LOCAL GOVERNMENT SUSTAINABLE ENERGY COALITION

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Re: R.19-09-009 Order Instituting Rulemaking Regarding Microgrids Pursuant to Senate Bill (SB) 1339; Local Government Sustainable Energy Coalition's Comments on Value of Resiliency

Dear Rosanne**,**

As revealed through the engaging workshops Energy Division has led on how to value resiliency, there is a pressing need to better coordinate and cross-pollinate public sector and investor-owned utility (IOU) resiliency planning and investment.

Under the federal Disaster Mitigation Act of 2000 (DMA 2000), along with state legislation, local governments (LG) have primary responsibility for fostering resilient communities, obligations that overlap with reliability-related energy services provided by IOUs, as regulated by the California Public Utilities Commission (CPUC). It is imperative that policies enhancing community resilience align across jurisdictions. To that end, LGSEC recommends that the CPUC develop transparent protocols by which greater collaboration between LGs and load-serving entities (LSEs) on resiliency planning, as well as associated tariffs and funding streams, is encouraged, including as a means to foster microgrid development.

Local Governments Play Central Role in Resiliency Planning

Local governments are key stakeholders in fostering resiliency.[1] LGs are typically the first to respond to disasters and provide core health and safety services.[2] All LGs have or are developing plans that include ways to bolster resiliency, though for low-capacity jurisdictions these may be limited to emergency response and coordination protocols with other key entities.

DMA 2000 established mitigation planning requirements for states, tribes, and local communities. In California, as indicated in Energy Division presentations, LGs have adopted Local Hazard Mitigation Programs (LHPS), which identify dangers, assess past disaster occurrences, estimate the probability of future incidences and set goals to reduce or eliminate risks to people and property from natural and human-made threats.[3] LHPS strategies include deployment of "soft" (e.g., information sharing procedures) and "hard" assets (e.g., emergency shelters).

Likewise, under Assembly Bill 897, regional climate networks are creating adaption action plans, which include a description of the impacts a city or region could encounter due to climate change – "Vulnerability Assessment" – and actions they can take to reduce associated harms; "Adaptation Strategies."[4,5]

Energy is a Critical Element in Resiliency

Essential LG facilities that need energy to operate are required to have emergency and standby power schemes, typically isolated from the distribution system.[6] Some facilities, such as hospitals, fuel, water conveyance and telecommunication nodes demand round-the-clock energy access. Others can tolerate less than 100 percent reliability but may require ancillary services when outages occur (e.g., cool places to shelter during periods of extreme heat). Extended blackouts, that last more than a few hours, can trigger the need for specific services to safeguard communities, such as emergency feeding, warming stations, places to recharge cell phones and other devices, and enhanced deployment of police and fire services.

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[1] The definition of resiliency varies by context. "It includes improving the capacity of people, communities, and local governments to respond to major shocks, as well as cope with on-going stresses and emerging threats." Local-Governments-Pocket-Guide-to-Resilience.pdf (urbanresiliencehub.org)

[2] See for example, JC Gaillard, Emmanuel A. Maceda, et. al., "Sustainable livelihoods and people's vulnerability in the face of coastal hazards," *J Coast Conserv* (2009) 13:119–129 DOI 10.1007/s11852-009-0054-y.

[3] See for example, Local Climate Adaptation & Resilience Plans - Institute for Local Government (ca-ilg.org); Hazard Mitigation Local Hazard Mitigation Program.

[4] What is a Climate Adaptation Plan? | South Bay Cities Council of Governments

[5] Under SB 99 Dodd a grant program for local governments to develop energy resilience plans would be created under the California Energy Commission's juridiction.

[6] EPSS Generator - 2019 CBSC (New 11.12.2020).xlsx (ca.gov).

Investor-owned utilities have historically planned their reliability-related investments based on ad hoc or systematic evaluations of emerging issues (e.g., outage rates; feeder line or substation congestion), expectations of growth in electricity consumption, and insights into the value customers place on dependability. LGs have responded to IOU service provision by bolstering reliability to meet their own standards, principally by fielding fossil fueled backup generator (BUGs). There are more than eight gigawatts of BUG capacity in California, reflecting power generation capabilities in excess of 10 percent of the total grid.[7]

More recently, rapidly rising rates, the availability of innovative distributed energy resources, CPUC-authorized funding streams dedicated to such resiliency measures as microgrids,[8] the desire or requirement to achieve local environmental goals, along with wildfires and associated forced outages that have increased the frequency and length of disruptions, has prompted a growing number of LGs to investigate, and sometimes adopt, more sophisticated external standby systems, including solar plus storage systems and microgrids, some of which can come close to or are fully capable of segregating from grid power. As a result, there is intensifying interaction between and need to coordinate energy services provided by IOUs and LGs.[9]

Need for Much Better Coordination Amongst Key Stakeholders

There is significant overlap between LG resiliency plans and existing and emerging IOU and California Public Utilities Commission efforts to invest in and safeguard electricity reliability and resiliency. In particular, LG resiliency strategies cover elements outlined in the Energy Division's "Four Pillar" methodology, including most predominately a baseline assessment of critical facilities. LG tactics reflect explicit identification of service reliability levels required to maintain specific functions. They often incorporate details on possible actions to achieve those levels, or other responses if that is not possible.

