COMMONWEALTH OF MASSACHUSETTS
DEPARTMENT OF PUBLIC UTILITIES

Petitions for Approval of 2022-2024	)	
Three-Year Energy Efficiency Investment Plans	)	
The Berkshire Gas Company	)	D.P.U. 21-120
Eversource Gas Company of Massachusetts,	)	
d/b/a Eversource Energy	)	D.P.U. 21-121
Fitchburg Gas and Electric Light Company	)	
d/b/a Unitil (Gas Division);	)	D.P.U. 21-122
Liberty Utilities Corp (New England Natural Gas	)	
Company) Corp., d/b/a Liberty Utilities;	)	D.P.U. 21-123
Boston Gas Company, d/b/a National Grid;	)	D.P.U. 21-124
NSTAR Gas Company, d/b/a Eversource Energy;	)	D.P.U. 21-125
Cape Light Compact JPE;	)	D.P.U. 21-126
Fitchburg Gas and Electric Light Company,	)	
d/b/a Unitil (Electric Division);	)	D.P.U. 21-127
Massachusetts Electric Company and Nantucket	)	
Electric Company, each d/b/a National Grid;	)	D.P.U. 21-128
NSTAR Electric Company d/b/a Eversource Energy	)	D.P.U. 21-129
	)	

INITIAL BRIEF OF THE

MASSACHUSETTS DEPARTMENT OF ENERGY RESOURCES

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I. INTRODUCTION

The Department of Energy Resources (DOER) supports each of the Program Administrator (PA) Energy Efficiency Investment Plans (PA Plans), which are the subject of these proceedings, to the extent that they are fully consistent with the Massachusetts Joint Electric and Gas Energy Efficiency Plan (Statewide Plan) for 2022 through 2024. The Statewide Plan will continue Massachusetts' nation-leading cost-effective energy efficiency programs and includes critical new design components and offerings to comply with An Act Creating a Next Generation Roadmap for Massachusetts Climate Policy[1] (the Climate Act). The Statewide Plan proposes aggressive greenhouse gas (GHG) emissions reduction goals through a focus on weatherization and electrification and targeted efforts in environmental justice communities that will, in aggregate, bring significant benefits to ratepayers and reduce GHG emissions in the Commonwealth. For the reasons set forth below, DOER respectfully requests that the Department of Public Utilities (Department) approve the PA Plans as filed, with the exception of the proposed savings associated with the adoption of appliance standards. The Statewide Plan received consensus support from DOER, the Attorney General's Office (AGO), and the Energy Efficiency Advisory Council (Council).

II. STANDARD OF REVIEW

A. The Green Communities Act

Pursuant to the Green Communities Act[2] (GCA), the Department has historically been charged with ensuring that the PA Plans "have identified and shall capture all energy efficiency

[1] St. 2021, c. 8.
[2] St. 2008, c. 169.

and demand reduction resources that are cost-effective or less expensive than supply."[3] On March 26, 2021, Governor Baker signed the Climate Act into law, which codified the Baker-Polito Administration's commitment to achieve net-zero emissions in 2050 and furthers the Commonwealth's nation-leading efforts to mitigate GHG emissions and incorporate environmental justice throughout energy and environmental policy. As discussed below, the Climate Act made significant changes to the GCA and the Global Warming Solutions Act[4] (GWSA) that have implications for the Statewide Plans' structure, prioritized measures, and goals. Specifically, not only did the Climate Act include an ambitious GHG emissions reduction requirement of at least 50 percent over 1990 levels in 2030, the Climate Act also included a requirement that the Secretary of Energy and Environmental Affairs (EEA) set a goal, expressed in tons of carbon dioxide equivalent ($CO2_e$), every three years for the succeeding Statewide Plans' necessary contribution to meeting each statewide GHG emissions limit and sublimit adopted under the GWSA (Secretary's GHG Goals).[5] Finally, the Climate Act included that the calculation of benefits must include the "social value of greenhouse gas emissions reductions" when determining cost-effectiveness of non-fossil measures and added to the Department's priorities under G.L. c. 25, "equity and reductions in greenhouse gas emissions to meet statewide greenhouse gas emission limits and sub-limits established pursuant to chapter 21N."[6] Therefore, in evaluating each of the PA Plans, the Department must consider the following.

[3] G.L. c. 25, § 21(d)(2); D.P.U. 18-110 through 18-119 at 8.
[4] St. 2008, c. 298.
[5] G.L. c. 21N, § 3B.
[6] Section 15 of the Climate Act added a new section 1A to the Department's authority under G.L. c. 25.

1. 2021 Climate Act Requirements

Among the significant changes implemented by the Climate Act is a shift in the standard of review for Three-Year Plans under G.L. c. 25, § 21(d)(2). The Department was previously charged with ensuring that the PA Plans "have identified and shall capture all energy efficiency and demand reduction resources that are cost-effective or less expensive than supply," whereas it is now directed to also ensure that the PAs have "complied with the requirements of this section."[7] Therefore, instead of simply evaluating the cost-effectiveness of the PA Plans, the Climate Act amendments now require that:

- Programmatic cost-effectiveness screenings must include the social value of GHG emissions reductions[8] and
- Each Plan be designed to meet or exceed the Secretary's GHG Goals, set pursuant to G.L. c. 21N, § 3B.[9]

2. Program Cost-Effectiveness and Energy Efficiency Less Expensive Than Supply

Critically, the Department continues to screen the energy efficiency and demand reduction programs for cost-effectiveness to ensure that the programs are designed to obtain energy savings and system benefits with a value greater than program costs.[10] The Department uses the Total Resource Cost (TRC) test for evaluating the cost-effectiveness of energy efficiency programs.[11] The TRC test includes all benefits and costs associated with the energy system, as well as all benefits and costs associated with the energy efficiency program participants.[12] As required by

[7] G.L. c. 25, § 21(d)(2), as amended by St. 2021, c. 8, § 26A.
[8] St. 2021, c. 8, § 26A; D.P.U. 20-150-A at 7.
[9] St. 2021, c. 8, § 28; D.P.U. 20-150-A at 50.
[10] G.L. c. 25, § 21(b)(3).
[11] D.P.U. 08-50-A at 14; Energy Efficiency Guidelines (EE Guidelines) § 3.4.3.
[12] D.P.U. 08-50-A at 15.

the Climate Act, the TRC test now must include the social value of GHG emission reductions when evaluating the cost-effectiveness of certain measures. With the social value of GHG emissions reduction included in the analysis, the TRC test continues to be a relevant and practical test that considers the avoided cost of supply as a program benefit. Thus, applying the TRC test ensures that the Pa Plans satisfy the GCA's requirement that the energy efficiency programs are less expensive than supply.[13]

3. Program Authorization and Delivery

In authorizing energy efficiency programs, the Department is charged with ensuring that: (1) the programs are delivered cost-effectively, capturing all available energy efficiency opportunities; (2) PAs have minimized administrative costs to the fullest extent practicable; and (3) PAs will use competitive procurement processes to the fullest extent practicable.[14]

4. Standard of Review – Residential Conservation Services

The PAs may also file their Residential Conservation Services (RCS) program as a component of each PA Plan. However, since the content of the RCS programs is governed by DOER regulations and RCS Guidelines, the Standard of Review is distinct from the other components of the PA Plans. The Department needs to review the reasonableness of the proposed RCS budget within the context of each PA Plan.[15]

III. ARGUMENT

DOER supports the proposed PA Plans and strongly urges the Department to grant their respective petitions for approval to the extent that they are fully consistent with the Statewide Plan,

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[13] *Id*. at 14.
[14] G.L. c. 25, §§ 19(a) and (b).
[15] G.L. c. 164, App., § 2-7(b); St. 2012, c. 209, § 32(i); D.P.U. 18-110 through D.P.U. 18-119 at 168-169.

which meets the Secretary's GHG Goals,[16] and identifies and captures all energy efficiency and demand reduction resources that are cost-effective or less expensive than supply. The Statewide Plan was reviewed and unanimously supported by the Council. If successfully implemented, the Statewide Plan will result in over $12.95 billion in benefits for consumers of the Commonwealth. The electric programs are expected to achieve $2.59 of benefits for every $1 spent and the gas programs are expected achieve $2.66 of benefits for every $1 spent.[17] The Statewide Plan represents a necessary transition of the energy efficiency programs in Massachusetts to appropriately remove program support for mature energy efficiency measures such as lighting incentives that no longer provide net savings and align the Statewide Plan investments with the Commonwealth's new climate and environmental justice goals required by the Climate Act.

