



June 28, 2021

Hon. Michelle L. Phillips Secretary to the Public Service Commission 3 Empire State Plaza Albany, NY 12223-1350

#### **VIA EMAIL**

Case No: 21-M-0199: Petition of the City of New York, Sabin Center for

Climate Change Law, and the Environmental Defense Fund to Comprehensively Study the Impacts of Climate Change on Utility

Infrastructure

**Re:** Joint Comments of the Sabin Center for Climate Change Law and

the Initiative on Climate Risk and Resilience Law

Dear Secretary Phillips:

The Sabin Center for Climate Change Law ("Sabin Center") and the Initiative on Climate Risk and Resilience Law ("ICRRL") (collectively, "Petitioners") respectfully submit the following joint comments to the New York Public Service Commission ("Commission") to support the petition filed March 19, 2021 ("Petition") in the above-captioned matter and to aid the Commission in its determination of whether and how to address the issues identified in the Petition.

The Sabin Center develops and promulgates legal techniques to address climate change and trains law students and lawyers in their use. The Sabin Center has worked extensively on issues relating to climate resilience in the electric utility sector and recently published a major report on the topic, co-authored with the Environmental Defense Fund. ICRRL is a joint initiative of the Environmental Defense Fund, the Sabin Center, the Institute for Policy Integrity at New York University School of Law, and Vanderbilt Law School, focused on legal efforts on climate risk and resilience, particularly at the intersection of practice and scholarship.<sup>1</sup>

<sup>&</sup>lt;sup>1</sup> This document does not necessarily represent the views of each ICRRL partner organization. For more information about ICRRL, see https://icrrl.org.

# Joint Sabin Center and ICRRL Comments on the Need to Study and Address the Impacts of Climate Change on Utility Infrastructure

This comment letter draws on a paper recently published by the Sabin Center and the Environmental Defense Fund, *Legal Obligations to Advance Climate Resilience Planning by Electric Utilities* ("Resilience Paper"),<sup>2</sup> to support the Petition and assist the Commission in resolving the questions put forth in the notice of proposed rulemaking. We first provide information to the Commission demonstrating the need for every major utility in New York to study and address climate change vulnerabilities and to undertake the four tasks listed in the notice of proposed rulemaking:

- (1) assess how future projections of climate risks and climate variability for New York State and their specific geography or service area will impact their key assets and facilities, their overall system operations, supply chain, worker safety, and emergency response capabilities;
- (2) identify and prioritize key vulnerabilities based upon the assessment in step 1;
- (3) evaluate and develop options to ameliorate, mitigate, or minimize the risks identified, including considering different levels of risk mitigation relative to cost, and specifically for electric and gas utilities, consider the required transformation to achieve climate change mitigation targets; and
- (4) develop a plan and organizational approach to achieve effective and accountable climate governance, including assigning and ensuring executive accountability, collecting and monitoring climate and weather indicators, incorporating climate resiliency into existing planning processes and developing resiliency metrics to track progress over time.<sup>3</sup>

Second, this comment letter explains that utilities have a legal obligation to prepare for climate impacts and that precedent exists for requiring utilities to undertake the assessment and preparation set forth in the Petition. Third, we respectfully urge the Commission to open a new proceeding as proposed in the Petition rather than attempt to address climate change resiliency on an *ad hoc* basis through rate proceedings. Fourth and finally, we provide recommendations as to how the Commission should address the topics set forth in the Petition.

## 1. The need to study and address the effects of climate change on utilities

<sup>&</sup>lt;sup>2</sup> ROMANY M. WEBB, MICHAEL PANFIL & SARAH LADIN, CLIMATE RISK IN THE ELECTRICITY SECTOR: LEGAL OBLIGATIONS TO ADVANCE CLIMATE RESILIENCE PLANNING BY ELECTRIC UTILITIES (2020). (Attached hereto as Exhibit A).

<sup>&</sup>lt;sup>3</sup> Proposed Rulemaking: Utility Studies of Climate Change Vulnerabilities, I.D. No. PSC-17-21-00007-P, NY Reg. Apr. 28, 2021 at 22.

