NPA Working Group: NPA Framework Comment Submission Due January 29
On behalf of (company/organization name): Massachusetts Department of Energy Resources
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High Level Comments

Key proposal strengths:

DOER commends the natural gas local distribution companies (LDCs) for putting a significant amount of time and effort into developing this Non-Pipeline Alternative (NPA) Framework as well as for building in time for stakeholder feedback and questions throughout the development process. Some strengths of the framework include:

- Realistically considers types of investments that would not be worth the time and resources to conduct an NPA Review (e.g., emergency pipe replacements, cybersecurity, etc.)
- Accounts for non-energy benefits/costs in the benefit cost analysis, particularly the social cost of carbon.
- Allows LDCs to update the framework as they gain experience implementing NPAs through their targeted electrification pilots.

Key proposal challenges:

While the proposed NPA framework is a good starting point, a significant amount of work is still needed for it to be an impactful tool and adequately address the directives laid out by the Department of Public Utilities in D.P.U. 20-80-B. Some areas that need improvement are:

- Project identification and analysis is conducted only on a reactive, case-by-case basis, without proactive planning with geographic optimization at the system level.
- New customer requests are excluded from the full NPA review process, which is likely to result in a significant number of future stranded gas assets.
- Potential rate impacts should be assessed separately by the DPU and should not factor into the Benefit Cost Analysis for NPAs.
- Certain sections of the framework are incomplete, including the Initial Viability Test, Benefit Cost Analysis, and Customer Engagement Strategy, which does not allow time for stakeholder feedback prior to filing with the DPU on April 1. Given the limited time for additional stakeholder feedback prior to the filing of the Framework, it is important for the LDCs to create a process for interim review and modification

to the NPA Framework to incorporate lessons learned and stakeholder feedback before the 5-year term is complete.

Project Identification

Key Point #1: More Proactive Planning in the Project Identification Process is Needed

(a) Need for Proactive Geographic Planning

In its order 20-80-B, the DPU states that: *"The comprehensive analysis of NPAs that we envision incorporates many of the elements identified in… the 'geographic marginal cost analysis' proposed by DOER."* DPU 20-80-B at 15, n.11.

The initial NPA framework that the LDCs have proposed only identifies projects on a case-by-case basis, where needs for new capital investments emerge. In contrast, the DOER proposal for a geographic marginal cost analysis cited by the Department in DPU 20-80-B envisioned a holistic, system-wide analysis identifying areas of the gas and electric distribution systems in which NPAs would be most beneficial to ratepayers and the Commonwealth as a whole. The LDCs' proposed framework falls short of this type of holistic analysis envisioned by the Department and DOER.

The NPA Framework should include a plan for identifying geographically and financially optimal locations for NPAs at the system level, in addition to case-by-case project identification and analysis.

(b) Commit to Incorporating NPA Analysis in Long-Term Planning

Slide 7 of the LDC's proposed NPA Framework states: *"Where possible, each LDC shall incorporate consideration of NPAs and NPA assessments into its long-term system planning and goal development."*

Order 20-80-B directs the LDCs to "*move beyond 'business as usual' in their gas system planning, whether involving proposed expansion of service to new areas or investments necessary to maintain the safety of existing natural gas infrastructure."* D.P.U. 20-80-B at 14. This directive to move beyond 'business-as-usual' for long term planning and goal setting requires the LDCs to shape their system planning processes around NPAs.

While there may be some capital projects that do not result in viable NPAs, robust NPA planning needs to underpin all long-term system plans for the LDCs.

Key Point #2: Include New Customer Requests in NPA Review

DOER recommends that new customer requests be subject to the new NPA Review Process and not continue to be processed under existing line extension policies. If the LDCs propose to exclude new customer requests from the full NPA Review Process, as they have stated in the Working Group, this would exempt a hugely important segment of capital investments from NPA analysis and the accompanying Benefit Cost Analysis, which includes the social cost of carbon. This course of action would likely result in a significant increase in stranded gas assets and carbon emissions.