The Statewide Plan builds on a solid foundation of the Commonwealth's nationally-recognized energy efficiency programs and is in policy alignment with EEA's 2030 Interim Clean Energy and Climate Plan[18] (2030 Interim CECP), Massachusetts 2050 Decarbonization Roadmap[19] (2050 Roadmap Study), and the Climate Act. The Baker-Polito Administration is committed to energy efficiency as our first fuel and a cost-effective way to reduce consumers' energy bills and reduce GHG emissions. Buildings currently account for 27 percent of the Commonwealth's GHG emissions, primarily driven by fossil fuel heating loads.[20] The 2050 Roadmap Study analyzed multiple pathways to achieve economy-wide net zero emissions in 2050

[16] Exh. 1, Appendix D at 1-10.
[17] Exh. 1, Appendix.C.1 and Appendix.C.2.
[18] EEA, Interim Clean Energy and Climate Plan for 2030 (Dec. 30, 2020), available at https://www.mass.gov/doc/interim-clean-energy-and-climate-plan-for-2030-december-30-2020/download.
[19] EEA, Massachusetts 2050 Decarbonization Roadmap (Dec. 2020), available at https://www.mass.gov/doc/ma-2050-decarbonization-roadmap/download.
[20] 2030 Interim CECP at 27.

and found that the lowest risk, cost-effective pathway relies heavily on energy efficiency and electrification of the building sector with a particular focus on tightening the building envelope and heating electrification.[21] The Statewide Plan appropriately prioritizes measures that provide long-term GHG emissions reductions that contribute to the Commonwealth's 2030 limit of at least 50 percent emissions reductions over 1990 levels, as well as measures that are consistent with the Commonwealth's net-zero in 2050 limit, including electrification, deep energy retrofits, and weatherization. Proposed investments in workforce development and enhanced support for historically underserved communities and customers align with the environmental justice provisions of Climate Act and are critical to ensure a sustainable and equitable transition to net-zero emissions.

For the reasons set forth below, DOER respectfully requests that the Department approve each of the PA Plans.

A. DOER played a pivotal role in developing the Term Sheet and collaborated with the full Council to unanimously endorse the Statewide Plan.

DOER, in collaboration with the AGO, worked with the PAs to establish an agreement of the specific terms and conditions to be included in the Statewide Plan (Term Sheet) that includes commitments to meeting the Secretary's GHG Goals, heat pump installation goals, equity targets, program budgets, dollar benefits, and program priorities over the 2022-2024 term.[22] The Term Sheet is appended to the Statewide Plan and was endorsed by the Council, which represents a

[21] 2050 Roadmap Study at 44.
[22] Exh. 1, Appendix M at 1-40.

broad range of stakeholders,[23] when it unanimously issued a resolution[24] in support of the Term Sheet and Statewide Plan.

As chair of the Council, the Commissioner of DOER led an extensive Councilor and stakeholder engagement process that informed the development of the Statewide Plan. This process included six Council planning workshops as well as six public comment sessions between October 7, 2020 and January 20, 2021. The planning workshops featured research materials and in-depth facilitator-led discussions among Councilors, PAs, and the Council's consultants. The Council held three more public comment sessions in June 2021 to receive stakeholder feedback on the draft plan submitted to the Council in April 2021 (April Draft Plan). In addition, the Council established an Equity Working Group (EWG) in early 2020, specifically to address issues of equity in the delivery of the energy efficiency programs which was informed by the PA Non-Participant Studies.[25] The EWG held focus group sessions and conducted surveys with stakeholders to seek input on how to improve program access and delivery specifically for renters, landlords, moderate income residents, English-isolated residents, and small businesses. The EWG also received

[23] In accordance with G.L. c. 25, § 22(a), the Council consists of "15 members, including 1 person representing each of the following: (1) residential consumers, (2) the low-income weatherization and fuel assistance program network, (3) the environmental community, (4) businesses, including large C&I end-users, (5) the manufacturing industry, (6) energy efficiency experts, (7) organized labor, (8) the department of environmental protection, (9) the attorney general, (10) the executive office of housing and economic development, (11) the Massachusetts Non-profit Network, (12) a city or town in the commonwealth, (13) the Massachusetts association of realtors, (14) a business employing fewer than 10 persons located in the commonwealth that performs energy efficiency services and (15) the department of energy resources."

[24] Exh. 1, Appendix N at 1-10.

[25] DNV-GL, Residential Nonparticipant Customer Profile Study (Feb. 6, 2020), available at https://ma-eeac.org/wp-content/uploads/MA19X06-B-RESNONPART_Report_FINAL_v20200228.pdf; Navigant, Illume, and Cadeo, Residential Nonparticipant Market Characterization and Barriers Study (Feb. 27, 2020), available at https://ma-eeac.org/wp-content/uploads/MA19R04-A-NP-Nonpart-MarketBarriersStudy_Final.pdf.

feedback on community-partnership programs and workforce development. Over the course of this stakeholder process, the Council received extensive verbal and written comments that informed development of the Council priorities established in its March 2021 resolution[26] and its subsequent review of the April Draft Plan. Council meetings were a regular venue for public comment and a forum for Councilors and the PAs to discuss the April Draft Plan.

On July 15, 2021, Secretary Theoharides issued a letter establishing the GHG Goals required by the Climate Act. On July 28, 2021, the Council formalized its comments, including adoption of the EWG recommendations, on the April Draft Plan in its Resolution in which the Council noted that it was pleased the PAs had adopted electrification, equity, and workforce development as key priorities and themes in the narrative, but noted that the April Draft Plan did not meet the Secretary's GHG Goals, needed higher ambition and lacked detail on program design.[27] Specifically, the Council stated that the April Draft Plan's proposed budgets, saving goals, and benefit-cost models must better reflect the priorities and sought a significant increase in ambition and focus on GHG emissions reduction in the next version of the Statewide Plan to be submitted to the Council.[28] The Council also noted that the April Draft Plan lacked necessary programmatic details reflective of the EWG recommendations, specific budget commitments, and numerical goals related to equity commitments.[29]

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[26] Council, EEAC Resolution Concerning Council Priorities for the Development, Implementation and Evaluation of the 2022-2024 Three- Year Energy Efficiency Plan (Mar. 24, 2021), available at https://ma-eeac.org/wp-content/uploads/FINAL-EEAC-Priorities-Resolution_Adopted-3.24.2021.pdf.

[27] Exh. 1, Appendix L at 1-16.

[28] *Id*.

[29] *Id*.

In October 2021, the PAs presented the Council with new statewide energy savings and GHG emissions reduction goals that represented significant increases from the April Draft Plan, including meeting the Secretary's GHG Goals.[30] The updated Statewide Plan and data tables reflect much greater alignment between the PA Plans and the Council and DOER priorities, including reduced investments in lighting and reduced incentives for efficient fossil fuel-based heating systems, and increased investments in weatherization and electrification of heating. Such improvements provided greater planned benefits and GHG emissions reductions than the April Draft Plan. The Council unanimously approved a Resolution endorsing the updated Statewide Plan as set forth in the Term Sheet and recommended that the Department approve the Statewide Plan.[31]

B. The Statewide Plan Complies with the Climate Act and the Secretary's GHG Emissions Reduction Goals.

DOER strongly supports the GHG emissions reduction and energy savings goals contained in the Statewide Plan and, to the extent that the PA Plans are fully consistent with the Statewide Plan, they meet the Secretary's GHG Goals as required by the Climate Act.[32] The Statewide Plan sets aggressive energy savings levels that are expected to deliver more than 240.6 million MMBtu in total lifetime savings.[33] The total MMBtu savings are expected to deliver over $12.94 billion in benefits, or more than $2.60 in benefits for every dollar invested.[34] More than $9 billion in

[30] Exh. 1, Appendix D at 1.
[31] Exh. 1, Appendix N at 1-10.
[32] Exh. 1, Appendix D at 1.
[33] *See* Exh. 1, Appendix.C.1 and Appendix.C.2.
[34] *Id.*

benefits are expected from electric measures and over $3.85 billion in benefits from gas measures.[35]