As discussed in the Petition, the consequences of climate change already present a significant risk to electricity and other utility infrastructure and operations, and that risk will intensify as climate change advances in the coming years.<sup>4</sup>

Many governmental and academic studies have detailed the threats that climate change impacts pose to the electric system.<sup>5</sup> The vulnerability assessment undertaken by Consolidated Edison Company of New York, Inc. ("Con Ed") following Superstorm Sandy in 2012 revealed hazards to the gas and steam systems in addition to electric utilities. These include damage to cooling equipment across Con Ed's systems (including air cooling towers and HVAC units for buildings) as a result of increased temperatures, vulnerability of underground assets to flooding, the danger that storm surge could harm both aboveground and underground assets, and the possibility that extreme weather events could overwhelm emergency preparedness efforts across sectors.<sup>6</sup> Unless mitigated, the identified hazards will impair Con Ed's ability to supply electricity—especially because, as Con Ed found, climate change will increase demand for electricity, heightening the potential for supply shortages and associated costs.<sup>7</sup> The risks to other utilities—such as water, sewage, and gas—have also been well documented.<sup>8</sup>

Climate-induced electricity and other utility service disruptions can also have broader social consequences. For example, where electricity outages affect critical facilities—such as hospitals or water treatment plants—public health and safety may be threatened. The devastating effects of Winter Storm Uri in 2021 demonstrate that extreme weather events can disrupt multiple utility sectors at a time and pose grave threats to customers' health and safety. Almost half of Texans lost access to running water and more than two-thirds lost electrical power, and more than 100 died. 10

A number of utilities have acknowledged climate risk in general terms in their corporate filings with the U.S. Securities and Exchange Commission and other documents, although these disclosures are extremely limited and do not provide a

<sup>&</sup>lt;sup>4</sup> See Webb, supra note 2 at 2-6; see also Craig Zamuda et al., Energy Supply, Delivery, and Demand, in Impacts, Risks, and Adaptation in the United States: Fourth National Climate Assessment, Volume II 174, 193 (D.R. Reidmiller et al. eds., 2018), https://perma.cc/P9QM-YJHF (attached hereto as Exhibit B); Justin Gundlach & Romany Webb, Climate Change Impacts on the Bulk Power System: Assessing Vulnerabilities and Planning for Resilience (2018), https://perma.cc/353Y-RSGS (attached hereto as Exhibit C); U.S. Dep't of Energy, Climate Change and the U.S. Energy Sector: Regional Vulnerabilities and Resilience Solutions 189 (2015), https://perma.cc/K9FZ-V7J5.

<sup>&</sup>lt;sup>5</sup> See, e.g., U.S. Gov't Accountability Office, Electric Grid Resilience: Climate Change is Expected to Have Far-Reaching Effects and DOE and FERC Should Take Action 15-18 (2021), https://perma.cc/Z9WA-FRLC (attached hereto as Exhibit D); Zamuda, *supra* note 4 at 174-89; U.S. Dep't Of Energy, Quadrennial Energy Review: Transforming the Nation Electricity System: The Second Installment of the QER 4-28 – 4-32 (2017), https://perma.cc/DZJ5-7PHC.

<sup>&</sup>lt;sup>6</sup> CONEDISON, CLIMATE CHANGE VULNERABILITY STUDY 32-33 (Dec. 2019), https://perma.cc/UWA7-6324. <sup>7</sup> *Id.* at 21-22, 25.

<sup>&</sup>lt;sup>8</sup> See, e.g., EPA, ADAPTATION STRATEGIES GUIDE FOR WATER UTILITIES (Feb. 2015), https://perma.cc/FFT3-JYCY; Zamuda, supra note 4 at 177, 182; SARAH BRODY ET AL., WHY, AND HOW, UTILITIES SHOULD START TO MANAGE CLIMATE-CHANGE RISK (Apr. 2019), https://perma.cc/W3X2-WCFB. 
<sup>9</sup> See generally Justin Gundlach, Microgrids and Resilience to Climate-Driven Impacts on Public Health, 18 HOUS. J. HEALTH L. & POL'Y 77 (2018), https://perma.cc/4DCT-4W3W.

