The Garden Club of New Haven

Promoting the preservation of natural resources is one of the primary missions of The Garden Club of New Haven (GCNH) and of the organizations with which is affiliated, the Federated Garden Club of Connecticut and the Garden Club of America. Since 2011, GCNH has actively participated in educating the public about issues involving trees and power and advocating for a balanced approach to preserving the benefits of trees and protecting public safety, including power reliability.

June 5, 2022

Melissa Paslick Gillett, Chairman
John W. Betkoski III, Vice-Chairman
Michael Caron, Commissioner
Public Utilities Regulatory Authority
Ten Franklin Square
New Britain, CT 06051

Filed electronically

Re: Docket No. 17-12-03RE08
Comments on Straw Reliability and Resilience Program Frameworks

Dear Chairman Gillett, Vice-Chairman Betkowski and Commissioner Caron:

In accordance with your request for comments on the Straw Proposal, we provide specific comments below, structured to reflect the headings of the Straw Proposal. First, however, we do have some general statements:

(1) Greater integration of the framework for reliability and the framework for resilience (Sections IV and V) is needed to ensure that expenditures for reliability are not wastefully made when full consideration of resilience would make it more cost effective to make resilience expenditures instead of expenditures that only improve reliability, especially for long term resiliency. Consideration of resiliency issues when considering reliability expenditures avoids the risk of stranded assets and unnecessary costs. We suggest changes to accomplish this in addressing Sections IV and V.

(2) In the cost/benefit analysis it would be entirely appropriate to consider, and PURA should consider, the negative impact of reliance on ever more aggressive vegetation management and removal of healthy, structurally sound trees to achieve reliability on the benefits of maintaining and increasing the roadside tree canopy to protect its importance to adaptation and resilience to cope with climate change. This is especially important for urban areas in general and for environmental justice communities in particular due to the benefits that the tree canopy

provides, *e.g.* ameliorating heat island effects, controlling storm water, and thereby reducing costs to ratepayers and to municipalities.

(3) We also request that you continue to consider the comments filed by the Garden Club of New Haven in this docket as they apply to the Straw Proposal because they expand on points made herein.

IV. Reliability Framework:

(1) Footnote 21 suggests that a circuit could be on both the list for reliability improvements and resiliency improvements, and recognizes that resiliency improvements will necessarily lead to increased reliability. This is especially true of undergrounding for resiliency.[1]

To provide the integration of the reliability and resilience frameworks needed to avoid stranded assets and unnecessary costs, data needs to be collected so as to compare proposed expenditures for measures typically used to achieve reliability with proposed infrastructure expenditures for measures that are intended to increase resiliency. By implication, Table 2 on page 19 seems to require provision of the data by circuit for the Reliability Framework, whereas data to be provided for the Resiliency Framework is by zone. To facilitate proper comparisons of short and long term costs of proposed improvements and the implications for cost-effective resiliency, it is important that the resiliency zones can be overlaid on the circuits.

Thus, for example, the resilience framework could call for replacing aging or degraded infrastructure in a zone with stronger poles and aerial spacer cables or undergrounding for greater resilience[2] while on the reliability framework the circuit in which the zone exists might call for replacing the infrastructure with somewhat higher quality wooden poles and tree wire for only reliability. In other words, poor performing circuits for blue sky conditions and gray-sky storms might be given priority for resiliency measures.

(2) Consistent with the analysis in Sections II and III, the data should differentiate among blue-sky, gray-sky and black-sky conditions. This is true for the Table 3 criteria discussed under V. below. As noted, it is the dark-sky storms that pose the greatest threats to the economy and to health and safety.

V. Resilience Framework:

(1) Because where and when a dark-sky storm will hit, and only one dark-sky storm (Tropical Storm Isaias in 2020) will be included if the previous four-year cycle is used as stated

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[1]As we have said in other comments to this docket, recent technological developments have significantly reduced the risk of and time needed to repair underground cables. Underground cables are now designed to resist damage even from water. In any case, the risk of failure has always been significantly less than for overhead lines in all types of weather, especially in extreme weather, and a failure is very unlikely to have widespread effects.

[2] We note that while there is clear evidence that undergrounding provides significant resilience and reliability, evidence is less robust for steel or concrete poles and aerial and or spacer cables. Hendrix aerial spacer cables do claim to withstand some hurricanes and to require less tree trimming and removal.

on page 22, we urge PURA to increase the time period for this initial identification and prioritization of vulnerable system zones to require data to be submitted by the EDCs from the 2011-12 storms (Hurricane Irene, Storm Sandy and the October Nor'easter). This will provide a more complete data set to guide decisions. This is necessary because the changing climate makes prediction of which parts of the electric distribution system are most vulnerable to failure in extreme weather difficult at best, and including black-sky storms that affected different parts of the state severely and not others will provide greater understanding of potential risks.