In the Secretary's letter establishing GHG emissions reduction goals for the Statewide Plan, the Secretary emphasized the importance of investing in measures that have long-lasting GHG emissions reduction impacts such that they contribute to the 2025 and 2030 statewide GHG limits.[36] As such, the primary GHG Goals for the Statewide Plan are expressed in annual metric tons of carbon dioxide equivalent of emission reductions expected in 2030, directly associated with the measures implemented in 2022-2024. This metric captures the GHG emissions reduction of measures installed in this plan term with sustained, long-lasting impacts in 2030. The PAs appropriately applied established measure-lives and emission-factors[37] to properly account for the Statewide Plan's contribution to meeting the 2030 limits. The PA Plans are designed to collectively meet the aggregate electric and gas emission reduction goal of 845,000 annual metric tons expected in 2030 associated with measures implemented during the plan term and will provide the necessary building sector contributions to the Commonwealth's GHG limit of at least 50 percent emissions reduction in 2030 compared to 1990 levels.[38]

The Statewide Plan shows the PAs' willingness to adapt to a changing regulatory landscape, to accommodate the evolving needs of energy consumers, and to address the urgent need to expand the program's focus on GHG emissions mitigation to meet the Commonwealth's climate requirements. The Statewide Plan for 2022-2024 continues to reduce the reliance on lighting to achieve energy and GHG emissions reductions goals. The widespread adoption of

[35] *Id*.
[36] Exh. 1, Appendix D at 2.
[37] *See* Exh. 1, Appendix D at 5-10, Appendix 1, Assumptions and Methodology.
[38] Exh. 1, Appendix D.

Light Emitting Diode (LED) bulbs in Massachusetts has reduced the measure lives and claimable program savings and, as such, using valuable ratepayer funds for lighting is no longer appropriate. Evaluation data shows that Massachusetts consumers will purchase LED bulbs when replacing current bulbs even without program intervention.[39] This allows the Statewide Plan to focus ratepayer funding more prudently on long-term measures that have greater impacts on the Commonwealth's emissions in 2030, including a primary focus on reduction of fossil fuel use (natural gas, oil, and propane) through weatherization, envelope measures, and fuel-switching to efficient electrification for both delivered-fuel and natural gas customers. This approach is consistent with the expectation established by the Secretary that the PA's achieve the GHG emissions reduction goal through "prioritizing measures consistent with the 2050 Roadmap and 2030 Interim CECP, such as insulation and heat pumps, and reduce support for measures like lighting and fossil-fuel heating incentives."[40]

As required by the Climate Act's amendments to the GCA, the Statewide Plan is designed to meet or exceed the Secretary's GHG Goals.[41] The Statewide Plan is designed to achieve total reductions of 845,000 metric tons of $CO2_e$ in 2030 with 474,000 metric tons of $CO2_e$ reductions from the electric programs and 371,000 metric tons of $CO2_e$ from the gas programs, which includes 30,000 metric tons from transitioning homes and businesses from gas to electric heating.[42] The residential programs are planned to achieve 470,928 metric tons of $CO2_e$ reductions, income-

[39] *See* Exh. DPU-Comm 2-4; Exh. DPU-Comm 2-4, Att. A; Exh. DPU-Comm 9-24.
[40] *Id*. at 4.
[41] G.L. c. 25, § 21(d)(4).
[42] Exh. 1, Appendix M at 2-3.

eligible programs are planned to achieve 86,169 metric tons of $CO2_e$ reductions, and the C&I programs are planned to achieve 287,952 metric tons of $CO2_e$ reductions.[43]

C. The PA Plans Appropriately Include the Social Value of GHG Emission Reductions.

Following the passage of the Climate Act and issuance of the Secretary's GHG Goals, the PAs hired an expert consultant to conduct a study to determine the social value of GHG emissions reductions (Social Value or Social Value of GHG Emissions Reductions). The PAs appropriately applied that value in the final benefit-cost models filed with the Department on December 21, 2021, which excluded Social Value for fossil-fuel based space, water, and process heating and cooling measures.[44] As provided below, a Social Value of $393/short ton utilizing a 1 percent social discount rate is appropriate, meets the requirements of the Climate Act, and should be approved by the Department as filed.

1. DOER Participated in and Supports the Process Utilized to Determine the Social Value of GHG Emissions Reductions.

The Avoided Energy Supply Cost (AESC) study,[45] which is updated every three years, is the accepted source of most avoided cost and benefit values utilized in the benefit-cost models.[46] As with prior plans, the regional AESC study group selected and the regional PAs sponsored a team of energy sector consultants led by Synapse Energy Economics (Synapse) to conduct the AESC 2021.

[43] Exh. 1, Appendix M.
[44] Exh. 1, Appendix C (Revised) - Statewide Data Tables (12-21-21).
[45] Exh. 1, Appendix Q, Study 1.
[46] D.P.U. 18-110 through 18-119 at 68.

The AESC 2021 calculated GHG non-embedded environmental costs[47] using four different methods to offer valuations useful to different states with different resource cost tests and policy contexts. In the March 2021 publication of the AESC 2021 study, and again in the May 2021 amendment,[48] the GHG emissions costs were presented in summary tables based on the use of the avoided cost of compliance with the GWSA as the primary metric.[49] The avoided cost of compliance with GWSA was first included in the 2019-2021 plans based on the Department's order directing the PAs to utilize the New England marginal abatement cost (MAC) methodology proposed in the 2018 AESC study.[50] As with all avoided costs, these MACs are modeled for multiple years and then, using a discount factor, they are presented as levelized costs over 15 years.[51] The AESC 2021 study recommended $125/short ton as the updated value for the MAC.[52]

One of the three other approaches to quantifying non-embedded environmental costs in the AESC 2021 study was an estimate of the damage costs or social cost of carbon (SCC) of $128/short ton. In summarizing the SCC, the May 2021 AESC study noted that "…experts examining or calculating an SCC typically recommend using reasonable, low discount rates; evaluating the SCC with a global perspective; and including the evaluation of low-probability, high-impact events… ."[53] Further, the study identified the December 2020 SCC guidance "Establishing a

[47] *See* Exh. 1, Appendix Q, Study 1 at 191 for a description of non-embedded environmental costs.
[48] *See* Exh. 1, Appendix Q, Study 1.
[49] *Id*. at 5-8 (ES-Tables 1 through 4).
[50] D.P.U. 18-110 through 18-119 at 68.
[51] Exh. 1, Appendix Q, Study 1 at 16.
[52] *Id*. at 202.
[53] *Id*. at 176.

Value of Carbon" published by New York (New York Study) as one source of this value that met this recommended criteria.[54]

The New York Study utilized the research data on damage costs from the Federal Interagency Working Group (IWG) and conducted multiple global integrated assessment models (IAMs) to calculate SCC values utilizing different social discount rates. The results of these models provide the AESC 2021 study team with access to SCC calculations based on IWG damage costs utilizing social discount rates of 1, 2, and 3 percent. In the March 2021 publication of the AESC 2021 Study, and again in the May 2021 update, Synapse provisionally recommend a 2 percent social discount rate, but went on to state that "[w]e also recommend that program administrators continually review this value (e.g., for the purposes of mid-term modifications) as updates to the federally-recommended SCC are expected in early 2022."[55] Synapse also noted "that this is the recommendation being made by the AESC authors at the time of this report's writing. It is possible—even likely—that this value will change as new information becomes available."[56]

The Climate Act passed in March 2021 required the PAs determine the appropriate Social Value of GHG Emissions Reduction for the Statewide Plan. Recognizing the Legislature's emphasis on Social Value and the provisional nature of the earlier AESC 2021 SCC developed in March 2021, the PAs commissioned a supplemental study of the AESC 2021 to comprehensively determine the most appropriate Social Value of GHG Emissions Reduction for Massachusetts (Supplemental Study). The Supplemental Study team, led by the same vendor as the regional

[54] *Id*. at 15.
[55] *Id*. at 172.
[56] *Id*. at 179.

AESC 2021 study, identified and reviewed a significant volume of additional literature that became available following the regional AESC 2021 study as a result of the public comment process of the Federal IWG that was reconvened in February 2021. As summarized in the Supplemental Study,[57] Synapse determined that the preponderance of studies and submitted comments combined with the updates specifically identified as under consideration by the IWG are likely to yield a significant increase to the 2022 federal update to the SCC.

This more in-depth review conducted through the Supplemental Study resulted in an updated recommendation that Massachusetts should utilize the existing damage costs and IAM model results from the New York Study, consistent with the AESC 2021 study provisional SCC recommendation, but update with a 1 percent discount rate instead of the provisional 2 percent rate.[58] As discussed in more detail below, the update reflects the more in-depth review of the scientific literature in the academic study of social costs as well as the Commonwealth's commitment and urgency exhibited by the Massachusetts Legislature and the Governor in enacting the Climate Act.

