COMMONWEALTH OF MASSACHUSETTS DEPARTMENT OF PUBLIC UTILITIES

Petition of Massachusetts Electric Company and Nantucket Electric Company, each doing business as National Grid, pursuant to G.L. c. 164, § 94 and 200 CMR 5.00, for Approval of General Increases in Base Distribution Rates for Electric Service.

D.P.U. 18-150

INITIAL BRIEF OF AMERICAN PETROLEUM INSTITUTE

Respectfully submitted,

AMERICAN PETROLEUM INSTITUTE

By its attorneys,

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I. INTRODUCTION

In this proceeding, Massachusetts Electric Company and Nantucket Electric Company, each doing business as National Grid (referred to collectively herein as "National Grid" or the "Company"), seek authority from the Department of Public Utilities ("Department") to increase base distribution rates and implement a performancebased ratemaking plan. See generally, Petition of Mass. Elec. Co. and Nantucket Elec. Co, D.P.U. 18-150. As part of this filing, the Company proposes to implement a second phase of the Company's Electric Vehicle Market Development Program ("Phase II Proposal"). National Grid's \$166.5 million Phase II Proposal would significantly expand the Company's investment of ratepayer funds in electric vehicle ("EV") infrastructure over the \$22.5 million approved by the Department in Phase I of the EV Market Development Program ("Phase I Program") in September of 2018. Petition of Mass. Elec. Co. and Nantucket Elec. Co, D.P.U. 17-13 ("Phase I Order") (Sept. 10, 2018). Unlike the modest pilot program approved in Phase I, the Company's Phase II Proposal is significantly larger, on a per ratepayer and per gigawatt hour ("GWh") basis, than EV programs approved in other jurisdictions.

Separate and apart from the ten-fold increase in size for Electric Vehicle Supply Equipment ("EVSE") from the Phase I Program to the Phase II Proposal, the Company made its Phase II request before any data regarding the effectiveness of the Phase I Program has been collected and before any Phase I EV charging stations are even operational. In addition, National Grid requests unlimited flexibility to spend the amounts approved in the ways and years it sees fit, without additional Department approval. Regulators in other jurisdictions have been deliberate and cautious in considering the investment of ratepayer funds for electric vehicle programs, and have been reluctant to approve new programs without meaningful metrics to guide them. The Department's approval of the Phase II Proposal would stand in sharp contrast to the trend in other jurisdictions where overly ambitious EV infrastructure programs have been rejected entirely, or significantly scaled back, and follow-up programs were rejected unless supported by evaluations and "lessons learned" from prior programs.

American Petroleum Institute ("API") objects to any effort to electrify the transportation sector that is funded by ratepayers, or is not otherwise the result of competitive market behavior based on the deployment of private capital. Specifically as related to this proceeding, API objects to National Grid's Phase II Proposal because it (a) is premature, (b) is an unjustified and exorbitant expenditure of ratepayer funds, (c) forces lower income ratepayers to subsidize wealthier EV adopters, and (d) will hinder the development of the competitive EV and alternative fuel markets. Moreover, because the Phase II Proposal is so inappropriately sized in terms of number of charging ports the Company estimates are necessary, it will not likely deliver the environmental benefits National Grid claims the infrastructure buildout will bring and will, instead, lead to underused and stranded assets.

Despite these significant flaws, if approved as filed, the Phase II Proposal entitles National Grid to recover its capital costs on more than \$118 million of EVSE, earn a guaranteed rate of return on the money, and then, based on a creative incentive scheme, earn up to \$12 million more in additional performance incentives, all at ratepayer expense. Succinctly stated, the Phase II Proposal, with its multilayered opportunities for the Company to reap in ratepayer dollars, is a great deal for National Grid shareholders, but catastrophic for its ratepayers, and the Department should reject it.

II. PROCEDURAL HISTORY

On November 15, 2018, National Grid filed a petition with the Department seeking approval of increases in base distribution rates for electric service pursuant to G.L. c. 164, § 94 and 220 C.M.R. §§ 5.00 et seq., along with other proposals. *See generally, Petition of National Grid,* D.P.U. 18-150 (November 15, 2018). As part of its petition, National Grid submitted its Phase II Proposal. *See* Exh. NG-RS-1. It also proposed two performance incentive mechanisms ("PIMs") in connection with the Phase II Proposal. Exh. NG-PBRP-1 at 54.

On December 21, 2018, API filed a timely petition to intervene as a limited participant on issues concerning the Phase II Proposal. On January 3, 2019, the Department held a procedural conference at which it granted API limited participant status. *See* Hearing Officer Ruling on Petitions for Intervention, at 2 (Jan. 8, 2019). Numerous other parties were also granted intervention as full parties, as limited intervenors or as limited participants. *Id.* at 2, 5.

On January 9, 2019, the Department issued a procedural schedule, addressing discovery, testimony, hearing and briefing, and establishing ground rules applicable to this proceeding. Procedural Notice (Jan. 9, 2019). Parties entitled to do so filed expert testimony on March 22, 2019. After substantial discovery had been conducted, the discovery phase of this proceeding closed on April 12, 2019. National Grid filed rebuttal testimony on April 22, 2019, and some intervenor witnesses filed written surrebuttal testimony on April 30, 2019. Between April 29, 2019 and May 23, 2019, the Department conducted 15 days of evidentiary hearings.

III. STANDARD OF REVIEW

In D.P.U. 13-182-A, the Department held that, with limited exceptions, it would not allow recovery of costs for distribution company ownership or operation of EVSE for new investments going forward. *See Electric Vehicles*, D.P.U. 13-182-A ("D.P.U. 13-182-A") at 13 (Aug. 4, 2014); *see also* Phase I Order at 12 (Sept. 10, 2018); *Petition of NSTAR Elec. Co. and W. Mass. Elec. Co.*, D.P.U. 17-05, *Order Establishing Eversource's Revenue Requirement* at 475 (Nov. 30, 2017).