(2) On page 23, although we do not object to special consideration for commercial and industrial customers, it should be recognized that more workers are likely to continue to be working remotely and rely on electricity and communication distribution to their homes. Thus, the consequences to the economy from widespread outages are far greater than only the impacts on fixed commercial and industrial sites.

(3) On page 24, we assume that the reference to Table 2 in the sentence preceding Table 3 is a typographical error and should be a reference to Table 3. As noted above regarding Section IV, major storms should be broken into the two categories, as discussed elsewhere in the Straw Proposal: gray-sky and dark-sky.

(4) We understand the discussion on page 25 to exclude tree pruning and removals as hardening measures for resiliency and consider that to be correct. With regard to the hardening measures for resilience solutions, the EDCs should be required to submit to PURA evidence as to the effectiveness of proposed solutions to achieve resiliency from reliable data. The EDCs are best situated to obtain data from other electric distribution companies throughout the country and to access studies from private consultants or industry organizations, especially when those studies are not readily available to the public. It should also be noted that, quite apart from the prediction of more frequent extreme weather due to climate change, technological changes, especially with regard to undergrounding, have made conclusions as to cost effectiveness reached in prior years no longer accurate, and EDCs should provide the most accurate current cost data for the alternative resilience solutions.

(5) As to obtaining customer feedback, rather than rely on public comment during rate proceedings, which are most likely to draw those opposed to rate increases regardless of the results to resiliency from the expenditures, consideration should be given to customer surveys. For example, the Wisconsin utility commission required Wisconsin Public Services to conduct a survey of customers prior to implementing a program for undergrounding. Given an estimate of a 5% increase or $4.30 per month, "the vast majority of customers said they were willing to pay that for reliability improvements." That was true of even those who had had no service interruptions in the prior year. Near the end of the implementation, there was a 97% reduction in outages.[3] Any such survey should be conducted only *after* PURA has determined that there is sufficient evidence to indicate that the proposed resiliency expenditures are likely to produce the expected results.

(6) We welcome the requirement (page 26) that the EDCs submit at least one alternative solution for each zone. Consistent with the statement at the top of page 42 that PURA is

[3] PowerGrid International, "Is it time for you to consider undergrounding some of your distribution lines"

"confident that the Reliability and Resilience Frameworks established herein are designed to cement the consideration of undergrounding as a viable mitigation measure," PURA should also require that at least one of the alternatives include undergrounding or a detailed explanation as to why undergrounding is not included.

(7) Regarding Evaluation of Plans on page, 26, PURA should more explicitly require modeling based on event levels rather than use the term "Major Storms". With regard to prediction of the number and intensity of such storms, the basis for the predictions should be presented in detail, including support from reputable climate research.

(8) With regard to the list of benefits on page 27:

(a) What is included in storm restoration costs? Why are pole replacement costs not included? Presumably replacement of wires and cables are included in storm restoration costs, but it would seem to be more informative to treat poles and, independently, wires/cables, as separate costs and specifically note that they are a subcategory of storm restoration costs.

(b) Avoided customer interruption costs would seem not to include avoidance of the health and safety consequences of power outages, and those should be included or at least noted.

(c) Customer interruption costs will rise exponentially as outages from black sky events become longer, and cannot be calculated at a fixed rate.

(d) In addition to avoided vegetation management costs, there should also be an estimate of the avoided loss of benefits from the tree canopy. I-Tree, developed by the USDA Forest Service, could be used to estimate the benefits provided by eliminating aggressive pruning and removal of healthy, structurally sound trees.

(9) In the first full paragraph on page 28, the EDCs should be explicitly required to provide the evidence supporting their assumptions and inputs, not simply state them.

(10) At the top of page 29, the EDCs are required to use actual events from the last five-year period as a proxy for prediction for the 5 and 10 year analysis windows. As we suggested previously (see page 2 of these comments) regarding identification of vulnerable zones, we also suggest that the four prior black-sky events should be included for purposes of prediction. The different nature of these events can be mapped against similar events predicted by current scientific research and a fuller understanding of the risks to the distribution infrastructure achieved. We note here, as well, that tornadoes and micro-bursts cannot be easily predicted except for their more likely frequency in Connecticut due to climate change. Although they are more localized than black-sky events such as hurricanes, the damage to the pole and wire distribution system can be extensive and produce similar results to the economy, health and safety at least within the area affected.

(11) It is critical for public understanding that the predicted average rate increases are provided on a monthly basis, rather than as a total cost to the utility (if different rates for different categories of customers are proposed, they should also be stated). Moreover, to the extent that the EDCs are able to secure Federal funds for resilience efforts (*see* B. Alignment with Federal Funding, p. 38-39), the reduced rates should be shown clearly.