2. The Proposed $393/Short Ton Value, Utilizing A Social Discount Rate of 1 Percent, is Prudent and Appropriate and Reflects the Requirements of the Climate Act.

The proposed Social Value of $393/short ton recommended by Synapse in the Supplemental Study is appropriate and is based on a comprehensive review of the most up-to-date information. The social discount rate is of critical importance in calculating the Social Value in that it determines how much value is placed on costs or benefits occurring in future years. A lower discount rate correlates to a higher value of future costs and benefits. For example, a 1 percent

[57] *See* Exh. 1, Appendix Q, Study 3 at 7-12.
[58] *See* Exh. 1, Appendix Q, Study 3.

discount rate equates to costs in 2050 being weighted at 75 percent of the value of the same cost in 2022. In comparison, a 2 percent discount rate reduces the value of impacts in 2050 by almost twice as rapidly, to under 57 percent of their equivalent value in 2022.

A lower discount rate is aligned with and reflective of the requirements of the Climate Act, in which Massachusetts codified its commitment to net-zero emissions in 2050. The 2030 Interim CECP and the 2050 Roadmap Study found that in order to meet Massachusetts' 2030 and 2050 emission limits, the Commonwealth needs to make significant investments in decarbonizing the building sector now. A low social discount rate of 1 percent is reflective of the Commonwealth's commitment to reducing GHG emissions and appropriately valuing climate mitigation investments being made in this three-year term to future citizens of the Commonwealth. Inaction now or any delays with decarbonization efforts will mean great damage and costs to future society, and the Commonwealth has already decided via law and policies that those results are not acceptable. A low social discount rate ensures that future damage costs are not effectively discounted away and that the value of the future benefits are correspondingly valuable today.

In addition to the specific Massachusetts policy context that requires a low social discount rate, a clear point of comparison for the social discount rate is the 0.81 percent financial discount rate applied to all other avoided costs calculated by the AESC 2021 study, including the MAC. Put into the context of the financial discount rates, the choice of 1 percent over 2 percent for the social discount rate, as the result of a more in-depth review provided by the Supplemental Study, is a prudent choice. Use of similar discount rates is more logically consistent than applying a social discount rate more than twice as high as the discount rate used for other avoided costs.

DOER supports a $393/short ton Social Value as proposed in the PA Plans and supported by the Council. The Department find the Social Value meets the requirements of the Climate Act

and is appropriately supported by expert analysis. Furthermore, if the Social Value were revised downwards in the PA Plans as filed, the PAs have said that they would likely need to revisit the types and quantities of measures in the portfolio.[59] Changing the types and quantities of measures risks a final plan that does not align with the priorities set forth in the Secretary's GHG Goals letter or the Council's priorities.

3. The Social Value of GHG Emissions Reductions As Proposed Complies with the Climate Act.

The Climate Act requires "…that when determining cost-effectiveness, the calculation of benefits shall include calculations of the social value of greenhouse gas emissions reductions, except in the cases of conversions from fossil fuel heating and cooling to fossil fuel heating and cooling."[60] A differentiation between fossil and non-fossil measures was clearly intended by the Climate Act, which excluded certain fossil fuel measures from the application of the Social Value of GHG Emissions Reduction. Using the proposed $393/short ton using a 1 percent discount rate results in significant differentiation between the benefits accrued to fossil and non-fossil measures. In contract, the provisional SCC from the regional AESC 2021 of $128/short ton using a 2 percent discount rate results in virtually no differentiation in benefits accrued between fossil fuel measures such as fossil fuel heating system rebates and measures that more aligned with the 2050 Net Zero GHG limit. The difference between the MAC value of $125/short ton and the provisional $128/short ton SCC of Carbon from the AESC 2021 study is too small to make a tangible difference in benefits or cost-effectiveness between fossil fuel equipment measures and non-fossil fuel measures. Therefore, because the Climate Act clearly distinguished between fossil and non-

[59] Tr. Vol II at 284; *see* Exh. RR-DPU-3; *see also* Exh. RR-DPU-3 Atts. A, B, C.
[60] G.L. c. 25, §§ 19 and 21

fossil measures, the proposed Social Value of GHG Emissions Reduction more accurately complies with the Climate Act than the provisional AESC 2021 recommendation.

4. The Social Value is Specific to Massachusetts Climate Requirements and Provides Planning Certainty to the PAs.

In DPU-Comm-1-2, the Department asked the PAs to consider the use of a Mid-Term Modification (MTM) for the Social Value after the Federal IWG issues its update in 2022. The PA's responded that "…incorporating the updated federal SCC into the portfolio of programs offered in Massachusetts may yield a less representative value than the current value proposed by the Program Administrators. The proposed value is intended to encapsulate the social conditions of Massachusetts citizens and policymakers and their urgent desire for climate mitigation action."[61]

As discussed above, the Supplemental Study reflects a Social Value of GHG Emissions Reduction for Massachusetts' laws that ensure policymakers place significant value on GHG emissions reductions to all residents of the Commonwealth, including a high value for future generations. While the IWG process necessarily reflects national sentiments and policies, its outcome may not best represent the level of commitment and urgency of the climate requirements in Massachusetts and the Massachusetts statutory context. The federal SCC has also been quite volatile in its brief history. The Obama Administration adopted a social discount rate of 3 percent[62]; however, it was updated to a higher 7 percent social discount rate during the Trump

[61] Exh. DPU-Comm 1-2.

[62] Interagency Working Group on Social Cost of Greenhouse Gases, Technical Update of the Social Cost of Carbon for Regulatory Impact Analysis Under Executive Order 12866 (Aug. 2016) at 4, Table ES-1, available at https://obamawhitehouse.archives.gov/sites/default/files/omb/inforeg/scc_tsd_final_clean_8_26_16.pdf.

Administration.[63] While the recent effort to review the SCC at the federal level has provided access to an excellent summary of the academic research and model findings in 2021 to date, the Social Value determined through the Supplemental Study considers Massachusetts policy in a way that the Federal process will not. The Supplemental Study provides an avoided cost of capturing the Commonwealth's unique statutory obligation to meet the GWSA goals, which may or may not fully align with the outcome of the ongoing IWG process. Therefore, the PAs appropriately commissioned a Massachusetts-specific Supplemental Study prior to filing the PA Plans and should not delay or update during the term based on the forthcoming Federal update.

D. The Statewide Plan Complies with the GCA Mandate to Capture All Cost-Effective Energy Efficiency and Demand Reduction Resources.

The Department evaluates the cost-effectiveness of each PA Plan using a TRC Test, established through its EE Guidelines.[64] In 2018, An Act to Advance Clean Energy changed the Department's standard of review of cost-effectiveness from the program level to an aggregate of programs at the sector level.[65] In 2021, the Climate Act added the Social Value into the cost-effectiveness test for certain measures.[66] The TRC test for each of the PA Plans demonstrates

[63] Trump Administration Executive Order 13783, Promoting Energy Independence and Economic Growth (Mar. 28, 2017) at § 5(c), available at https://www.federalregister.gov/documents/2017/03/31/2017-06576/promoting-energy-independence-and-economic-growth#p-39.
[64] D.P.U. 11-120-A; EE Guidelines § 3.4.3.
[65] G.L. c. 25, § 21(b)(1), as amended by St. 2018, c. 227, § 1; D.P.U. 18-110 through D.P.U. 18-119 at 61.
[66] St. 2021, c. 8.

benefit-cost ratio of greater than one at the Sector and Program level.[67] On a statewide level, the PAs demonstrate benefit-cost ratios as follows:[68]

- Residential electric: 2.77
    - New Buildings: 5.51
    - Existing Buildings: 3.05
    - Residential Hard-to-Measure: 0.00
- Residential gas: 2.28
    - New Buildings: 4.24
    - Existing Buildings: 2.30
    - Hard-to-Measure: 0.00
- Income Eligible electric: 2.71
    - Income Eligible Existing Buildings: 2.80
    - Income Eligible Hard-to-Measure: 0.00
- Income Eligible gas: 3.06
    - Existing Buildings: 3.15
    - Hard-to-Measure: 0.00
- Commercial & Industrial electric: 2.41
    - New Buildings: 5.10
    - Existing Buildings: 2.36
    - Hard-to-Measure: 0.00
- Commercial & Industrial gas: 3.14
    - New Buildings: 6.87
    - Existing Buildings: 3.01
    - C&I Hard-to-Measure: 0.00

The PAs have appropriately incorporated the updated avoided costs provided by the most recent multi-state AESC study and have further applied the Social Value through adoption of the SCC calculated in the Massachusetts-specific Supplemental Study into the Benefit-Cost models of the TRC test.[69]

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[67] EE Guidelines § 3.4.3.2 ("Hard-to-Measure Energy Efficiency Programs. A Program Administrator shall allocate the benefits and costs of Hard-to-Measure Energy Efficiency Programs to the program's customer sector. If such inclusion causes the sector's benefit-cost ratio to fall below one, then the Hard-To-Measure Energy Efficiency Program's core initiatives shall be revised or removed.").