First, the Department allows electric distribution companies to recover the cost of EVSE ownership and operation for their own vehicle fleet charging and employee vehicle charging. D.P.U. 13-182-A at 13. Second, the Department allows investment in and cost recovery for research, development and design ("RD&D") related to EVs, EVSE, and EV charging as part of an electric distribution company's RD&D proposal in its grid modernization plan, or as a separate, approved pilot. D.P.U. 13-182-A at 13. Finally, the Department may grant cost recovery for a distribution company's EVSE ownership and operation in response to a company proposal, as National Grid now seeks through its Phase II Proposal. *Id.* For Department approval and allowance of cost recovery, any EVSE proposal must: (1) be in the public interest, (2) meet a need regarding the advancement of EVs in the Commonwealth that is not likely to be met by the competitive EV charging market, and (3) not hinder the development of the competitive EV charging market. *Id.; see also* M.G.L. ch. 25A §16(f).

IV. ABOUT API

API is the only national trade association representing all facets of the natural gas and oil industry, which supports 10.3 million U.S. jobs and nearly eight percent of the U.S. economy. API's more than 625 members include large integrated companies, as well as exploration and production, refining, marketing, pipeline, and marine businesses, and service and supply firms. API's members play a significant role in providing energy to the nation, including through the development of alternative fuels, i.e., low- and zerocarbon fuels. API members have also worked extensively with their counterparts in the automotive industry in conducting research related to the performance and environmental impacts of advanced technology vehicles, which are capable of running on petroleum and non-petroleum based fuels, or a mixture of both. API members have also worked on refueling infrastructure for hydrogen fuel cell vehicles and creating standards for that technology.

From 2000 through 2016, the U.S. oil and natural gas industry invested approximately \$108 billion in greenhouse gas ("GHG") mitigating technologies, including alternative fuels and advanced technology vehicles.¹ API's mission is to promote safety across the industry globally and to influence public policy to protect the competitive markets, to promote competition, and to maintain an even playing field for the U.S. oil and natural gas industry, including but not limited to alternative fuels. As a stakeholder in the development of alternative fuels markets, API objects to National Grid's use of ratepayer funds to subsidize this emerging competitive market, and encourages the Department to reject National Grid's Phase II Proposal.

V. OVERIEW OF PHASE I AND THE PHASE II PROPOSAL

The Department approved National Grid's Phase I Program on September 10, 2018. *See* Phase I Order at 62-63. In its approval of Phase I, the Department allowed National Grid to pursue cost recovery of up to approximately \$20 million for the

¹ <u>https://www.api.org/~/media/Files/News/2018/18-May/2017 API GHG Investment Study.pdf.</u>

construction of EV infrastructure equipment, rebates for EV site host equipment and charging stations, and program management and marketing, among other things. *See id.* at 11, 62.

National Grid's Phase II Proposal consists of five components:

- An EV Charging Program, "which is intended to complement the Company's Phase I Charging Program by significantly increasing the number of charging ports in the Company's service territory..." Exh. NG-RS-1, at 3. The residential component of the Phase II EV Charging Program includes a \$1,000² rebate, applicable to EV charger and installation costs for approximately 9,000 residential customers at an estimated cost of \$9 million, and a residential offpeak charging rebate estimated at \$5.6 million. *Id.* at 27-28
- A Fleet Advisory Services Plan;
- A Marketing Plan;
- An Evaluation Plan; and
- A Research and Development (R&D) Plan, that will focus on innovations to increase access to electric transportation in disadvantaged communities and benefits of co-locating DCFC with energy storage and solar. *Id.* at 3.

As of October 2018, there were approximately 1,400 Level 2 and 200 Direct Current Fast Charge ("DCFC") ports in Massachusetts. *Id.* at 6. For Phase II, National Grid is proposing to assist in the deployment of 17,400 new Level 2 EV charging ports and 300 new DCFC ports, in addition to its targets of about 1,200 Level 2 ports and 80 DCFC ports from Phase I. *Id.* at 9-10, 11, Table RS-4, Exh. NG-RS-5, at 1.

Unlike the Phase I Program, the Phase II Proposal would allow for both "(1)

customer-owned and maintained EVSE; and (2) Company-Owned and maintained

² The Company is requesting flexibility to adjust the rebate in response to market trends. Exh. NG-RS-1, at 28.

EVSE." NG-RS-1 at 11, 12, Figure RS-1. National Grid is proposing to own up to 50%, or about 3,200, of the Phase II Level 2 charging ports installed at multi-unit dwellings ("MUDs"), public parking areas, and for government and private fleets. *Id.* at 40, Table RS-4; Exh. NG-RS-5 at 1. The Company is additionally proposing to own up to 50% of the Phase II DCFC charging ports. Exh. NG-RS-1 at 40; Table RS-4, Exh. NG-RS-5 at 1.

Phase II also includes an offer for "a time-limited discount . . . on electric bills for dedicated DCFC accounts . . . [to] encourage the development of DCFC stations, which may be prohibitively expensive to operate during the early phase of EV market growth because of the combination of relatively low station utilization levels and demand-based delivery charges." NG-RS-1 at 35.

As part of its Phase II R&D proposal, National Grid is proposing to identify a DCFC site to research the economic, environmental, grid and customer benefits of colocating DCFC with solar and energy storage. *Id.* at 62. The Company plans to identify a third party to deploy the storage and solar. *Id.*

In addition to the five main components of the Phase II EV Program, National Grid is proposing two separate performance incentive mechanisms related to the Program. *Id.* at 70. Finally, the Phase II Proposal includes a request that the Company have unrestricted authority to transfer funds between and among both program components and program years. Exh. NG-RS-1 at 66; Exh. NG-RS-Rebuttal-1 at 15.

VI. ARGUMENT

A. The Department Should Reject Phase II Proposal Because It Is An Ill-Advised Approach to Meet the Commonwealth's 2050 Environmental Goals.

1. National Grid significantly overestimates the number of EVs and charging ports necessary by 2025.

According to the Company, the Phase II Proposal is sized "to help the Commonwealth be on a trajectory to reach the necessary rate of transportation electrification in 2030 and 2040 to achieve" the Commonwealth's Global Warming Solutions Act ("GWSA") goal of 80 percent emissions reduction by 2050. Exh. NG-RS-1, at 4. To be clear, and despite the Company's insistence otherwise, the Commonwealth's 2050 GWSA "goal" is the only goal the Commonwealth has set, and the only legal standard against which the Department should evaluate the Phase II Proposal.