(12) In the first full paragraph of page 32, the gray-sky levels, 4 and 5, are not noted, which may simply be a typographical error. Data should be collected for all levels.

(13) From our research it appears that there is aerial cable with and without spacer cable, and also that different cables have different pole strength requirements. Aerial cable and spacer cable are separately listed in Table 6, and only aerial cable is listed in the third paragraph of page 32. To the extent that aerial cables without spacer cables and aerial spacer cables, or any other category of cable differ in their resiliency capabilities, they should be separately and consistently listed in all data collection for reporting and verification.

(14) Since "resilience-based vegetation management" is not listed as hardening in the list of hardening solutions on page 25, it is unclear how it is defined and whether PURA has approved its use. Although the Garden Club of New Haven ("GCNH") has long supported removal of hazardous trees as defined in Section 16-234 (a)(3), within the UPZ and in the public right-of-way, to achieve blue-sky and minor storm reliability, it appears that Eversource, at least, may be already embarking on a plan to remove trees that do not meet the statutory definition, and to prune more aggressively than in the past as a "resilience" measure pursuant to a line maintenance plan that was deferred to consideration in this docket.[4] GCNH considers vegetation management as necessary for reliability, in accordance with the statutory requirements, but strongly objects to considering it a hardening solution for resiliency.

(15) In evaluating the metrics for Table 7, some note must be made for evaluation of outages where undergrounding or other efforts for resilience in the Zone may have been less effective because of failures of an overhead system supply to the Zone that was not sufficiently hardened.

VI. Administration of Reliability and Resilience Frameworks:

(1) On page 35 under Annual Review Process, it should be explicitly stated that the EDCs cannot begin implementation of line maintenance plans submitted pursuant to Section 16-32g until they have received explicit PURA approval for them, nor can they proceed with line maintenance practices that have not been submitted for approval. The Frameworks for Reliability and for Resilience developed in the Straw Proposal would have little meaningful effect unless this is the case.

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[4]It is disturbing that, despite the fact that a PURA decision on the EDC's line maintenance plans submitted for 2022 pursuant to Section 16-32g in Docket # 21-12-31 was deferred for review to this docket, news reports indicate that Eversource is beginning what it terms its "Resiliency Program" of more aggressive tree pruning and removal in some Connecticut municipalities. See, *e.g.,* local news notice of information meeting in Redding. It intends to conduct more tree removal and it is uncertain whether criteria for removal of trees within the UPZ and within the public rights-of-way are limited to those that meet the definition of hazardous trees in Section 16-234(a)(3). In addition, it appears that Eversource intends to remove trees that are outside of the public right-of-way for which it needs property owner consent. Eversource"s submitted line maintenance plan increases its clearance around distribution wires to 10 feet from the statutory 8 feet for the Utility Protection Zone (Section 16-234 (a)(2)). (*See* p. 3 of Eversource line maintenance plan and Appendix 3, p. 4.) The compliance of the "Resiliency Program" with Section 16-234 and the costs of this expanded vegetation management deserve PURA review prior to implementation, both to avoid costs in excess of what is needed to achieve cost-effective reliability and which will not enhance resiliency, and to prevent unwarranted harm to the tree canopy.

(2) If such prior approval is not now the practice and understanding of the EDCs, PURA should immediately direct the EDCs to halt any line maintenance work that deviates from their already approved plans and practices for 2021 in order to protect the results of these proceedings.

VII. Other Matters Related to the Frameworks:

D. We support development of a long-term undergrounding strategy, as outlined on pages 41-44, and only have a few comments about the proposal:

(1) To inform itself and the stakeholders invited to submit proposals for possible legislation, it is important that both be aware of legislation enacted in all other states, beyond those cited in this Straw Proposal. Appropriate PURA staff, possibly aided by DEEP staff, should develop a list with links or other access to all current legislation in other states pertaining to undergrounding of distribution wires, and make it available to the public. The legislative proposals will thereby be of higher quality and benefit from work that has already been done. This would also aid the stakeholder group established to make proposals for administrative action, as well, since administrative action usually implements legislative directives, and may require legislative authorization.

(2) The stakeholder group for recommendations for financing provisions in administration of an undergrounding program should also be given easy access to current administrative rules in other jurisdictions to inform their decision making, and PURA ought to provide links or other access to all such administrative provisions.

In both cases, providing comprehensive information about legislation and administrative practices in other state jurisdictions will ensure that the best, most well-informed proposals are made to the legislature and to PURA.

We thank you for your thorough work on the Straw Proposal for the benefit of Connecticut and its residents.

Respectfully submitted,
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