[68] *See* Exh. 1, Appendix.C.1 (Rev.) and Appendix.C.2. (Rev.).

[69] Exh. 1, Appendix Q, Study 3.

The PAs have taken the necessary steps to identify other identified funding sources to minimize bill impacts on customers, including the System Benefit Charge and proceeds from PA participation in the Forward Capacity Market.[70] While the PA Plans result in increased rates, the proposed investments in energy efficiency programs will result in significant benefits for both participants and non-participants, can substantially reduce customers' energy usage and bills, and are necessary investments to meet the Commonwealth's 2030 GHG limits.

E. The PA Plans Appropriately Include New Offerings Required by the Climate Act, Which Expanded The Opportunities Within The GCA For Cost-Effective Energy Efficiency And Demand Reduction Resources.

1. DOER Strongly Supports Fuel-Switching Electrification Measures, Including Incentives For Customers Converting From Fossil Fuels (Oil, Propane, and Natural Gas) To Cold-Climate Air-Source Heat Pumps For Heating and Hot Water.

As noted above, An Act to Advance Clean Energy amended the GCA in 2018 to allow "expanded strategic electrification, such as measures that are designed to result in cost-effective reductions in greenhouse gas emissions through the use of expanded electricity consumption while minimizing ratepayer costs."[71] The 2019-2021 Plans introduced new incentives for fuel switching from oil and propane to high efficiency electric heat pumps including both air-source and ground-source. Following the passage of the Climate Act, the Secretary's GHG Goals letter included additional direction to the PAs on program approaches to ensure that the Plans comply with the Climate Act and provide the necessary contributions to the Commonwealth's 2030 GHG limit.[72] The Secretary noted her expectation that the PAs achieve the GHG goals by, among other actions, "significantly ramping up electrification of existing buildings through heat pump goals that set the

[70] G.L. c. 25, §§ 19(a), 21(b)(2); EE Guidelines § 3.2.1.2.
[71] G.L. c. 25, § 21(b)(2), as amended by St. 2018, c. 227, § 2.
[72] Exh. 1, Appendix D at 1-10.

Commonwealth on a path to achieving one million homes and 300–400 million square feet of commercial buildings using electric heat pump for space heating by 2030."[73] Efficient electrification is an effective strategy to reduce overall energy usage and GHG emissions for all customers.

The electrification approach proposed by the PAs is also aligned with Massachusetts's long-term climate and energy policy goals. DOER's Comprehensive Energy Plan demonstrated that the greatest emissions and energy bill reductions for consumers can be achieved by complementing aggressive Massachusetts energy efficiency and renewable energy policies with aggressive fuel switching from more expensive, GHG-intensive fuels to cleaner, more-efficient, lower-cost heating sources.[74] More recently, the Massachusetts 2030 Interim CECP found that the most cost-effective and technologically feasible approach to achieve the required emission reductions for the building sector includes "electric space heating deployed across approximately one million households and 300-400 million square feet of commercial real estate [by 2030]."[75] Strategic electrification with heat pumps will allow Massachusetts to leverage its investments in clean electricity generation, lowering both emissions and costs. In addition, meeting the 2030 GHG limits will require significant investments in workforce development and market transformation to shift the home heating market from carbon-intensive fossil fuels to efficient heat pumps. The PAs have appropriately proposed to increase electrification goals, expand eligible measures to include gas-to-electric fuel-switching, and enhance incentives for all-electric new construction. All these efforts, including workforce development, are necessary to achieve the

[73] *Id*. at 4.
[74] DOER, Massachusetts Comprehensive Energy Plan (Dec. 12, 2018), available at https://www.mass.gov/files/documents/2019/01/10/CEP%20Report-%20Final%2001102019.pdf.
[75] *See* 2030 Interim CECP at 29.

broad market transformation required to align the Statewide Plan with the scale of electrification set forth in the 2030 Interim CECP.

2. DOER Strongly Supports the New Equity Targets and Program Enhancements with a Focus on Increasing Participation from Historically Underserved Customers.

Since the planning process for the 2019-2021 term, equitable program participation by historically underserved populations has been a focus of stakeholders and a priority of the Council. Equity was at the forefront of the 2022-2024 planning process, particularly in response to two non-participant studies completed in 2020 which analyzed existing data and collected new information to evaluate participation levels and barriers to participation for certain residential and small business customers.[76] The studies found that moderate-income households, renter households, and limited English-speaking households participated at a lower rate than other populations in 2013-2017.[77] They also found that the populations of lower participation tended to cluster geographically. For example, census block groups that have a high proportion of renters are also likely to have a high proportion of homes that are multifamily and households that speak limited English. In 2020, the Council established the EWG to focus attention on customer groups

[76] *See* DNV-GL, Residential Nonparticipant Customer Profile Study (Feb. 6, 2020), available at https://ma-eeac.org/wp-content/uploads/MA19X06-B-RESNONPART_Report_FINAL_v20200228.pdf; Navigant, Illume, and Cadeo, Residential Nonparticipant Market Characterization and Barriers Study (Feb. 27, 2020), available at https://ma-eeac.org/wp-content/uploads/MA19R04-A-NP-Nonpart-MarketBarriersStudy_Final.pdf.

[77] *See* DNV-GL, Residential Nonparticipant Customer Profile Study (Feb. 6, 2020), available at https://ma-eeac.org/wp-content/uploads/MA19X06-B-RESNONPART_Report_FINAL_v20200228.pdf; Navigant, Illume, and Cadeo, Residential Nonparticipant Market Characterization and Barriers Study (Feb. 27, 2020), available at https://ma-eeac.org/wp-content/uploads/MA19R04-A-NP-Nonpart-MarketBarriersStudy_Final.pdf.

identified through the non-participant studies, including moderate-income customers, renters and landlords, households with a primary language other than English, and small businesses.[78]

The EWG is comprised of representatives of the Council, PAs, Low Income Energy Affordability Network (LEAN), Green Justice Coalition, Conservation Law Foundation, and Council's consultants. The EWG spent a year and a half doing outreach, conducting research, hosting focus group sessions, and developing recommendations for programmatic improvements for the 2022-2024 plan term. In addition to programmatic recommendations, the EWG developed numerical equity targets to guide investments in equity, assess performance in the 2022-2024 Plan term, and improve transparency.[79] DOER supports the equity targets and reporting established and proposed in the Statewide Plan and expresses its gratitude for the significant time and effort of all EWG members and stakeholders in developing these recommendations and targets.

DOER supports the enhancements included in the Statewide Plan that respond to the EWG recommendation to focus on equitably serving customers and increasing participation from customer groups that have historically lower participation rates.[80] Specifically, DOER supports continuation of no-cost insulation, enhanced incentives for efficient electric heat pumps, and new incentives for the removal of pre-weatherization barriers for moderate income customers as well as the enhanced incentives for renters and landlords proposed in the Statewide Plan. DOER will continue to work with the PAs, Council, and the EWG to ensure successful completion of a strategic plan for serving renters, streamlined income verification process for low and moderate-

[78] Council, EEAC Equity Working Group (May 20, 2020), available at https://ma-eeac.org/wp-content/uploads/Final-EEAC-Equity-Working-Group-Doc-5-20-20-1.pdf.
[79] Exh. 1, Appendix E at 1-6.
[80] Exh. 1 at 18-21.

income customers, and a language access plan, among other things, during Statewide Plan implementation.