<sup>&</sup>lt;sup>10</sup> See Hobby School of Public Affairs, University of Houston, The Winter Storm of 2021 1-2 (March 2021), https://perma.cc/D3KK-GB3Q.

comprehensive assessment of climate-related risks. 11 Utilities can identify and assess climate risks using well-established, proven planning processes. 12 For example, the Department of Energy and others have provided resilience planning guidance to utilities, and the vulnerability study and Climate Change Implementation Plan developed by Con Ed provides a model for other utilities. <sup>13</sup> Nonetheless, most utilities have not integrated climate considerations into system planning, design, operation, and other decisions.<sup>14</sup>

# 2. The Commission's authority to require utilities to assess and address climate vulnerabilities.

Requiring utilities to study climate change vulnerabilities and develop plans to prepare for climate impacts, as proposed by the Petition, is an appropriate use of the Commission's authority.

As discussed in further detail in the Resilience Paper, utilities have a legal obligation to prepare for climate change impacts. Vulnerability planning is critical to ensuring that utilities fulfill their basic duty to provide adequate service because a failure to prepare for climate impacts can result in service disruptions as discussed above.<sup>15</sup> Relatedly, New York law requires electric utilities to develop "emergency response plans" that outline measures to prepare for, and ensure prompt restoration of service after, storms and similar events. 16 Utilities cannot adequately plan for storms based on historical data that does not account for the changing climate; compliance with this legal obligation requires long-term assessment of risks based on future climate predictions.

Additionally, it is well established that public utilities must act prudently when making investment decisions and taking other actions that affect rates. <sup>17</sup> "A utility's decision is prudent if it acted reasonably based on the information that it had and the circumstances that existed at the time," <sup>18</sup> and "considering that the company had to solve

<sup>&</sup>lt;sup>11</sup> E.g., NextEra Energy, Inc. & Florida Power & Light Co., Annual Report (Form 10-K) 25 (Feb. 15, 2019) (indicating that "severe weather and natural disasters . . . can be disruptive and cause power outages and property damage . . . . [The company's] physical plants could be placed at greater risk of damage should changes in the global climate produce unusual variations in temperature and weather patterns, resulting in more intense, frequent and extreme weather events, abnormal levels of precipitation and . . . a change in sea level"); Consolidated Edison Company of New York, Inc., Annual Report (Form 10-K) 36 (Feb. 20, 2020) (noting that "[c]limate change could affect customer demand for the Companies' energy services. It might also cause physical damage to the Company's facilities and destruction of their operations due to more frequent and more extreme weather-related events").

<sup>&</sup>lt;sup>12</sup> See WEBB, supra note 2 at 9.

<sup>&</sup>lt;sup>13</sup> See U.S. DEP'T OF ENERGY, CLIMATE CHANGE AND THE ELECTRICITY SECTOR: GUIDE FOR CLIMATE CHANGE RESILIENCE PLANNING 1-2 (2016), https://perma.cc/6B6Q-EH7P [hereinafter DOE PLANNING GUIDE] (attached hereto as Exhibit D); KRISTIN RALFF-DOUGLAS, CAL. PUB. UTILS. COMM'N, CLIMATE ADAPTATION IN THE ELECTRIC SECTOR: VULNERABILITY ASSESSMENTS & RESILIENCE PLANS (2016). https://perma.cc/R6NW-F6GV [hereinafter CPUC Report] (attached hereto as Exhibit E); CONSOLIDATED EDISON, CLIMATE CHANGE VULNERABILITY STUDY (2019), https://perma.cc/GR37-6UJT. The Resilience Paper provides additional recommendations and information on best practices. See WEBB, supra note 2 Part

See Webb, supra note 2 Part 2.3.
 See N.Y. Pub. Serv. Law § 65(1).

<sup>&</sup>lt;sup>16</sup> N.Y. PUB. SERV. LAW § 66.

<sup>&</sup>lt;sup>17</sup> See, e.g., Long Is. Lighting Co. v. Pub. Serv. Comm'n of State of N.Y., 523 N.Y.S.2d 615, 620 [3d Dep't 1987] (describing prudence as "an essential constituent of utility regulation.").

<sup>&</sup>lt;sup>18</sup> National Fuel Gas Dist. Corp. v. Pub. Serv. Comm'n of N.Y., 922 N.Y.S.2d 224, 229 (2011).

its problems prospectively rather than in reliance on hindsight." <sup>19</sup> New York utilities cannot feign ignorance of the risks that climate change currently poses to their assets, and therefore, to their customers. Many utilities, and the Commission itself, have recognized the risks posed by climate change and the importance of factoring those risks into planning and investment decisions.<sup>20</sup> "It would be neither just nor reasonable for a utility's customers to bear the costs of . . . poor planning."<sup>21</sup> The prudence standard thus demands that climate risks inform utilities' investment and other operational decisions that impact rates.