Notwithstanding the express 2050 GWSA mandate, National Grid takes it upon itself to establish a new trajectory for meeting interim carbon reduction goals for 2030 and 2040, goals that the Department of Environmental Protection and the Department of Energy Resources, through authority delegated to them by the legislature, have yet to establish. *See* St. 2008, c. 289. Next, the Company uses these manufactured and inappropriate 2030 and 2040 goals to size its Phase II Proposal in a way that justifies its expansive and immediate EVSE buildout. *See* Market Sizing Exhibit, Exh. NG-RS-13; Tr. Vol. 1 at 139-40. Specifically, the Company claims that the Commonwealth will need 546,464 total light-duty EVs by 2025. NG-RS-13. The Company then claims based on these contrived assumptions that "by 2025, the Commonwealth … will need approximately 19,000 workplace, 12,000 public parking, 22,000 MUD, and 200,000 SFH Level 2 ports, 50,000 light-duty corporate and government fleet ports, and 2,000 public DCFC ports." Exh. NG-RS-1, at 22; Exh. NG-RS-13.

This analysis grossly miscalculates both the number of EVs the Company will have in its service territory by 2025 and the amount of EVSE necessary to support it. In the Phase I proceeding, National Grid argued that the Phase I Program was "designed to make meaningful progress toward the Commonwealth's aggressive goal of bringing 300,000 Zero Emission Vehicles to Massachusetts roads by 2025." D.P.U. 17-13, Initial Brief of National Grid, at 34. National Grid, now jumps to a goal that requires 82% more EVs, or 546,464, by 2025. Exh. NG-RS-13

The Department should reject the Company's unsubstantiated conclusion that the Commonwealth will have 546,464 registered light-duty vehicles by 2025. *See id.* The Company's EV witness, Mr. Sondhi, admitted that the Company has done no separate analysis to determine the likely number of EVs in the market by 2025.³ Vol. 1. Tr. at 136. But, contrary to Mr. Sondhi's testimony, the Company did analyze EV adoption rates in its service territory in order to establish its self-serving EV Adoption Targets for the purposes of proposing additional performance incentives. Those incentives will reward the Company for EV adoption rates that are well below 546,464 registered light-duty vehicles that Mr. Sondhi testified would be necessary in the Commonwealth by 2025. *Compare* Exh. NG-PBRP-Table 4 *and* Exh. NG-RS-13. Nor do the Company's inflated EV calculations reflect EV statistics that project that growth in the EV adoption rate in New England will slow significantly, decreasing from 28 percent to 12 percent

³ Additionally, while the projected number of EVs is an important variable to determine the required number of charging ports, other variables, such as EV range, EV charge times, and EV pricing, can and likely will have dramatic impact on charging port projections over the course of the five-year program.

between 2020 and 2024.⁴ Testimony of Jeff D. Makholm on behalf of the Fueling Stations and Convenience Stores Coalition, Exh. FSCS-JDM-1 ("Makholm Testimony") at 31. Even if it is determined that it is necessary to lay *some* groundwork for meeting the 2050 GWSA goal prior to 2050, the Company has not demonstrated the need for the unprecedented EVSE buildout contained in the Phase II Proposal to meet a goal that is still more than three decades away.

2. Overbuilding, combined with rapidly changing technology, will lead to stranded assets.

One major consequence of incorrectly sizing the EV charging market is that ratepayers will likely end up funding significant underutilized infrastructure. *See* Exh. FSCS-JDM-1, Makholm Testimony at 16. In essence, National Grid proposes to build and own infrastructure that will not be used because there will not be enough EVs to support it. While the Company's testimony reflects its intent for charging station deployment to outpace EV adoption rates and spur additional adoption, there is a point at which additional infrastructure has no incremental effect. *See* Exh. NG-RS-1, at 8; Tr. Vol. 1, at 145. Moreover, overbuilding relative to realistic market projections will also lead National Grid to own a much larger market share of EVSE infrastructure than described in the Phase II Proposal. Tr. Vol. 1, at 140.

Even worse, an incorrectly sized and overly ambitious buildout of EVSE can lead to stranded costs, where infrastructure is installed too early and becomes obsolete in light of rapidly changing technology. Exh. FSCS-JDM-, Makholm Testimony at 13-14. As

⁴ U.S. EIA Annual Energy Outlook 2018, *Table: Light-Duty Vehicle Sales by Technology Type, Reference Case, New England.* Available at <u>https://www.eia.gov/outlooks/aeo/data/browser/#/?id=48-AEO2018&cases=ref2018&sourcekey=0.</u>

the Commission on the Future of Transportation in the Commonwealth recently noted, "the first 350kW fast-charging station in the U.S., which will allow future EVs to add 200 miles of range in 10 minutes, was installed in Chicopee, Massachusetts in May 2018," and "[w]ireless charging pads for parked vehicles may alter the need for charging stations/outlets."⁵ Moreover, premature build-out of EV infrastructure based on an inflated assessment of the market "need" could fail to account for these rapidly changing technologies, leading the Company not only to ineffectively spend funds to the detriment of ratepayers, but to leave ratepayers paying for these assets well beyond their economic usefulness. *See generally*, FSCS-JDM-1, Makholm Testimony.