3. DOER Supports Geographic Targeting in the 38 Proposed EJ Communities.

The EWG determined that "while access to and participation in energy efficiency programs is of primary importance, it is not the sole definition of equity and cannot be achieved without a broader view of and approach to equity."[81] The EWG emphasized the importance of equitable distribution of benefits, which include both geographic distribution of program benefits as well as employment and procurement opportunities through the programs. This is important to ensure that the Statewide Plan is equitably distributing all of the benefits that the energy efficiency programs bring to Massachusetts, but also important to ensure that the PA Plans actually achieve equitable program participation from underserved customer groups and through implementation with a diverse workforce. The EWG received significant feedback through public comment and focus group sessions about the importance of geographically targeted investments in community partnerships to reach customers as well as the importance of employing diverse staff and contractors within the programs to reflect the diverse populations the programs must strive to serve.

In order to focus the Statewide Plan on improving equitable participation, ensuring geographic distribution of benefits, and responding to the Climate Act's call for equitable distribution of energy and environmental benefits and burdens, DOER worked with the PAs and stakeholders to develop the proposed list of focus communities for the 2022-2024 plan term. These communities have high levels of its population living in Environmental Justice (EJ) block groups

[81] Exh. 1, Appendix L at 10.

and have historically participated in the Mass Save programs at a below average rate.[82] In order to develop the list of communities, DOER and the PAs used the publicly available 2020 Environmental Justice Populations municipal statistics list[83] and the PA Non-Participant Study data to apply data filters resulting in the 38 communities.[84] The process and the resulting community list were supported by the EWG and the Council. DOER supports the designation of the 38 communities proposed in the Statewide Plan to prioritize community partnerships, targeted workforce investments, the tracking of investments through equity targets, and the equity component of the shareholder performance incentive, among other things.

F. The Proposed PI Mechanism Complies with The Climate Act, Is Needed to Ensure the Plan Delivers Necessary GHG Emission Reductions and Equitable Outcomes, and is Consistent With The Department's Guidelines and Precedent.

The PA Plans include an incentive for electric and gas utilities based on their success in meeting or exceeding certain performance goals[85] as allowed by the GCA.[86] Section 3.6 of the Department's EE Guidelines sets forth principles for the design of a performance incentive (PI) mechanism. Pursuant to the EE Guidelines, an incentive mechanism must: (1) be designed to encourage PAs to pursue all available cost-effective energy efficiency; (2) be designed to encourage energy efficiency programs that will best achieve the Commonwealth's energy goals; (3) be based on clearly defined goals and activities that can be sufficiently monitored, quantified, and verified after the fact; (4) be available only for activities in which the PA plays a distinct and clear role in bringing about the desired outcome; (5) be as consistent as possible across all electric

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[82] Exh. 1 at 21.
[83] EEA, Massachusetts Cities and Towns with Environmental Justice Populations (July 29, 2021), available at https://www.mass.gov/doc/massachusetts-cities-towns-with-environmental-justice-populations.
[84] *Id.*
[85] Exh. 1, Appendix A at. 25-31.
[86] G.L. c. 25, § 21(b)(2)(v).

and gas PAs; and (6) avoid any perverse incentives.[87] Further, the EE Guidelines specify that the amount of funds available for PI should be kept as low as possible in order to minimize the costs to electricity and gas customers, while still providing appropriate incentives for the PAs.[88]

The PAs included details on their proposed PI mechanism for 2022-2024 in Exhibit 1, Appendix A and Appendix S, Performance Incentive Models.[89] The proposed PI mechanism includes:

1. Use of a three-component structure based on benefits, with a focus on achieving electrification, equity, and energy efficiency benefits in a manner designed to address Department precedent and design principles articulated in the Department's Guidelines.
2. Overall PI pool of $170 million, of which $131.8 million is dedicated to electric and $38.2 million dedicated to gas.
3. The PI approach contains tailored thresholds for each of the three components that are designed to be aggressive and achievable with effort on each of the three components.
4. The PI approach contains higher payout rates for priority benefits in the equity and electrification components in recognition of the additional effort it will take to realize those benefits.
5. In all events, there is an overall cap of 125% of the incentive pool applicable to any given PA.

[87] D.P.U. 20-150-A at 54; EE Guidelines § 3.6.2.
[88] EE Guidelines § 3.6.3.
[89] Exh. 1, Appendix A at. 25-31. Capitalized terms used herein for the PI components are based on this source.

6. For purposes of calculating benefits eligible in PI calculations, the benefits set forth in the AESC study for MAC related to fossil fuel heating and hot water measures are not included. Such MAC benefits are included for cost-effective determinations.

Based on the Climate Act amendments to the GCA[90] and the recommendations of the 2030 Interim CECP[91], the design of the proposed PI mechanism appropriately prioritizes efforts that reduce GHG emissions and align with equitable achievement of the Commonwealth's Net-Zero in 2050 requirement. DOER supports the proposed PI mechanism in the Statewide Plan which includes a "savings" component based on benefits with three distinct, dedicated PI pools and individual thresholds for equity and electrification, as consistent with the Department's EE Guidelines.

1. The Updated Three-Component PI Mechanism is Designed to Achieve the Commonwealth's Goals Under the Climate Act.

In response to the Climate Act, the PAs, DOER and the AGO, with support from the Council and in alignment with stakeholder comments, designed a three-component structure for the 2022-2024 PI Mechanism. This structure maintains a core focus on achieving benefits while ensuring that PAs must deliver on equity and electrification benefits to support the priorities of the Statewide Plan while complying with Department precedent and the design principles of the EE Guidelines.

The equity component was designed to support the Statewide Plan's priority of equitably serving customers by providing an incentive to the PAs to increase benefits delivered to residents

[90] St. 2021, c. 8, § 25.
[91] EEA, Interim Clean Energy and Climate Plan for 2030 (Dec. 30, 2020), available at https://www.mass.gov/doc/interim-clean-energy-and-climate-plan-for-2030-december-30-2020/download.

and small businesses in EJ communities and to moderate-income customers. The equity component is designed to ensure that PAs achieve a measurable increase in benefits in specific communities that have demonstrated systemic barriers to participation and that have residential participation below the statewide average as illustrated by the Non-Participant Studies. The equity component rewards the PAs for benefits achieved in specific EJ communities and selected Boston zip codes (excluding large commercial & industrial customers) and for moderate-income customers statewide, including benefits from electrification of moderate-income customers. The equity component benefits for residential/income eligible programs must be at least 25 percent of the total residential/income eligible portfolio benefits for electric and 45 percent for gas by 2024. This represents a measurable increase over historical baseline data in the 38 selected communities referenced above. The threshold PI for the equity component is set at 85 percent and is not capped but is subject to the total portfolio PI cap of 125 percent. This design uses an 85 percent threshold to ensure that the PI pool associated with the equity component cannot be earned unless benefits are increased over baselines. Payout rates for equity benefits within the electric PI and within the gas PI are higher than the non-EJ energy efficiency payout rates to ensure that there is a strong incentive for the PAs to invest appropriate time and resources to achieving the equity benefits, which will take dedicated, focused efforts in the 38 communities. The equity component complements the proposed program implementation approach of utilizing geographically targeted community partnerships to increase awareness, participation, and equitable distribution of benefits.

The electrification component is designed to support the Secretary's GHG Goals, is in alignment with the Council's priority of realizing GHG reductions through electrification, and is consistent with stakeholder comments. The electrification component includes benefits from

electrification measures excluding any electrification benefits that are captured in the equity component. The threshold for the electrification component is set at 60 percent and is not capped but is subject to the total portfolio PI cap of 125 percent. DOER supports a separate pool for electrification to ensure that the implementation of the Plan delivers on the heat pump and electrification goals set forth in the Term Sheet as this measure is imperative as part of the efforts to meet 2030 goal. Specifically, as set forth in the 2030 Interim CECP and emphasized in the Secretary's GHG Goal letter, meeting the Commonwealth's 2030 GHG limit requires significant investment in and increase of the electrification of heating loads within the buildings sector. Specifically, the 2030 Interim CECP calls for GHG emissions reductions of 6.8 $MMTCO_2e$ through thermal electrification of the buildings sector, representing 72% of the total 9.4 $MMTCO_2e$ of GHG emissions reductions needed from the buildings sector in 2030.[92] The proposed PI approach ensures that the PAs are sufficiently motivated and unable to earn their full PI without achieving the planned electrification benefits by setting a distinct pool and threshold for electrification. While it emphasizes electrification and equity, the PI mechanism also includes sufficient flexibility once minimum thresholds are achieved within each component to ensure the PAs can invest in cost-effective benefits where they exist.