If the LDCs do not intend new customer requests to be subject to the NPA Review Process, please update the Project Identification tables on Slides 5 & 6 to reflect this by either moving New Customer Requests to the "Excluded" category or by creating a third category to differentiate this type of investment.

DOER believes that not applying the full BCA to new customer requests is inconsistent with 20-80-B, since the DPU directed that "*the standards for investments to serve new customers be examined and revised.*" D.P.U. 20-80-B at 98. Furthermore, Section 99 of c. 239 of the Acts of 2024 removed the LDCs' obligation to serve new customers, which strengthens the ability of the LDCs to advance NPAs. See also, D.P.U. 20-80-B at 98-101.

Key Point #3: Clarify Types of New Customer Requests

Within the category of "New Customer Requests," the LDCs should differentiate at least two types of requests to optimize NPA planning: 'new customer – low throughput' (i.e., small-diameter, low-pressure pipeline that connects individual homes and businesses to existing distribution mains) and 'new customer – high throughput' (i.e., complex projects, like residential developments or large commercial projects that require the construction of distribution main or other natural gas delivery infrastructure).

The LDCs have stated in the NPA Working Group and Technical Subcommittee meetings that small and large new customer requests currently undergo very different evaluation processes. We recommend that the proposed framework reflect these different work streams to provide a more accurate depiction of how the new customer planning process will work/already works. This would enable stakeholders to provide more useful feedback.

Key Point #4: Identify Scale of Projects in Project Identification Phase

Because NPAs can be identified as either cost-effective or cost-prohibitive at different scales, the LDCs should provide more clarity and consistency on how they will determine

the scale of their NPA analyses. We encourage the LDCs to adopt standard terminology for evaluating NPAs at different scales and suggest at least two terms: project and program.

The term "project" could apply to a specific, continuous area, such as a single street segment or the end of a street segment. The term "program" could involve an entire customer class or jurisdiction, for example a demand response program or the installation of thermal networks for a neighborhood.

Different scales of NPA identification have different implications for avoided costs of a pipeline segment upgrade. For example, capacity-expansion investments can be evaluated at a much larger scale than pipeline replacements, since not all affected customers need to participate, and electrification upgrades may not be needed. These capacity investments could also be particularly well-suited for assessing certain NPA technologies like thermal networks, which are more cost-effective when deployed at larger scales.

Defining these terms provides more clarity into the process and a more complete picture of the costs and benefits of various types of NPA candidates.

Initial Viability Testing

Key Point #1: Provide a Plan and Timeline for Finalization of and Stakeholder Feedback on the Initial Viability Test

Because the LDCs are still in the process of developing a plan for Initial Viability Testing, DOER is concerned that stakeholders will not have the opportunity to provide feedback on its structure. The LDCs should provide a plan and timeline for incorporating stakeholder feedback as they develop their Initial Viability Tests.

Key Point #2: New Customer Requests should have a high NPA Suitability Score

According to the NPA Opportunity Matrix on Slide 10, new customer requests appear to be pre-categorized as having medium-low NPA potential solely based on timeline, since safety/reliability concerns do not apply. Please clarify why the planning process for new customer requests can't be extended to allow sufficient time to conduct a full NPA analysis. DOER believes that new customer requests are some of the most highly suitable projects for NPAs, since they don't trigger safety or reliability concerns.

In addition, as mentioned in Key Point 3 under Project Identification, please differentiate planning timelines for the various types of new customer requests in this matrix.

Key Point #3: Proactive Planning Timelines

Please clarify the planning timelines for all projects falling within the 3-5 year and 5+ year range in the NPA Opportunity Matrix. Are the LDCs adjusting their planning timelines to give, for example, 'Resiliency' projects enough time to undergo full NPA analysis and implementation?