Requiring utilities to plan for the impacts of climate change now is also consistent with the Commission's duty to ensure that rates are just and reasonable. 22 A failure to plan could result in unnecessary future costs to consumers as utilities belatedly respond to climate change impacts (e.g., by hardening or relocating assets) or face avoidable outages and other emergencies that are costly to remedy. Factoring future climate impacts into planning and decision-making now allows utilities to avoid these outcomes by buildingin resilience from the start. For example, a 2020 study found that due to the impacts of climate change, spending on transmission and distribution infrastructure could increase by up twenty-five percent or \$24 billion per year by 2090.<sup>23</sup> By contrast, the study found, designing new infrastructure based on projected climate conditions over its useful life "roughly halves the expected costs of climate change experienced in 2090" compared to a scenario in which no adjustments are made to infrastructure design. <sup>24</sup> Requiring utilities to take steps to plan for the impacts of climate change is, therefore, fully consistent with the requirement that rates be just and reasonable.

Precedent exists in and beyond New York for requiring utilities to undertake climate resilience planning. In June 2013, as part of rate case proceedings for Con Ed, the Commission convened a "Resiliency Collaborative" to explore issues related to storm hardening and climate resilience. <sup>25</sup> The groups participating in the Resiliency Collaborative reached a settlement requiring Con Ed to complete a climate vulnerability assessment in 2014 (which the utility ultimately completed in 2019). <sup>26</sup> In approving the settlement that led to the Con Ed Climate Study, the Commission encouraged other electric utilities in New York to also engage in climate resilience planning, concluding:

The State's utilities should familiarize themselves with scientists' projections for local climate change impacts on each service territory. . . . We expect the utilities to consult the most current data to evaluate the climate impacts anticipated in their regions over the next years and

<sup>&</sup>lt;sup>19</sup> Long Is. Lighting Co., 523 N.Y.S.2d at 620 (citations omitted).

<sup>&</sup>lt;sup>20</sup> See. e.g.. Joint Utilities' Comments Regarding the Public Service Commission's Inquiry Related to Reported Risks Related to Climate Change, In the Matter Regarding the Need for Reporting Risks Related to Climate Change, Case 20-M-0499 (Dec. 15, 2020) at 2, https://perma.cc/63NZ-KSVQ.

<sup>&</sup>lt;sup>21</sup> Long Is. Lighting Co., 523 N.Y.S.2d at 620. <sup>22</sup> See N.Y. Pub. Serv. Law §§ 65(1), 97(1).

<sup>&</sup>lt;sup>23</sup> Charles Fant et al., Climate Change Impacts and Costs to U.S. Electricity Transmission and Distribution Infrastructure, 195 ENERGY 7 (2020), https://perma.cc/ON2J-D4VO.  $^{24}$ Id.

<sup>&</sup>lt;sup>25</sup> N.Y. Pub. Serv. Comm'n, Notice of Collaborative Meeting Concerning Storm Hardening and Resiliency Issues, Case 13-E-0030, et al. (July 1, 2013), https://perma.cc/92Y3-6HJG. <sup>26</sup> See CONEDISON, supra note 6.

decades, and to integrate these considerations into their system planning and construction forecasts and budgets.<sup>27</sup>

Seeking to promote greater transparency of the climate risks facing electric utilities, in October 2020 the Commission initiated a new proceeding to address "matters related to the financial reporting of climate issues."<sup>28</sup> The proceeding proposed by the Petition would build on and complement these earlier efforts; in fact, climate vulnerability assessments could inform the contents of subsequent climate risk disclosures.

Additionally, in May 2018 the California Public Utilities Commission ("CPUC"), on its own motion, opened a proceeding of the kind that the Petition proposes. The CPUC commenced a rulemaking proceeding "to consider how to address climate change adaptation for the investor-owned electric and gas utilities" it regulates. <sup>29</sup> The CPUC subsequently issued a decision in August 2020 that requires investor-owned electric and gas utilities in California to periodically evaluate risks to their assets, operations, and services from the impacts of climate change. 30 As discussed below, that decision and subsequent phases of California's process provide useful guidance to the Commission and New York utilities in pursuing resiliency planning.