3. Uncoordinated EVSE Expansion may have adverse environmental effects.

Separate and apart from the issues with the Company's inflated estimates, and the creation of stranded costs, the significantly oversized Phase II Proposal will not only fail to deliver the promised emissions reductions, but could actually have an unintended deleterious effect on GHG emissions. Because "uncoordinated expansion of the EVSE could change the shape of aggregate residential demand curve," a substantial increase in EV charging during peak hours which would likely be met by deploying additional peaking units and may not result in a net reduction in emissions. *Id.* at 20-23. The region experienced this exact phenomena in 2018 when, a January cold snap forced less efficient

⁵ Commission on the Future of Transportation in the Commonwealth, *Choices for Stewardship: Background Books—Facts, Trends, & Issues,* December 2018 at 138, available at https://www.mass.gov/files/documents/2018/12/14/FOTCVolume2.pdf.

resources to run to meet peak demand. During this period, GHG emissions in the region spiked, more than doubling the average short tons of CO2 emitted during the event.⁶

The potential danger of increased peak demand is borne out by the structure of National Grid's Phase II Proposal itself. The Residential Off-Peak Rebate contained in the Phase II Proposal is valued at 4.5 million, and comprises only 3.2 percent of the total \$166.5 million requested. Exh. FSCS-JDM-1, Makholm Testimony at 22. With the vast majority of the Phase II funds dedicated to the development of public charging stations, on-peak charging is far more likely to occur. *Id.* at 22. "A proliferation of charging stations of the magnitude proposed by National Grid would appear to bring with it a concomitant demand for electricity during peak hours." *Id.* at 23; *see also* Phase I Order at 36 (demand from EVSEs will impose significant impact upon the electric grid during peak hours and could jeopardize the benefits of EV adoption). Unfortunately, National Grid has failed to provide the Department with a careful and meaningful analysis of the precise impact such a significant buildout of EVSE will have on the regional electric grid, including any increase in on-peak demand charging and the likelihood that additional utility infrastructure will be necessary to meet that demand.

B. National Grid's Phase II Proposal Is Disproportionately Expensive Compared to Other EV Programs and the Department Should Follow the National Trend of P.U.C.s Rejecting or Greatly Curtailing EV Programs.

The sheer magnitude of National Grid's Phase II Proposal warrants the

Department's scrutiny. National Grid's \$166.5 million Phase II Proposal seeks a ten-fold expansion for EVSE infrastructure over its Phase I program. Testimony of David

⁶ http://isonewswire.com/updates/2018/4/25/winter-20172018-recap-historic-cold-snap-reinforces-findings.html.

Harrison on behalf of the Fueling Stations and Convenience Stores Coalition Exh. FSCS-DH-1 ("Harrison Testimony") at 8-9. As compared to similar programs approved in other jurisdictions, the \$166.5 million requested by National Grid, if approved as filed, would permit the Company to spend approximately \$128 per ratepayer and \$25,918 per GWh on electric vehicle infrastructure, making it, by a significant margin, the most expensive EV program in the United States. *Id.* at 36.

In stark contrast to National Grid's gold-plated Phase II Proposal of \$128 per ratepayer, EV infrastructure programs in Rhode Island, Pennsylvania, and two programs in Oregon ranged from \$3 to \$8 per ratepayer. *See* Exh. FSCS-DH-1, Harrison Testimony at 35. Nor does the Phase II Proposal fare any better when evaluated on a GWh basis. While Rhode Island, Pennsylvania and Oregon's two programs costs amount to \$1,008, \$158, \$169 and \$108 per GWh respectively, the cost of National Grid's Phase II Proposal is a staggering \$25,918 per GWh. *Id.* The level of potential ratepayer funding in the Phase II Proposal is about six times the average value of the other programs in terms of dollars per customer and more than 14 times the average value in terms of dollars per GWh as demonstrated below:

			Customers	Electricity	Total Program	\$ /		
Utility	State	Year	Served (#)	Sales (GWh)	Budget (\$)	Customer	\$ / GWh	Status
Duquesne	PA	2018	600,000	12,673	\$2,000,000	\$3	\$158	Approved
Eversource	MA	2017	1,400,000	23,539	\$45,000,000	\$32	\$1,912	Approved
KCP&L	MO	2017	282,843	8,494	\$6,000,000	\$21	\$706	Approved
NG (Phase I)	MA	2018	1,300,000	6,424	\$22,200,000	\$17	\$3,456	Approved
NG	RI	2018	500,000	3,868	\$3,900,000	\$8	\$1,008	Approved
Pacific Power	OR	2018	587,365	17,082	\$1,850,000	\$3	\$108	Approved
PG&E (1)	CA	2016	5,400,000	82,514	\$130,000,000	\$24	\$1,575	Approved
PG&E (2)	CA	2018	5,400,000	82,514	\$23,300,000	\$4	\$282	Approved
Portland GE	OR	2018	874,568	17,754	\$3,000,000	\$3	\$169	Approved
SCE	CA	2016	5,100,000	84,311	\$22,000,000	\$4	\$261	Approved
SDG&E (1)	CA	2016	1,400,000	15,623	\$45,000,000	\$32	\$2,880	Approved
SDG&E (2)	CA	2018	1,400,000	15,623	\$142,400,000	\$102	\$9,115	Approved
Average						\$21	\$1,803	
NG (Phase II)	MA		1,300,000	6,424	\$166,500,000	\$128	\$25,918	Application

Comparisons of Funding in Phase II Proposal to Approved Utility EV Programs

Id.

The amount requested by National Grid in the Phase II Proposal is enormous even when compared to other EV programs approved by the Department. For example, in National Grid's Phase I proceeding, D.P.U. 17-05, the Department approved \$22.5 million of the \$25 million requested. In Eversource's grid modernization docket, D.P.U. 17-05, the Department approved \$45 million for the EV program. The per ratepayer cost of those two approved programs (i.e., \$17 and \$32, respectively) and the per GWh cost (i.e., \$3,456 and \$1,192, respectively), are substantially lower than the excessive costs associated with the Phase II Proposal. *Id.* at 35. Further, neither of the two Massachusetts pilot programs allowed for utility ownership of EVSE and both programs were of limited duration. *See* D.P.U. 17-13; D.P.U. 17-05. Moreover, National Grid's request for unlimited flexibility to spend the funds as it sees fit over the five years of the program should be an additional reason for further Department scrutiny.