Key Point #4: LNG/LPGA investments should have a higher potential for NPAs

DOER recommends that Liquified Natural Gas (LNG/LPGA) projects should be suitable for NPAs since they are often planned at least 5 years in advance and are eligible for all NPA technologies/solutions based on the table in Slide 8.

Please speak to how the LDCs plan to address the DPU directive to phase out their reliance on Everett Marine Terminal LNG contracts.

Gas System Feasibility Review and Electric System Feasibility Review

Key Point #1: Electrical System Impact Assessment Failure Conditions

Slide 13 of the proposed NPA framework suggests that potential NPAs will not reach the Benefit Cost Analysis screening if they first "fail" the Electric System Impact Assessment (ESIA). Please identify the factors that would cause an NPA to fail the ESIA. DOER believes that the LDCs should only use the ESIA cost estimate to inform the subsequent BCA, not to disqualify a potential NPA, since the purpose of the BCA is to evaluate costs and benefits (including any identified electric system upgrade costs).

Key Point #2: Explanation of Customer Viability Review

Slide 11 includes the first and only mention of a Customer Viability Review in the NPA Framework. Please provide more details on how this review will be implemented.

Benefit Cost Analysis

Key Point #1: Incompleteness of the BCA

As of the January 22nd Technical Sub-Committee (TSC) meeting, the LDCs are still in the process of deciding what factors will be included in the BCA. DOER is therefore concerned that stakeholders will not have an opportunity to provide feedback on the final structure of the BCA prior to the LDCs' filing with the DPU on April 1st, particularly since the LDCs have asked for all comments to be submitted by January 29th. DOER would like to see a plan and

timeline for how the LDCs will incorporate stakeholder feedback before they finalize the criteria of the BCA.

Key Point #2: Using Four Separate Tests to Calculate the BCA is Ineffective and Confusing

(a) The TRC should be the only test used in the BCA

The LDCs preliminary proposal for the BCA includes four tests: a participant cost test (PCT), a gas rate impact measure (RIM), an electric RIM, and a Total Resource Cost test (TRC). For the TRC, the LDCs have opted to use "*the most currently approved TRC in the 3-year Energy Efficiency Plan with all applicable values*" (Slide 13).

DOER recommends that the TRC be the primary and only test used in the BCA for the NPA Framework. The other proposed tests (RIMs and PCTs) do not provide additional information of relevance for the LDCs to make decisions about the cost-effectiveness of NPAs, for reasons described below. Further, multiple BCA tests will make it difficult to establish a consistent approach for approving NPAs that pass some tests and fail others.

(b) RIM tests should not be used in the BCA

20-80-B states that, "*the decarbonization of the natural gas industry may result in higher costs being imposed on ratepayers. Given the urgency of addressing the climate crisis, however, we are reluctant to slow the pace at which the transition must occur due to concerns about affordability for low- and moderate-income utility customers. Rather, the Department will address these issues in a separate proceeding, to be commenced later this year, dedicated toward examining innovative solutions to address the energy burden and affordability*" D.P.U. 20-80-B at 15.

This statement by the DPU asserts that potential ratepayer impacts are not grounds for the LDCs to shy away from otherwise viable decarbonization strategies such as NPAs, but rather that the impacts of the transition on ratepayers will be systematically addressed by the DPU in a separate proceeding, currently underway in DPU 24-15. The gas and electric RIMs proposed by the LDCs should not shift that authority from the DPU to the LDCs and therefore should not be permitted in the BCA.