At the national level, the Federal Energy Regulatory Commission is examining the issue and recently held a technical conference on climate change, extreme weather, and electric grid reliability. 31 The U.S. Environmental Protection Agency also has a program to develop climate resilience in the water and wastewater sectors.<sup>32</sup> The need for utilities to plan for climate change impacts is well established.

## 3. The need for a separate process to require vulnerability planning.

The notice of proposed rulemaking asks for comments on whether climate change vulnerabilities can be addressed through existing proceedings or future rate cases, or if there is a need for a separate process. There is no existing case that provides an appropriate venue for this process. While the Commission recently commenced a proceeding to consider requiring climate-related financial disclosure at the utility operating company level, 33 that proceeding does not provide what the Petition requests: requiring each utility to undertake a comprehensive assessment of climate risks and to develop resiliency plans to address those risks.

<sup>&</sup>lt;sup>27</sup> N.Y. Pub. Serv. Comm'n, Order Approving Electric, Gas and Steam Rate Plans in Accord with Joint Proposal, Case 13-E-0030 et al., at 71-72 (Feb. 21, 2014), https://perma.cc/Y78W-GY8H.

<sup>&</sup>lt;sup>28</sup> N.Y. Pub. Serv. Comm'n, Order Instituting Proceedings in the Matter Regarding the Need for Reporting Risks Related to Climate Change, Case 20-M-0499 (Oct. 15, 2020), https://perma.cc/459N-PTJY.

<sup>&</sup>lt;sup>29</sup> Cal. Pub. Utils. Comm'n, Rulemaking 18-04-019: Order Instituting Rulemaking to Consider Strategies and Guidance for Climate Change Adaptation (May 7, 2018), https://perma.cc/BL9Q-Y9AX.

<sup>&</sup>lt;sup>30</sup> Cal. Pub. Utils. Comm'n, Rulemaking 18-04-019: Decision on Energy Utility Climate Change Vulnerability Assessments and Climate Adaptation in Disadvantaged Communities (Phase 1, Topics 4 and 5) (Aug. 27, 2020), https://perma.cc/2GKK-VCNP.

31 See Fed. Energy Reg. Comm'n, Technical Conference to Discuss Climate Change, Extreme Weather, &

Electric System Reliability, Docket No. AD21-13-000.

<sup>&</sup>lt;sup>32</sup> EPA, Creating Resilient Water Utilities (visited June 11, 2021), https://www.epa.gov/crwu.

<sup>&</sup>lt;sup>33</sup> Order Instituting Proceeding, In the Matter Regarding the Need for Reporting Risks Related to Climate Change, Case 20-M-0499 (issued Oct. 15, 2020) at 2.

Nor should the Commission attempt to address climate change vulnerabilities on an *ad hoc* basis through future rate proceedings. As discussed, climate change presently poses risks to utility reliability, and utilities have a legal obligation to assess and prepare for those risks. This process should therefore begin as soon as possible. If the Commission waits until each utility moves for a rate increase to require each utility to begin the process of assessing climate risks, the urgently needed vulnerability planning will be unnecessarily delayed. Indeed, the 2014 Commission decision approving the Con Ed settlement, discussed above, encouraged utilities to undertake this analysis in future rate proceedings; seven years later, that has not occurred.

Additionally, because many utilities are interconnected and may face similar threats, a unified proceeding requiring participation of every jurisdictional utility would facilitate knowledge sharing across utilities, and make it easier for the Commission and stakeholders to consider and provide feedback on utilities' analysis and proposed plans. The time and resources of Commission members and staff would also be more efficiently used if all relevant issues were addressed in one proceeding.

Moreover, a single proceeding intended to address climate vulnerability planning across utilities would facilitate the participation of stakeholders who are affected by issues of utility resilience but do not have an interest in specific rate proceedings. Rate proceedings can last for several months and are highly complex, dealing with a broad range of technical issues, most of which have little or no relevance to climate resilience planning. The structure of a rate proceeding would create a needless barrier to entry for intervenors who are only interested in issues related to resilience.

