eversource to improve the performance metrics, research and development, and stakeholder feedback components of its GMP as discussed in Section IV(E); and

6. Grant further relief that is just and reasonable.

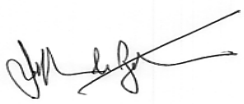
VI. CONCLUSION

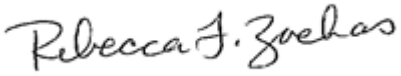
For the reasons above, the Compact JPE respectfully requests that the Department reject the IGMP and direct the Company to refile its GMP within 120 days of its order or by such other deadline as the Department finds reasonable.

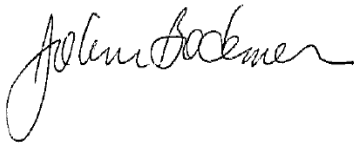
Respectfully submitted,

THE CAPE LIGHT COMPACT JPE

By its attorneys,







Jeffrey M. Bernstein, Esq. (jbernstein@bck.com)
Rebecca F. Zachas, Esq. (rzachas@bck.com)
Jo Ann Bodemer, Esq. (jbodemer@bck.com)
Kathryn M. Terrell, Esq. (kterrell@bck.com)
BCK Law, P.C.
271 Waverley Oaks Road, Suite 203
Waltham, MA 02452
Telephone: (617) 244-9500
Facsimile: (802) 419-8283

Dated: July 12, 2017

COMMONWEALTH OF MASSACHUSETTS

DEPARTMENT OF PUBLIC UTILITIES

Petition of NSTAR Electric Company and Western Massachusetts Electric Company d/b/a Eversource Energy For Approval of their Grid Modernization Plan	)	D.P.U. 15-122

CERTIFICATE OF SERVICE

I hereby certify that I have this day served the foregoing document(s) upon Secretary Mark D. Marini and Hearing Officers Tina Chin and Sarah Herbert via electronic mail and hand delivery and upon the Service List via electronic mail and/or first class mail in this matter.

Dated this 12th day of July, 2017.

Rebecca Zachas, Esq. (rzachas@bck.com)
BCK Law, P.C.
271 Waverley Oaks Road, Suite 203
Waltham, MA 02452
(617) 244-9500 (Phone)
(802) 419-8283 (Fax)