This recommendation – that RIM tests should not be used to evaluate whether to proceed with an NPA – is also one of the key principles in the National Standard Practice Manual (NSPM) for Benefit-Cost Analysis of Distributed Energy Resources.[1] However, this key

[1] National Energy Screening Project (NESP), National Standard Practice Manual for Benefit Cost Analysis of Distributed Energy Resources, August 2020,

principle was excluded from the list of NSPM cost test design principles presented to stakeholders at the December 17th TSC Meeting (TSC Meeting #2, Slide 8). The NSPM document cited during this presentation includes the following statement:

"*BCA does not – and should not be used to – account for rate, bill, or participation impacts – the analyses answer different questions.*
• *This is a key NSPM principle*
• *Rate Impact Measure (RIM) Test combines BCA results with rate impact results, making it difficult to understand either result*
• *Instead, rate, bill, and participation impacts should be analyzed separately from BCAs."*[2]

RIM tests should not be used in the BCA for NPAs because they indicate only whether rates will go up or down. They do not indicate the magnitude of the rate increase or decrease, nor do they provide context for assessing the impacts of a rate increase or decrease on customers. Instead, the LDCs should conduct a periodic Rate Impact Analysis (RIA) across their entire NPA project portfolio and share the results of the analysis with the DPU to aid its investigation into rate impacts of the gas-electric transition. See Appendix A for more information on RIAs.

(c) Participant Cost Test should not be used in the BCA

The PCT does not provide relevant information for an LDC to determine whether an NPA is cost-effective. The PCT is useful when designing NPA programs to ensure they effectively incentivize customer participation. If NPA programs are appropriately designed and implemented, program participants will always experience greater benefits than costs. Otherwise, they would not participate. Additionally, existing financial incentives should already be accounted for in the TRC as 'Project Participation Costs.' Therefore, it is inappropriate to apply the PCT as a standalone BCA test that is limited to participant costs and benefits.

Some stakeholders have raised the issue of customers' stranded assets (i.e., customer-purchased equipment that must be replaced prior to the end of its useful life). These are not considered in the BCA test in the Energy Efficiency Guidelines. However, these

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https://www.nationalenergyscreeningproject.org/wp-content/uploads/2020/08/NSPM-DERs_08-24-2020.pdf.

[2] National Energy Screening Project (NESP), National Standard Practice Manual for Benefit-Cost Analysis of Distributed Energy Resources, November 2023, Page 54, https://www.nationalenergyscreeningproject.org/wp-content/uploads/2023/11/NSPM_for_DERs_Overview_Nov_2023.pdf.

stranded assets could be evaluated in the context of financial incentives in a separate PCT to encourage household participation.

Key Point #3: Calculating Costs and Benefits for Electric System Upgrades

Please address how the EDCs' existing directive to dramatically increase electrical capacity, as outlined in the ESMPs, would impact the cost of electric system upgrades for NPAs. While this was discussed at the most recent NPA Working Group and Technical Subcommittee, DOER would like to see further written explanation of how the LDCs plan to leverage planned ESMP investments to facilitate electrification through the NPA Framework.

Key Point #4: Threshold for Passing the BCA

DOER would like to see a standard framework for what additional factors an LDC will consider to approve an NPA with a total BCA score of ≤ 1. For example, will the LDCs commit to passing NPAs with a lower BCA score if the project is located in an Environmental Justice Community?

Key Point #5: Costs to Customers

Please clarify if the LDCs plan to recover costs of electrification or other NPA implementation from ratepayers. Please identify what costs of NPA implementation would be borne by participants, and whether there is a maximum amount that participants would be asked to pay out of pocket, particularly LMI customers.

Key Point #6: Examples

Please provide one or two specific examples (with numbers) of how the BCA would be calculated for a potential project.

Project Authorization and Prioritization

Key Point #1: Bandwidth Expectations

Slide 16 of the framework states, "*If more NPAs are identified than can be reasonably implemented in a specific timeline the Companies shall consider prioritizing their NPA projects…*"

Please clarify what would cause the LDCs to need to prioritize some NPAs and overlook others. Since DPU 20-80-B states that LDCs will bear the burden of demonstrating that NPAs were adequately considered, DOER's understanding is that the LDCs should allocate

sufficient resources to ensure that all eligible capital investments are considered under the NPA Framework and that all eligible, cost-effective NPAs are implemented.