Moreover, the three components were deliberately and carefully constructed with distinct benefits to ensure that there is no double-counting of benefits within the mechanism. Once the PAs achieve the design-level benefits associated with the equity and electrification components, they have flexibility to receive the standard payout rate for additional standard energy efficiency benefits beyond the 125% cap for the standard component to ensure the PAs can invest in cost-

[92] 2030 Interim CECP at 29, Table 4 (calls for "[e]lectric space heating deployed across approximately one million households and 300-400 million square feet of commercial real estate" in order to support meeting the 2030 GHG reduction goals).

effective benefits where they exist. This meets the EE Guidelines' guiding principle that PI mechanism be designed to encourage pursuit of all available cost-effective energy efficiency and demand reduction resources.[93]

DOER supports the three savings components that build on the currently approved mechanism to ensure that the full PI cannot be earned by the PAs without successfully implementing electrification programs or demonstrating a measurable improvement to equitably serving customers. Achieving these priorities in 2022-2024 will require programmatic changes and additional effort which warrant distinctions similar to the current active demand management component.[94] The three savings components appropriately respond to the new requirements of the Climate Act to ensure the Statewide Plan will be implemented consistent with the law and to achieve the Commonwealth's electrification and equity priorities.

2. The Removal of the Value Component is Justified and Appropriate.

Historically, the purpose of the value component has been to incentivize the PAs to achieve benefits at the lowest cost. While it is important to reduce ratepayer costs where appropriate, the value component as currently structured is no longer aligned with the priorities of this Statewide Plan and results in conflicting signals to the PAs as it relates to the savings components proposed in the three-component mechanism. The value component motivates the PAs to pursue the lowest-cost benefits which may have been an appropriate primary incentive for the PAs in past plans to encourage all cost-effective energy efficiency and demand reduction while minimizing ratepayer costs. However, the Climate Act updated the Department's standard of review and creates new requirements and priorities for the 2022-2024 Plan. The prioritized benefits associated with equity

[93] EE Guidelines § 3.6.2(b).
[94] D.P.U. 18-110 through D.P.U. 18-119 at 96.

and electrification needed to meet the Climate Act requirements and GHG goals are expected to come at a higher cost than the benefits from the standard energy efficiency component.[95] For example, as provided in the National Grid Gas benefit-cost model, the weatherization of a moderate income, single family, gas heated home costs $0.40 of incentive cost per dollar benefit achieved while the same measure for a market rate, single family, gas heated home costs $0.32 of incentive cost per dollar benefit achieved.[96] These values show that the cost per benefit achieved for the weatherization of a moderate income, single family, gas heated home costs $0.08 more per dollar benefit achieved compared to the same measure in a market rate income home. This comparison is based only on incentive costs and does not include the additional costs associated with marketing, outreach, and costs to acquire moderate income customers to participate in the programs. While reducing administrative and other program costs is critical, it is no longer appropriate to universally reward the utilities for prioritizing lower-cost benefits over other benefits, particularly given the broad support from the Council and stakeholders for increased investments in equity, including reducing systemic barriers to participation and investing in community partnerships and workforce development.

An additional and persistent challenge associated with the value component is the heavy reliance on and inherent uncertainty of accurate planned costs. While DOER agrees it is appropriate to motivate the utilities to achieve the priorities of this plan while minimizing costs to ratepayers, it is not appropriate to reward the utilities for uncertainty and the potential overestimation of planned costs. There are already mechanisms in place to minimize costs, including regular reporting to the Council, the MTM process established by the Department, and

[95] Exh. 1, Appendix A at 26.
[96] Exh. NG-Gas-5 (Revised), Gas BC Model 12.21.

the inherent motivation without Performance Incentives for utilities to minimize energy efficiency related bill impacts for their customers. These mechanisms are sufficient without a value component for 2022-2024. DOER is committed to help ensure that future electricity costs are as low as possible to support the electrification of buildings and transportation. DOER will continue to work with the Council and its consultants to review monthly data dashboards as well as quarterly and annual reports to monitor spending to ensure that costs are being minimized.

The 2022-2024 Plan represents a pivot to the next generation of energy efficiency programs in Massachusetts, in alignment with the Climate Act and in support of the GHG and equity goals of the Commonwealth. DOER supports the removal of the value component and sees this change as a crucial adjustment to the PI Mechanism to continue to reward the PAs for innovative and nation-leading programs. If the Department determines that a value component is a necessary cost containment mechanism, it should be weighted lower than in past plans to avoid misalignment with the Plan's electrification and equity priorities. This determination should consider both the weight applied to the value component and also the absolute PI pool amount allocated to the value component. As such, if the Department retains the value component, DOER recommends utilizing a lower percentage than the 20 percent weight proposed by the PAs in their response to DPU-Comm 3-16.[97] If the Department directs the PAs to add a value component to the PI mechanism, DOER suggests there be separate value components for each of the three savings component pools. Distinct value components for equity, electrification, and standard energy efficiency will incentivize the PAs to achieve the new plan priorities at the lowest cost and avoid a PI mechanism

[97] Exh. DPU-Comm 3-16; Exh. DPU-Comm 3-16, Att.

that incentivizes the PAs to prioritize lower-cost energy efficiency measures in affluent communities over energy efficiency in historically underserved EJ Communities.

3. The PI Mechanism is Consistent with Department Precedent and the EE Guidelines.

As noted above, in the 2019-2021 Plan, the Department approved a separate PI pool to foster the nascent market for active demand management.[98] Specifically, the Department stated that "the proposed active demand reduction savings component [was] appropriately designed to overcome barriers to the nascent active demand reduction market and otherwise consistent with the Department's principles for the design of a performance incentive mechanism." Likewise, strategic building electrification is a nascent market and should be appropriately fostered, consistent with the EE Guidelines, to "encourage energy efficiency programs that will best achieve the Commonwealth's energy goals."[99]

The proposed 2022-2024 PI mechanism was also carefully crafted to avoid offering incentives in more than one category for the same measure. In its order on the 2019-2021 Plan, the Department rejected a proposed renter component that awarded the PAs with $20 for each renter served, in addition to any performance incentive earned in connection with the savings and benefits attributed to the measures installed for each renter, because it would lead to the PAs earning an incentive in multiple components for a single action.[100] As noted in the Statewide Plan, "PAs had to make some determinations about measures that could qualify for multiple components (i.e., electrification measures in an EJ community) to ensure that there is no double counting of benefits."[101] Consistent with the EE Guidelines, the PI mechanism is "based on clearly defined

[98] D.P.U. 18-110 through D.P.U. 18-119 at 96.
[99] EE Guidelines § 3.6.2(b).
[100] D.P.U. 18-110 through D.P.U. 18-119 at 92-93.
[101] Exh. 1, Appendix A at 26.

goals and activities that can be sufficiently monitored, quantified and verified after the fact" as well as "designed to avoid any perverse incentives."[102]

Finally, the PI mechanism is carefully crafted to address the 2021 amendments to the GCA by the Climate Act. In its recent revisions to the EE Guidelines, the Department rejected the PAs' argument that § 3.6.2(b) limited the PI to achieving the energy goals set forth in the GCA and stated that the PI must now address the broader energy goals of the Climate Act.[103] Therefore, the specific design of the 2022-2024 PI mechanism was collaboratively developed by the PAs and the Council to address the new requirements of the Climate Act and is consistent with both Department precedent and the updated EE Guidelines.

G. DOER Does Not Support Utilizing Ratepayer Energy Efficiency Funds for Efforts Associated with Legislative Advocacy, Including the Appliance Standards.

1. The Department should reject the unsubstantiated GHG savings associated with appliance standards advocacy and require the PAs to achieve those savings with approved initiatives.