Relatedly, Article 48 of the Environmental Conservation Law declares that it is state policy that all people have a right to fair treatment and meaningful involvement in the development and implementation of environmental policies, and that no group of people, including any racial, ethnic or socioeconomic group, should bear a disproportionate share of the negative environmental consequences of a state policy or program.<sup>34</sup> It is especially critical to ensure access to participation given the inequitable burden that climate change impacts impose on communities of color and low-income communities, and that service disruptions often disproportionately affect such communities.<sup>35</sup> For example, some high-poverty neighborhoods in New York City have high vulnerability to heat, making them susceptible to power outages that disable air conditioners, with potentially lethal consequences.<sup>36</sup> Commencing a proceeding dedicated solely to climate resilience would make it easier for all New Yorkers—including those that are likely to be disproportionately affected by climate impacts—to participate in the process.

Moreover, Section 6 of the Climate Leadership and Community Protection Act ("CLCPA") requires the Department of Environmental Conservation to prepare a report on overburdened communities' barriers to accessing a number of services and commodities, including adaptation measure to improve climate resilience in homes, and

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<sup>&</sup>lt;sup>34</sup> N.Y. Envtl. Conserv. Law § 48-0101.

<sup>35</sup> See, e.g., Alexa Ura & Juan Pablo Garnham, Already hit hard by pandemic, Black and Hispanic communities suffer the blows of an unforgiving winter storm, TEXAS TRIBUNE, Feb. 19, 2021.

<sup>&</sup>lt;sup>36</sup> See CITY OF NEW YORK, COOL NEIGHBORHOODS NYC 7, available at https://perma.cc/UPK2-DRK8.

other infrastructure that can reduce the risks associated with climate-related hazards.<sup>37</sup> The New York Power Authority and relevant state agencies must assist in preparing this report.<sup>38</sup> A proceeding dedicated to utility climate resilience could provide information and analysis that is relevant to the report as well. Compliance with the CLCPA will also require the construction of a massive amount of new wind, solar, transmission, and storage infrastructure, as contemplated by the Accelerated Renewable Energy Growth and Community Benefits Act. Any studies performed for a climate resiliency proceeding will be of great assistance to the planners and designers of these new facilities.

# 4. Recommendations for resilience planning.

As discussed in the Resilience Paper, in the electric utility sector climate resilience planning is generally conceived of as a two-stage process, involving the development of (1) climate vulnerability assessments and (2) climate resilience plans.<sup>39</sup> Broadly, climate vulnerability assessments identify where and under what conditions electric utility assets are at risk from the impacts of climate change, how those risks will manifest, and what the consequences will be for system operation.<sup>40</sup> Based on that information, electric utilities can then develop climate resilience plans, outlining measures to reduce the risk to vulnerable assets.<sup>41</sup> In developing climate resilience plans, electric utilities compare the costs and impacts of different measures and, based on that information and the risk profile of each asset, determine whether, when, and how to invest.<sup>42</sup> Previous reports published by the Department of Energy and others have outlined recommended best practices for climate resilience planning in the electric utility sector.<sup>43</sup> Those reports generally recommend that electric utilities take a long-range, 50-plus year view and plan for the impacts of climate change over the anticipated useful life of existing assets and new assets under development.<sup>44</sup>

These general principles can be applied to other utility sectors as well, though different climate impacts may need to be assessed in each sector. Additionally, lessons can be drawn from California, which has already begun this process. As discussed, the CPUC commenced a proceeding in May 2018 to integrate climate change adaptation matters into relevant CPUC proceedings. <sup>45</sup> Thus far the CPUC has provided guidance to

<sup>&</sup>lt;sup>37</sup> L.2019, c. 106, § 6.

 $<sup>^{38}</sup>$  *Id*.

<sup>&</sup>lt;sup>39</sup> 2016 DOE PLANNING GUIDE, *supra* note 13 at 1.

<sup>&</sup>lt;sup>40</sup> *Id*. at iii.

 $<sup>^{41}</sup>$  Id

<sup>&</sup>lt;sup>42</sup> CPUC Report, *supra* note 13 at 22-26.

<sup>&</sup>lt;sup>43</sup> See, e.g., 2016 DOE PLANNING GUIDE, supra note 13; U.S. DEP'T OF ENERGY, CLIMATE CHANGE AND THE ELECTRICITY SECTOR: GUIDE FOR ASSESSING VULNERABILITIES AND DEVELOPING RESILIENCE SOLUTIONS TO SEA LEVEL RISE (2016), https://perma.cc/AAA7-P448; ASIAN DEVELOPMENT BANK, GUIDELINES FOR CLIMATE PROOFING INVESTMENT IN THE ENERGY SECTOR (2013), https://perma.cc/ZRD2-M7EG; CPUC REPORT, supra note 13; Melissa Allen et al., Oak Ridge Nat'l Lab., Assessing the Costs and Benefits of Resilience Investments: Tennessee Valley Authority Case Study (2017), https://perma.cc/N6S9-LGX7; Justin Gundlach & Romany Webb, Climate Change Impacts on the Bulk Power System: Assessing Vulnerabilities and Planning for Resilience (2018), https://perma.cc/353Y-RSGB.