In evaluating similar, and less expensive, EV infrastructure programs, regulators in other jurisdictions have exercised an abundance of caution before approving the expenditure of ratepayer dollars for funding EV charging infrastructure, and they have substantially curtailed those requests to reduce ratepayer impact. For example, in a recent Maryland proceeding, the Public Service Commission ("PSC") rejected approximately 80% of utilities' demand for the deployment of EV charging infrastructure deeming it "overly broad and costly to ratepayers." Petition of Electric Vehicle Working Group, Maryland P.S.C., Order No. 88997 at 37 (January 14, 2019).⁷ Instead of the 24,000 chargers requested in the proposal, the PSC approved a mere 5,000. Id. The \$104 million proposal rejected as too costly by the Maryland PSC averaged \$45 per customer. The Phase II Proposal weighs in at a hefty \$128 per customer, more than two and a half times the proposal rejected in Maryland. Exh. FSCS –DH-1 at 35, 37. Similarly, in California, the Public Utilities Commission ("P.U.C.") ultimately reduced the amount of utilities' EVSE programs by more than \$200 million. See generally, California P.U.C., 17-01-020, Decision of the Transportation Electrification Standard Review Projects, (May 31, 2018).⁸ In curtailing the proposed program amounts, the California P.U.C. sought "to balance costs with benefits for all ratepayers...impacts on competition...and disadvantaged communities..."⁹ In addition, the California P.U.C., has, on two other occasions, also reduced other EV programs. See San Diego Gas and Electric, California P.U.C., 14-04-014, Decision Regarding Underlying Vehicle Grid Integration Application and Motion to Adopt Settlement Agreement at 3, 15 (Jan. 28, 2016) (reducing requested

⁷ https://www.psc.state.md.us/wp-content/uploads/Order-No.-88997-Case-No.-9478-EV-Portfolio-Order.pdf.

⁸ <u>http://docs.cpuc.ca.gov/PublishedDocs/Published/G000/M215/K783/215783846.PDF;</u> *see also* <u>https://apps.cpuc.ca.gov/apex/f?p=401:57:0::NO.</u>

⁹ <u>http://docs.cpuc.ca.gov/PublishedDocs/Published/G000/M215/K467/215467739.PDF.</u>

program amount by almost 30%);¹⁰ *Pacific Gas and Electric*, California P.U.C., 15-02-009, *Decision Directing Pacific Gas and Electric to Establish an Electric Vehicle Infrastructure and Education Program* at 9, 83 (Dec. 15, 2016) (approving only 20% of the amount originally requested).¹¹ Even in the modest proposal approved by the Public Utilities Commission in Pennsylvania following a settlement agreement, Duquesne Light Company's original proposal in the amount of more than \$3 million was reduced to approximately \$2 million. *Duquesne Light Co.*, Pennsylvania P.U.C., R-2018-3000123, *Opinion and Order* at 33 (Dec. 20, 2018).¹²

National Grid has offered scant justification regarding which elements of its Phase II Proposal are driving the disproportionate departure from more conservatively priced programs approved in other jurisdictions. The Department should conclude, as regulators in other jurisdictions have, that the Phase II Proposal costs are overly broad and costly to ratepayers.

C. The Phase II Proposal Forces Lower-Income Ratepayers to Subsidize Higher-Income EV Adopters.

While API does not take lightly the important energy and environmental policies pursued by the Commonwealth, it believes that those policies should not unfairly discriminate against one economic sector or group, such as low-income residents. EVs are currently used only by a small fraction of drivers, many of whom are wealthy enough to afford these more expensive vehicles and the related home charging system

¹⁰ http://docs.cpuc.ca.gov/SearchRes.aspx?DocFormat=ALL&DocID=158241020.

¹¹ http://docs.cpuc.ca.gov/PublishedDocs/Published/G000/M171/K539/171539218.PDF.

¹² <u>http://www.puc.pa.gov/about_puc/consolidated_case_view.aspx?Docket=R-2018-3000124</u>; *see also* http://www.puc.pa.gov/about_puc/press_releases.aspx?ShowPR=4135

to accompany it. According to a University of California study, federal clean energy "tax expenditures have gone predominantly to higher-income Americans. . .The most extreme is the program aimed at electric vehicles, where [they found] that the top income quintile has received about 90% of all credits." *See* "The Distributional Effects of U.S. Clean Energy Tax Credits," National Bureau of Economic Research, Cambridge, Massachusetts, July 2015.

A later study of IRS income data showed that more than 90% of the federal income tax credits for EVs went to households with an adjusted gross income of over \$50,000, with the majority going to households earning more than double the median income.¹³ Lower-income households are already paying taxes that are ultimately subsidizing EV purchases by upper-income earners. Through the Phase II Proposal and other EV proposals, lower-income households are required to subsidize the infrastructure to charge EVs. Permitting an expansive EVSE build out, such as that proposed in Phase II, and to then allow recovery of the costs of those investments through National Grid's ratepayers, results in a further inequitable shifting of costs onto those who have not opted for this technology, and those not necessarily receiving any benefit from it. Ratepayer-supported transportation electrification investment causes "disproportionate economic or financial harm to low-income households and electric utility service consumers." Testimony of John Howat on behalf of Massachusetts Energy Directors Association, Exh. MEDA-JH ("Howat Testimony") at 7.

¹³ "Pacific Research Institute 2018: Costly Subsidies for the Rich," <u>https://www.pacificresearch.org/wp-content/uploads/2018/02/CarSubsidies_final_web.pdf</u>

The fact that lower-income households pay disproportionately more for their electricity is "a fundamental inequity baked into the current energy/utility landscape." *Id.* The bill impacts on ratepayers resulting from the Phase II Proposal are regressive in effect and "households with the least means shoulder the greatest energy burdens...[and] lower income households forego or cut back on the other necessities...in order to pay energy bills..." *Id.* at 8-9. The regressive impact resulting from the Phase II Proposal is particularly pernicious because National Grid may need to combine additional EVSE infrastructure with additional expenses for new or improved transmission and distribution infrastructure, all of which will become permanently embedded into the Company's rate base. The Company will continue to earn a double-digit (or near) rate of return on these assets well into the future, all to the prolonged detriment of the Company's lower income households.

While National Grid's Phase II Proposal does include some program elements directed at developing infrastructure in low-income areas, it fails to address the bigger economic issue of low-income customers subsidizing higher income customers. *See generally, id.* Nor does the Company proffer any solution to ameliorate the significant impact that the \$128 per customer price of the Phase II Proposal will inevitably have on low-income ratepayers. The Department should not approve a program that favors a small group of upper-income households who use EVs at the expense of lower-income households. "Decisions regarding transportation electrification investment should not exacerbate these inequities." *Id.* at 10.