The Climate Act included provisions that set minimum energy efficiency standards for 15 new products and prohibited the sale of products that fail to meet those standards.[104] In their description of the Statewide Plan, the PAs propose to include savings associated with their support of appliance standards provisions in the Climate Act by enhancing their existing Codes and Standards Compliance and Technical Support Initiative (CSCS) in 2022--2024.[105] In the current CSCS, in the absence of reasonable estimates from other jurisdictions or evaluated savings data, PAs chose to attribute ten percent of the total statewide savings for appliance standards to their

[102] EE Guidelines § 3.6.2(c) and (f).
[103] D.P.U. 20-150-A at 56.
[104] St. 2021, c. 8, § 35.
[105] Exh. 1 at 39.

efforts, including a combination of government affairs and participation in multi-party support coalitions.[106]

While DOER appreciates the PAs' support of energy and water efficiency policies that help the Commonwealth achieve its climate limits, the Department should not allow claimable energy and resulting GHG savings associated with the appliance standards provisions in the Climate Act. The PAs argue that they should be able to claim savings associated with the appliance standards provisions, which were passed with many other significant new provisions and requirements in the Climate Act and base their position on findings in a 2020 evaluation study on code adoption savings attribution.[107] The study clearly states that the PAs independently developed and proposed five specific amendments to the 2018 International Energy Conservation Code (IECC) that were then adopted by the state Board of Building Regulations and Standards.[108] The IECC amendments were an effort initiated and advocated for by the PAs and were done through a regulatory as opposed to a legislative process. This is a key distinction between the PAs' savings claims for code adoption and the claims for standards adoption. PA involvement in adoption of appliance standards in the Climate Act includes participation in broad coalitions of supporters and providing input to a national non-profit designed to propose model appliance standard legislation to states.[109] Notably, all letters of evidence of appliance standards activity presented by the PAs thanked the PAs for their contributions to the group efforts to pass the bill; however, none indicated that the bill would not have been proposed or passed without PA support.[110] Unlike the activity resulting in the attributed code savings, the PA's accounting of their activity relating to standards adoption

[106] Exh. DOER-Comm 1-1.
[107] Exh. DOER-Comm 1-1, Att. 1-1(f).
[108] *Id*.
[109] *See* Exh. DOER-Comm 1-1; Exh. DOER-Comm 1-1, Att. 1-1(b) through (e).
[110] Exh. DOER-Comm 1-1, Att. 1-1(b) through (e).

does not indicate incremental savings that would not have occurred without their participation.[111] Thus, the Department should reject the PAs' claims of savings associated with advocating for the statewide appliance standards bill and order PAs to make up for the associated claimed GHG savings with other evaluated and substantiated measures.

2. The Department should support further study of savings from appliance standards compliance.

Although DOER does not support the PAs' attempt to claim savings for the legislative adoption of appliance standards, DOER has proposed, as an alternative, a method for PAs to support and claim savings for ensuring compliance with the appliance standards.[112] DOER proposes carving out a dedicated PA role in appliance standards compliance and allowing the PAs to determine the savings attributable to that role through the Council's evaluation framework. DOER respectfully requests that the Department make a distinction between appliance standards compliance as compared to appliance standards adoption, which does not have substantiated savings or fall within the ratepayer energy efficiency mandate of the PAs. Appliance standards compliance is a valid source of potential cost-effective PA savings, an appropriate role for the PAs through ratepayer-funded energy efficiency, and similar to the PAs' current role in building code compliance.

H. The RCS Budget is Reasonable, but the PAs are Not Currently Fully Compliant with the RCS Guidelines.

The Residential Conservation Services (RCS) program has been administered by DOER, since its establishment in 1980.[113] DOER is directed by the RCS statute to develop a program

[111] Exh. DOER-Comm 1-1, Att. 1-1(a).
[112] Exh. 1 at 39.
[113] G.L. c. 164, App. § 2-1 to 2-10.

"coordinating the Massachusetts residential conservation service and other state or federal law promoting residential energy conservation.[114] As a result of the Energy Act of 2012, PAs may submit their RCS filings as part of their three-year plans.[115] Within that context, the Department then reviews the reasonableness of the proposed RCS budgets.[116]

Pursuant to DOER's *RCS Guideline interpreting 225 CMR 4.00* (RCS Guideline), the PAs are required to deliver a DOER-approved home energy scorecard, in conjunction with in-home audits.[117] In its Order for the 2019-2021 Three Year Plan, the Department approved the PAs' proposed RCS budget as reasonable and established a process PAs could use if they needed additional funding to implement the required Scorecards during the term.[118] During negotiations for that plan, DOER and the PAs agreed to a target date of July 2019[119] for the PAs to implement residential home energy scorecards as part of RCS in-home energy assessments to satisfy compliance with DOER's RCS regulations and the RCS Guideline.[120] In response to an information request from DOER, the PAs indicated that home energy scorecards are expected to "soft launch with a limited number of energy assessors" in December of 2021 with the requirement that customers authorize consent in writing in order to obtain a scorecard.[121] However, the PAs are over two years behind in their RCS obligation to provide home energy scorecards to program

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[114] G.L. c. 164, App. § 2-3.
[115] St. 2012, c. 209, § 32(h), (i).
[116] G.L. c. 164, App., § 2-7(b); St. 2012, c. 209, § 32(i); D.P.U. 15-160 through D.P.U. 15-169 at 99.
[117] Residential Conservation Service Program, 225 CMR 4.00 (Apr. 7, 2017); *Guideline Interpreting 225 CMR 4.00*, Feb. 20, 2020, available at https://www.mass.gov/doc/rcs-guideline-revised-2202020/download.
[118] D.P.U. 18-110 through 18-119 at 173-174.
[119] D.P.U. 18-110 – D.P.U. 18-119, Exh. 1, Appendix F at 7.
[120] *Guideline Interpreting 225 CMR 4.00*, Feb. 20, 2020, available at https://www.mass.gov/doc/rcs-guideline-revised-2202020/download.
[121] *See* Exh. DOER-Comm 1- 4 at 3. The PAs state they expect a full roll out in first quarter 2022.

participants and, because it significantly limits the benefits of scorecards by requiring affirmative customer consent, the PA's proposal is inconsistent with RCS regulations and Guidelines. This is an issue that DOER will address with the PAs during implementation but is one that should not impact the Department's approval of the budgets as reasonable.

DOER respectfully requests the Department to approve the PAs' RCS budgets, which include the cost of implementing scorecards as required by RCS regulations and Guideline, as reasonable.

IV. CONCLUSION

The Department, DOER, the Council, the AGO, and the PAs have been deliberate in their approach to meet the new requirements of the Climate Act: to realize and propagate cost-effective energy efficiency and GHG mitigation throughout the Commonwealth, resulting in nation-leading savings goals and benefits. Building on the success of previous Three-Year Plans and responding to the changing statutory and regulatory landscape, Massachusetts climate requirements, and evolving customer needs, the proposed PA Plans, to the extent that they are fully consistent with the Statewide Plan, are expected to reap projected benefits of approximately $12.95 billion and contribute 845,000 metric tons of $CO2_e$ emissions reductions towards the Commonwealth's 2030 GHG limits.

The Department should approve the PAs' proposed GHG goals, energy savings, and budgets which will support new offerings that prioritize equity, electrification, and workforce development. The Department should approve the PI mechanism as responsive to the Climate Act and consistent with the updated EE Guidelines. The PAs should not be allowed to claim the unsubstantiated savings or GHG emissions reductions associated with advocacy for the appliance

standards section of the Climate Act and the Department should require those emissions reductions be achieved through approved measures and programs. The proposed RCS budget is reasonable to implement the required components of the PAs' Residential Conservation Services program. However, DOER will continue to work with the PAs to ensure regulatory compliance with RCS program components and delivery, including home energy scorecards and data reporting.

Therefore, DOER respectfully requests that the Department approve the individual PA Three-Year Energy Efficiency Investment Plans for 2022-2024 in each of these proceedings, to the extent they are consistent with the Statewide Plan, with the exception of the proposed savings associated with the adoption of the appliance standards. As required by G.L. c 25, § 21(d)(2), the Department should find that each of the PA Plans "complies with the requirements of this section." The measure mix and portfolio of programs proposed by the PAs meet the priorities of the Council, DOER, and the EEA Secretary's GHG Goals. If the Department orders any changes to the proposed measure mix, it should ensure that the PAs make up for any necessary GHG emissions reductions to meet the Secretary's 2030 GHG Goals through measures supported by the PAs, DOER, and the Council to ensure consistency and alignment with the Commonwealth's 2030 Interim CECP, 2050 Roadmap, and the Climate Act's net-zero 2050 limit. DOER also respectfully requests the Department approve the RCS budget as filed.

Respectfully submitted,

COMMONWEALTH OF MASSACHUSETTS
DEPARTMENT OF ENERGY RESOURCES

By its attorneys,

/s/ Rachel G. Evans

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Dated: December 29, 2021

Certificate of Service

I hereby certify that I have this day served the foregoing document upon all parties of record in this proceeding in accordance with the requirements of 220 CMR 1.05(1).

/s/ Rachel G. Evans

Rachel Graham Evans