Key Point #2: More information about cost recovery is needed

The framework does not include a discussion of the cost recovery mechanism for the approved NPAs. Please identify what costs incurred through implementation of the NPA Framework would be recovered from ratepayers and through what mechanisms.

Project Execution

Key Point #1: Need More Information

Slide 17, Project Execution, does not provide any additional information about this part of the NPA Process. Please provide more clarity and an opportunity for discussion on this part of the framework.

Customer Education, Engagement and Commitment

Key Point #1: Lack of Framework for Customer Engagement

The NPA Framework does not include a proposed customer engagement plan for stakeholders to review. Considering that customer engagement may prove to be the most significant barrier to the success of the NPA Framework, stakeholders should have the opportunity to provide feedback on how the LDCs structure this strategy.

Since there is limited time remaining before the LDCs submit their initial NPA Frameworks to the DPU, please provide a plan and timeline for how the LDCs will incorporate stakeholder feedback as they develop their customer engagement strategies.

Key Point #2: Timing of Customer Education

Customer education will require significant time and effort and should begin well before customers are required to decide whether to participate in a proposed NPA project. Please clarify at what point in the planning process (as laid out on Slide 7) the LDCs will initiate customer education/engagement.

Key Point #3: Difficult-to-Engage Customers

Under the current Framework proposed by the LDCs, a single customer may invalidate an NPA Project that would otherwise be technically feasible, cost-effective, and in the public interest. DOER would like the LDCs to propose a robust strategy for leveraging trusted community and municipal partners to engage with holdout customers to encourage their

participation. DOER would also like to see consideration in the NPA Framework for other strategies to enable NPA electrification projects to proceed despite holdout customers, including potentially leveraging other fuel sources as alternatives.

Impacts to Project Implementation

Key Point #1: New Customer Requests in NPA Project Areas

Slide 22 of the framework states "*During the NPA implementation period, the LDCs would not be accepting new gas connections in the discrete NPA project area*."

Please clarify at what point in the planning process (as laid out on Slide 7) the LDCs will stop accepting new customer requests within an NPA assessment area. For example, if an EDC is in the process of conducting an ESIA for a proposed NPA, accepting a new customer request during that process could undermine the assessment work that has already been done.

DOER would also like the LDCs to commit to not accepting new customer requests in areas where NPA Projects have been completed (e.g., a new resident moves into a house on a decommissioned segment and wants to connect to the gas system), as this would undermine the NPA investment and conflict with the goals of the NPA Framework.

Key Point #2: Customer Participation

In addition to Key Point #4 under Customer Engagement, please propose a specific strategy for engaging new property owners or customers that back out of their commitment to electrify.

Framework Updating

Key Point #1: Update and Review Schedule

Slide 25 contains the following bullet points: "*Regular updates to the Framework as experiences are gained through the process*," and "*A specific update cycle will allow for consistency and the chance to make updates with lessons learned*."

As the LDCs have acknowledged, they will rapidly gain experience and understanding of best practices as they begin to apply the framework. Please clarify the LDCs' plan for a "specific update cycle" to the NPA Framework. DOER recommends that the LDCs conduct an update and stakeholder review process biannually for the first two years of framework implementation and then annually for the duration of the first five-year review cycle.

Waiting five years to make any updates would result in an ineffective and incomplete framework for the first five-year period, particularly since the Initial Viability Test, BCA, and Customer Engagement Plans are still being developed. The five-year review cycle proposed in 20-80 is appropriate after process has stabilized and issues that emerge in the initial years of implementation have been ironed out.

We look forward to stakeholders having the opportunity to provide feedback on each update.

Key Point #2: Metrics and Evaluation

It would be useful to see data during each subsequent update regarding which investment types saw the most success with NPA implementation (or how far through the evaluation process each investment type typically survived before being eliminated). This would help stakeholders, LDCs, and the DPU understand what areas of the framework have the most room for improvement.