D. National Grid's Phase II Proposal is Premature and Should be Rejected.

In D.P.U. 17-13, where the Department approved National Grid's Phase I

Program, the Company described the importance that evaluation would have going

forward:

Reporting and evaluation throughout the EV Program term will enable the company and the Department to assess the EV Program's effectiveness and its impact. The Company will use its experience implementing the EV program to inform subsequent proposals to the Department related to EV charging, consumer EV education, and EV-related R&D.

See Petition of National Grid, D.P.U. 17-13, Joint Pre-Filed Testimony of Karsten A.

Barde and Brian J. Cronin (Exhibit KAB/BJC-1) at7. The Department adopted the Phase

I Proposal and directed the Company to include with its annual cost recovery filings, the

data collected from the R&D plan and the survey results from the evaluation plan.

Specifically, the Department noted that the Phase I evaluation plan would address such

questions as:

how much increased availability of charging infrastructure increases consumer purchases or leases of EVs; what are the impacts of charging stations on the electric distribution system including the Companies' system peak; what are the impacts of charging stations on site hosts' electric demand; and what are feasible and cost-effective options for managing station demand based on driver usage patterns."

Phase I Order at 38. The Department awarded National Grid \$500,000 to carry out this

evaluation.¹⁴

¹⁴ The Department's Order is consistent with the Maryland PSC, which recently mandated reporting at semi-annual intervals "where lessons learned and underlying key data collected will be made 'publicly available at defined intervals during and following completion of the programs" *Petition of Electric Vehicle Working Group*, Maryland P.S.C., Order No. 88997 at 73-74 (January 14, 2019).

https://www.psc.state.md.us/wp-content/uploads/Order-No.-88997-Case-No.-9478-EV-Portfolio-Order.pdf

Despite its express recognition of the importance of the evaluation process and the Department's Phase I Order, National Grid has offered no evaluation of the factors identified by the Department. And while National Grid attempts to distract the Department's attention from its failure to provide any evaluation of Phase I by claiming that the Company and its affiliates are sharing information learned from programs in other states, *see* Exh. NG-RS-Rebuttal- at 9-10, such information sharing does not satisfy the specific information mandated by the Department in D.P.U. 17-13. Specifically, the Company has failed to show:

- The average impact of Phase I charging stations on the Company's system peak demand;
- The average increase in a charging station site host's electric demand;
- The hourly demand over a typical 24-hour period for all Phase I charging stations;
- Utilization levels and patterns of Phase I charging stations;
- The increased number of consumer purchases or leases of EVs that are attributable to the increased availability of charging infrastructure deployed in Phase I; and
- Average infrastructure costs for charging stations deployed in Phase I.

Testimony of Edward A. Burgess on behalf of the Massachusetts Attorney General, Exh. AG-EAB ("Burgess Testimony") at 9 (citing National Grid's response to AG-18-3 (Feb. 27, 2019)).

Moreover, National Grid has yet to select a contractor to perform the evaluation

Tr. Vol. 1 at 23, 74-75; National Grid's response to AG-18-2 (Feb. 27, 2019), and the

Company does not expect that implementation of the Phase I Evaluation Plan will begin

before July 2019. Tr. Vol. 1 at 23. As of March 2019, National Grid had less than one-

half of one full-time person working on EVSE deployment. National Grid's response to

D.P.U. 27-22 (April 3, 2019) (0.41 full-time employee working on and has spent just

\$13,000 in wages on the Phase I Program). As of February 2019, National Grid had not

installed a single charging port under its Phase I program. National Grid's response to

AG-18-3 (Feb. 27, 2019).

The California P.U.C. faced a similar situation when Southern California Edison ("SCE") sought approval for its Phase 2 EV program prior to the availability of meaningful metrics from its Phase 1 proposal. In rejecting the Phase 2 program, the P.U.C. stated:

> We agree with SCE that certain efficiencies may exist in moving seamlessly from a pilot to full-scale deployment, and we are sympathetic to parties' calls for rapid movement. However, we cannot abdicate our responsibility as a regulatory agency or relinquish the process needed to adequately review a proposal for Phase 2 deployment. As SCE explains in its testimony, Phase 1 will allow SCE to test several key assumptions underlying its approach prior to full-scale deployment. This application is being approved on the merits of Phase 1, and we cannot assume that Phase 2 has merit without considering the results of Phase 1.

See Application of Southern California Edison Company, California P.U.C., U338-E,

Order at 29-30 (Jan. 14, 2016). Such is precisely the case here. Approving Phase II absent "key assumptions" and other important metrics from Phase I would render meaningless the evaluation process the Department itself approved to ensure the proper expenditure of ratepayer funds

Indeed, requiring National Grid to provide additional information regarding insights from Phase I, and to develop Phase II based on those insights, promotes maximum program effectiveness. Delaying Phase II approval will provide the Department the opportunity to review evaluation results of Phase I. This approach was endorsed by Attorney General witness Edward Burgess and FSCS witness Dr. David Harrison, who both emphasized that waiting for such Phase I metrics prior to considering Phase II would not, contrary to National Grid's testimony, have any meaningful impact on the Commonwealth's ability to meet the Commonwealth's current GHG emission reductions goals. *See* Surrebuttal Testimony of David Harrison on behalf of the Fueling Stations and Convenience Stores Coalition Exh. FSCS-DH-Surrebuttal-1 ("Harrison Surrebuttal") at 13; *see also* Exh. AG-EAB-1, Burgess Testimony at 11.

E. National Grid has Failed to Show that The Phase II Proposal Will Not Hinder Development of the Competitive EV Charging Market.

The Department has previously established the standard by which it reviews utilities' requests for cost recovery for EVSE ownership and operation expressly recognizing that "[d]istribution companies may have a competitive advantage in owning and operating EVSE that may adversely affect the development of a competitive market for EV charging." *Electric Vehicles*, D.P.U. 13-182-A, at 13. In approving the Phase I Program, the Department highlighted that the Company "will not own or operate EVSE...and does not intend to participate in the competitive EV charger market." Phase I Order at 18. The Department further noted that "there is substantial evidence demonstrating that the EV Program will help facilitate the development of the private EVSE market by supporting the costs to site hosts and allowing site hosts to choose from a range of technologies, ownership models, and pricing approaches." *Id.* Because the Phase I Evaluation Program has not yet commenced, the Department lacks any basis upon which it can determine the extent to which the Phase I Program is actually helping to facilitate the development of the private EVSE market.