<sup>&</sup>lt;sup>44</sup> 2016 DOE PLANNING GUIDE, *supra* note 13 at 44, 80, 83.

<sup>&</sup>lt;sup>45</sup> California Public Utilities Commission, *Climate Change Adaptation*, https://www.cpuc.ca.gov/climatechangeadaptation/ (visited May 26, 2021).

electric and gas utilities on conducting vulnerability assessments, and the CPUC anticipates multiple phases to address aspects of water, telecommunication, electric and natural gas utilities. <sup>46</sup> California's Department of Water has also developed a vulnerability assessment methodology that may be instructive for New York's water utilities. <sup>47</sup>

Utilities should consider the full range of climate impacts expected to occur within their respective service territories during the planning period. This necessarily requires the use of forward-looking projections—as in the Con Ed Vulnerability Study—because, in the age of climate change, historic data is no longer a good predictor of future conditions. Since the impacts of climate change will vary regionally, electric utilities should use localized or downscaled projections, which reflect anticipated conditions in the planning area. Additionally, utilities should not focus solely on infrastructure; assessments should consider climate risks to operations and service as well as to utility assets over which utilities do not have direct control. So

It is critical that electric and natural gas sectors utilities conduct this process consistent with the greenhouse gas reduction requirements set forth in the CLCPA and avoid maladaptation, or adaptation measures that ultimately exacerbate the climate crisis. Utilities should evaluate all resilience measures through a climate change lens, evaluating their carbon intensity or the associated greenhouse gas emissions, and measures that increase emissions should not be pursued. Gas utilities should use vulnerability studies to identify opportunities for limiting and reducing capital investments in gas infrastructure and prioritizing electrification and other options for achieving the CLCPA targets.

Finally, as discussed, New York law requires that all people have a meaningful opportunity to be involved in environmental decision making, and that state policies not result in a disproportionate environmental burden on any group. Given these commitments to equity, the Commission should consider adopting California's approach to involving historically overburdened communities in resiliency planning, and require utilities to submit community engagement plans to ensure that "disadvantaged communities" have the opportunity to participate in identifying adaptation priorities. 52

 <sup>46</sup> Id.; see also Cal. Pub. Utils. Comm'n, supra note 29.
 47 See Cal. Pub. Utils. Comm'n, supra note 29 at 62-64.

<sup>&</sup>lt;sup>48</sup> U.S. Dep't of Energy, A Review of Climate Change Vulnerability Assessments: Current Practices and Lessons Learned from DOE's Partnership for Energy Sector Climate Resilience 12 (2016), https://perma.cc/5EKK-T9GA.

<sup>&</sup>lt;sup>49</sup> 2016 DOE PLANNING GUIDE, *supra* note 13 at 17; 2016 CPUC REPORT, *supra* note 13 at 9.

<sup>&</sup>lt;sup>50</sup> See Cal. Pub. Utils. Comm'n, supra note 28 at 61.

<sup>&</sup>lt;sup>51</sup> See id. at 28.

<sup>&</sup>lt;sup>52</sup> Under the CLCPA, "[d]isadvantaged communities shall be identified based on geographic, public health, environmental hazard, and socioeconomic criteria, which shall include but are not limited to: i. areas burdened by cumulative environmental pollution and other hazards that can lead to negative public health effects; ii. areas with concentrations of people that are of low income, high unemployment, high rent burden, low levels of home ownership, low levels of educational attainment, or members of groups that have historically experienced discrimination on the basis of race or ethnicity; and iii. areas vulnerable to the impacts of climate change such as flooding, storm surges, and urban heat island effects." N.Y. ENVTL. CONSERV. LAW § 75-0111(1)(c). The Climate Justice Working Group is currently developing criteria that

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Thank you for the opportunity to submit these comments. For your convenience the Resilience Paper is attached. Please contact us with any questions.

Respectfully,

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