Appendix A: Rate Impact Analysis

Rate Impact Analysis (RIA) can be a helpful supplement to the BCA but should not influence its outcome.

Although RIM tests should not directly influence the outcome of the BCA according the NSPM, it is still advisable to supplement the NPA Framework with a periodic Rate Impact Analysis (RIA) of an LDC's entire portfolio of NPA projects/programs. This would provide the DPU with a more helpful, big-picture assessment of rate impacts from NPAs, which could contribute to the assessments of energy burden and affordability taking place in DPU 24-15.

Structure of Typical Rate Impact Analysis

Typical rate impact analyses include some of the same inputs as the proposed BCA tests in the LDC's framework, including all the costs that affect the utility system and the utility revenue requirements. Typical rate impact analyses also include lost revenues caused by reductions in gas or electricity sales, as well as increased revenues caused by increased sales.

Rate impacts should be presented in terms of the long-term average rates over the same study period as that used for the BCA. This captures the average effect of both increases and decreases over the relevant period and puts the results into straightforward figures that can be used for balancing rate impacts with cost impacts. For energy efficiency or any NPA that primarily impacts one fuel, the results are stated in ¢/kWh or $/therm, and percent increase.

Table 1 presents the costs and benefits that should be included in an NPA rate impact analysis for the gas utility customers, while Table 2 presents the costs and benefits that should be included for the electric utility customers.

Table 1. Impacts Included in the Gas Rate Impact Analysis

Cost or Benefit	Affected Party	Impacts
Costs	Gas Utility	Project implementation cost
		Performance incentive costs
		Lost revenue from gas customers
		Recovery of gas stranded costs
Benefits	Gas Utility	Gas avoided costs
		Reduced GHG emissions (SCC)

Table 2. Impacts Included in the Electric Rate Impact Analysis

Cost or Benefit	Affected Party	Impacts
Costs	Electric Utility	Increased electricity costs
		Increased GHG emissions (SCC)
Benefits	Electric Utility	Increased revenue from electrification
		Electric avoided costs

DOER recommends that GHG emissions be considered a utility system impact in both rate impact analyses. This is based on the premise that the gas and electric utilities are required to meet Massachusetts' GHG goals regardless of whether they implement the NPAs being evaluated. In other words, if the NPA being evaluated is not implemented, then the gas utility would need to implement some other measure to meet Massachusetts' emissions sublimits, and the cost of that other measure would be equal to the marginal cost of GHG emissions, which is the social cost of carbon (SCC).

This assumption has important implications for the rate impact analysis because it could significantly reduce the difference between the rate forecasts without the NPA and the rate forecast with it.

Consideration of Both Electric and Gas Customer Rate Impacts in NPA RIA

RIAs for energy efficiency only considers the impact on sales of the fuel that is being saved; in the case of NPAs, however, it is important to consider impacts on both gas and electricity sales.[3] NPAs are likely to increase rates for gas customers due to the cost of the program and reduction in gas consumption as well as reduce rates for electric customers due to the increase in electricity consumption. Determining whether rate impacts of an NPA are reasonable requires consideration of both customer types.

Therefore, the rate impact results for the gas customers should be added to the rate impact results for the electric customers. The best way to do this is to present the rate impacts in terms of the bill, in terms of $/month or $/year, so that they can be added together.[4]

[3] Technically, the rate/bill impacts of delivered fuels could be included in the rate impact analyses. To reduce the complexity of this exercise, delivered fuel impacts are not included.
[4] This means there are two calculations: a gas customer rate impact (in terms of $/therm, % change in rates and $ change in bills) and an electric customer rate impact (in terms of $/kWh, % change in rates and $ change in bills). However, there are three results: electric rate impact, gas rate impact and a combined rate impact. The combined results will be shown as a $/change in bills. Note that electric-only customers will only see the electric rate impacts, while customers who also use gas will see the combined rate impact.