Despite this lack of information, National Grid is proposing to make a significant entry into the market through the Phase II Proposal. The Company is proposing to own up to 50 percent of the charging ports deployed by the Phase II program for the MUD, public parking, government/private fleet, disadvantaged community, highway/retail, and

public transit/school bus market segments. Exh. NG-RS-1 at 40, Table RS-4. As described above, National Grid will likely own significantly more than 50 percent of the charging ports because it has greatly overestimated the number of EVs and the EVSE that will exist in the market in 2025. If approved, this proposal would allow the Company to own up to 3,350 charging ports in its service territory. *Id.* at 23, Table RS-3.

National Grid's injection of \$166.5 million into the EVSE market will create a subsidized competitor in the field, giving the Company a major competitive advantage over every other market participant. Exh. FSCS-JDM-1, Makholm Testimony at 18-19. Other competitors in the market will be forced to compete against a player with no capital at risk and one that is immune to the vagaries of market dynamics. *Id.* at 16, 18-19. National Grid will be made whole, and then some, by ratepayer money. The remaining competitors will not, which will put them at a competitive disadvantage in making decisions related to commercial operations. "It is manifestly unreasonable to conclude that the competitive EVSE charging market would avoid harm when one member, comprising up to 14 percent of the total facilities in such a competitive market, can install charging stations with no risk to its capital and a guaranteed, up-front return. Such activity by National Grid would not 'stimulate' a competitive EVSE charging market—it would 'chill' it." Surrebuttal Testimony of Jeff D. Makholm on behalf of the FSCS Exh. FSCS-JDM-Surrebuttal-1 ("Makholm Surrebuttal Testimony") at 5.

The Phase II Proposal does not warrant the Department's approval, particularly when the Company has not provided any evidence (1) that there is a market need for Company-owned EVSE, or (2) that the Company's entry into the EV charging market at this scale would not harm the competitive market. *See* Exh. AG-EAB, Burgess

Testimony at 17 ("The market need for and effect of Company-owned chargers has yet to be determined and is not supported by the Company's experience to date."). National Grid states that it is offering a Company ownership option "because of barriers to entry, such as a lack of interest from property owners to pay for upgrades, the time and resources to maintain the EVSE, and limited engagement of property owners and managers." Exh. NG-RS-1, at 38. The Company, however, has offered no evidence to suggest that these potential barriers are actually constraining potential site hosts in its service territory. While the Company's Phase I "evaluation will seek insights regarding the experiences of Site Hosts that enroll (or choose not to enroll) in the Phase I EV Program . . . including factors such as motivations, understanding, and barriers to participation," it has not yet begun this evaluation. National Grid's response to FSCS-1-6 (Mar. 1, 2019).

Additionally, while the Company claims that its Phase II Proposal would permit it to own between approximately four percent and 13 percent depending on market segment, of the total territory charging needed, Exh. NG-RS-1, at 23, Table RS-3, it has not provided any analysis demonstrating that these proposed ownership levels are reasonable and would not interfere with the competitive market. Moreover, National Grid's conclusions that it will (a) own and operate less than five percent of the EVSE market in its service territory, and (b) address between eight and 33 percent of the need for different market segments in its service territory are based on the Company's assumption the projected need of over 50,000 public Level 2 ports and 2,000 public DCFC ports will be achieved by 2025. Exh NG-RS-13.

As discussed above, however, the Company has greatly miscalculated the number of EVs and EVSE that will exist in the statewide market in 2025. Indeed, under the majority of the scenarios that the Company sees as reasonably likely to be achieved, actual EVSE development in its service territory will fall far short of these goals. See Tr. Vol. 1 at 140-41. In fact, under several of the scenarios that the Company considers reasonably likely to occur, full deployment of the Phase II proposal could result in Company ownership of over 50 percent of the *total* EVSE market for certain segments. If so enabled, National Grid to would "be the first to cater to EV owners in National Grid's service territory and would be the first to develop know-how with respect to the EVSE market," giving it "first mover" advantage. Exh. FSCS-JDM-1 Makholm Testimony at 18. In addition to status as a "first mover," the Phase II Proposal also affords the Company a pervasive presence in this market. Id. A ready balance of ratepayer cash injected into the market over a short period of time will only solidify the Company's dominant market position. The Company has not demonstrated that the Phase II Proposal will not hinder the competitive market and the Department should reject it.

F. By approving Phase II, the Department will be declaring EVs the "Winner" at the Expense of Other Alternative Fuel Options.

Approval of the Phase II Proposal effectively picks a technology "winner"— EVs—and thus relegates all vehicles using alternative fuel technologies other than electricity to "loser" status. Those other technologies include, but are not limited to hydrogen cell and zero- and low-emission fuels. If the Phase II Proposal is approved,

the Department will have approved a total of approximately \$234 million¹⁵ to subsidize the buildout of EVSE within the Commonwealth. Such a decision sends the very clear message that the Commonwealth is "all in" on EVs, to the exclusion of other alternative vehicles and the fuel technologies that support them, regardless of how effective those other fuel technologies might be in reducing emissions within the transportation sector. National Grid's Phase I and Phase II Proposals' focus on electricity as the sole source of fuel for alternative vehicles is self-serving and not surprising given the Company's strong incentive to sell electricity. The Department should not support using ratepayer money to promote a singular fuel technology. Instead, the Department's priority should be to support the Commonwealth, *Choices for Stewardship: Background Books—Facts, Trends, & Issues,* December 2018, Executive Summary at 8;¹⁶ Multi-State Zero Emission Action Plan 2018-2021), Attachment to National Grid's response to DPU-33-3 (April 10, 2019).

G. National Grid's Phase II Proposal is a Good Deal for Shareholders but a Bad Deal for Ratepayers.

Among the most significant differences between Phase I Program and the Phase II Proposal is that Phase II expressly authorizes the company to own and operate EVSE charging equipment. By using ratepayer funds to develop EVSE, there is no risk to private capital and no risk to shareholders. The risks involved in the Phase II EVSE buildout fall squarely and exclusively on the shoulders of ratepayers. In sharp contrast,

¹⁵ The Department authorized \$45 million in D.P.U. 17-05; it also authorized \$22.5 million in D.P.U. 17-13. If the Department approves the Phase II Proposal of \$166.5 million, it will mean a total authorization of \$234 million for EVSE expansion.

¹⁶ <u>https://www.mass.gov/files/documents/2018/12/14/FOTCVolume2.pdf</u>.

National Grid shareholders can only benefit from the Phase II Proposal, even if it is a complete failure. Where the competitive market is naturally incentivized to meet consumer needs, such is not the case where the Company is immune from investment risk.

The fact that National Grid has no experience owning and operating EVSE technology, and that the Company is venturing into an industry unrelated to its core utility functions, creates additional and substantial risk to ratepayer funds. Exh. FSCS-JDM-1, Makholm Testimony at 14. Poor siting choices and rapidly changing technology only increase the likelihood that the assets will become obsolete and result in stranded costs. "The Phase II proposal does not acknowledge such market innovation nor the associated risks of stranded ratepayer capital if superior technologies emerge and displace earlier generation of EVSE that National Grid has installed and owns." *Id.* The Phase II Proposal, if approved, would add more than \$118 million of EVSE to the Company's rate base and ensures that National Grid will earn a healthy rate of return on these assets. Moreover, the Company's return on those investments is guaranteed, even if the Company fails to meet Phase II Proposal's goal of significantly increasing EV adoption in its service territory fails, and even if the technology it deploys becomes obsolete.

The opportunity for Phase II to result in stranded assets is not limited exclusively to changes in charging infrastructure technology. Unlike competitors with experience in siting, owning and operating fuel infrastructure facilities, National Grid has little, if any, experience in identifying locations for the proper siting of EVSE. *Id.* Nor does the Company have experience with EVSE operations. If the Company's siting choices turn out to be poor ones, where EVSE see little to no use, or the EVSE facilities are operated

poorly, the assets will languish. In these circumstances, there will be few, if any, environmental benefits from these assets, yet National Grid will continue to earn a return on them, and they will remain an economic albatross around ratepayers' necks for years to come. *See id.* at 16.

In a traditional competitive market, where investment risk and reward principles apply, the risks and ultimate financial effects of such a poor decision would be borne exclusively by shareholders. *See id.* In this instance, however, where the capital at risk is not that of National Grid, but that of its ratepayers, there is no downside risk to the Company. Because (1) EVSE ownership is a function unrelated to the Company's core utility functions, (2) the Company has little to no experience in owning and operating EVSE, and (3) the Company admittedly has little to no data to offer from Phase I, the Department should not reward National Grid's hubris by approving the Phase II Proposal.

In addition to the rate of return, the Phase II Proposal further allows National Grid to earn approximately \$12 million in PIMs. Exh. NG-PBRP-1 at 78-81; Table PBRP-4. The Company's request is inconsistent with the Department's decision in the Phase I proceeding. In approving the Company's request for a performance incentive in connection with the Phase I Program, the Department stated:

In sum, we determine that it is appropriate for National Grid to receive an incentive payment for the work that it carries out in the proposed EV Program. Importantly, our determination is significantly influenced by: (1) the fact that the performance incentive is earned following the successful implementation of a limited-term proposal that we encouraged the Companies to develop in order to effect progress toward the Commonwealth's EV goals and (2) the fact that the incentive is proposed in lieu of the return on capital investment that could cost the ratepayers more than the incentive.

Phase I Order at 46. The Phase II Proposal is distinguishable on both grounds. First, the Phase II Proposal represents a significant expansion of Phase I and the proposed term of five years is longer than the three year Phase I program. Second, in its Phase II Proposal, the Company seeks to add to its rate base \$118 in capital expenditures, on which the Company will earn a robust return. Allowing the Company to earn both a rate of return on the capital and a PIM is an unnecessary burden on ratepayers and a windfall to the Company.

Moreover, the requested PIMs are inappropriate in this context. Neither of these proposed PIMs are "narrowly-targeted incentive regulation mechanisms" in line with Department precedent, and they do not meet the standards of objectivity upheld in other performance-based ratemaking proceedings. Exh. FSCS-JDM-1, Makholm Testimony at 29 (citing D.P.U. 94-158). The PIMs are impermissibly based on subjective inputs. Exh. FSCS-JDM-1, Makholm Testimony at 30. Finally, the PIM that would reward the Company for EV Adoption PIM, is based on outcomes which are not within the Company's control. Because the PIMs fail to satisfy the Department's previously developed standards for targeted performance incentive mechanisms, they should be rejected.

H. If The Department Does Not Reject the Phase II Proposal Outright, It Should Be Modified.

API strongly urges the Department to follow California's P.U.C. lead, and reject the Phase II Proposal in its entirety because it is premature and an unwise expenditure of ratepayer funds. There is no downside risk to the Department in rejecting the Phase II Proposal, and conversely there is significant long-term risk to ratepayers in approving a program when the Phase I Program has not been evaluated. Even if approved, the Department should reject utility ownership of EVSE. Allowing National Grid to dominate the EV charging market by owning a significant portion of it backed by

ratepayer money will force ratepayers to pay for unnecessary and soon to be out-date assets. If the Phase II Proposal is authorized as filed, it will permit a heavily subsidized competitor into a newly emerging market, will cause irreparable harm and will adversely affect the short-term and long-term development of that market. Finally, if the Department is inclined to approve some portion of the Phase II Proposal, it should follow recent national trend, as embraced by California, Maryland and Pennsylvania, and significantly curtail the size and scope of National Grid's Phase II Proposal.

VII. CONCLUSION

For the foregoing reasons, API respectfully requests that the Department reject National Grid's Phase II Proposal.

Respectfully submitted,

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By its attorneys,

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