Optimally LG resiliency plan development occurs in close consultation, or at least transparent information sharing, with the IOU in which the investments are occurring, though this is often not the case.[10] Resiliency tactics consist of either depending on the LSE – including community choice aggregators and IOUs – to provide secure access to energy or mitigating measures, the LG independently developing these resources, or a combination of both, as reflected in interconnection agreements and IOU tariffs.

[7] BUGs-in-5-CA-Air-Districts.pdf (lgsec.org); EIA - State Electricity Profiles.
[8] Microgrid Incentive Program.
[9] This is both formal, as reflected in consumer choice aggregators, contractual, when LGs participate in solar, standby, and other tariffs, and informal, as evidence by off-the-grid BUGs.
[10] LGs often find it difficult to interact with the IOUs and secure the information necessary to comprehensively plan energy-related investments.

Progress needs to be made to better coordinate mitigation measure identification, funding, and deployment. Arguably, LGs should primarily lead these efforts, though that would require access to additional planning resources. Likewise, the geography of resiliency preparation needs to be better matched between LGs and IOUs. IOU distribution planning areas do not neatly fall into governmental jurisdictional boundaries, nor do energy service boundaries. As a result, crosswalks need to be developed between IOU and LG planning topography, which could consist of smaller geographic units building to regional plans. Similarly, stove piped institutional structures, such as bifurcations between emergency response and long -term resiliency planning teams, need to be remediated at LGs and IOUs, so as to avoid duplicative efforts, information and action gaps, as well as create synthesized planning approaches.

The CPUC has increasingly pressed for IOUs to better collaborate with LGs. In addition to direction along those lines in the microgrid proceeding, a recently issued transportation electrification framework proposed decision requires that IOUs demonstrate they have the support of local/regional/tribal governments as part of electrification investments. Likewise, IOU proposals to install electric vehicle (EV) charging at evacuation/emergency response centers; and/or piloting technologies and programs that use EVs as backup power resources to enhance resiliency in communities that may face power shut-offs due to weather, wildfire risk or other emergencies are required to demonstratively work with county/local and tribal governments, state emergency agencies, community choice aggregators, and local planning/transportation agencies.

Given the topical need to develop new collaborative models, a series of workshops is merited that focus on how LGs and IOUs can best work together on planning for resiliency, leading to transparent identification of communication and data sharing protocols, coordination activities, mitigation measure development processes, and funding channels. Such an effort should result in a tractable platform for use across local, IOU, and state energy and environmental resiliency-related decision-making systems.[11]

Planning for resiliency requires thoughtful, collaborative, approaches in which LGs are given proper seats at the table.

Revealed Preference Offers Powerful Way to Value Resiliency

A significant factor that influences political willingness to provide electric utilities with monopoly protections is Section 451 of the California Public Utilities Code, which articulates the

[11] This recommendation dovetails with the recently issued ORDER INSTITUTING RULEMAKING TO MODERNIZE THE ELECTRIC GRID FOR A HIGH DISTRIBUTED ENERGY RESOURCES FUTURE, which includes in its proposed scope the following questions: “How frequent should the [distribution planning] consultations be and at what level of local government (e.g., city or county level)? What should be the scope of outreach, including the scope of outreach to tribal governments?”

IOUs' "obligation to serve" their customers. Service requirements include minimum reliability levels, as determined by the CPUC, historically measured through outage characteristics, as was reviewed as part of Energy Division workshops. The need to safeguard "resiliency" in the face of new and emerging conditions disrupts long held service standards, with implications to how IOUs should meet their obligations. These circumstances are what gave rise to the Energy Division workshops, QED.

Given LGs' primacy in determining adequate resiliency levels, the IOUs should be responsible for ensuring reliability goals stipulated as part of LHMPs or other relevant planning documents, or otherwise compensate LGs.[12] The fact that LGs do not assure resiliency at this level, prompting the need for non-IOU investments, gives credence to applying a revealed preference approach to valuing resiliency. In addition, the CPUC should explicitly authorize payments to LGs to provide these services, commensurate with IOU revenue requirements.

LGs, as well as other public and private sector entities, have invested significantly in resiliency measures, including as reflected in backup generators, emergency response protocols, resiliency centers, and redundancies. Likewise, resiliency failures, as triggered by Public Safety Power Shutoffs (PSPS) and wildfire-related outages caused by IOU equipment, have imposed substantial costs on LGs.

The more than eight gigawatts of BUG capacity in the state[13] reflect roughly $5.7 billion in public and private sector reliability investments, with another up to $9 million or more in annual fuel costs.[14] Evidence suggests that a growing proportion of these generators have been deployed as a resiliency response to PSPS, wildfire and associated risks. For example, the BUG population located in the South Coast Air Quality Management District's jurisdiction has significantly expanded over the past year. In total, 3,292 assets, with an estimated 956 megawatts of capacity, equaling 100.6 gigawatt-hours and 51,981 metric tons of carbon dioxide emissions have been added since 2020.[15]

BUG and other investments reflect the revealed value energy users place on resiliency, at specific geographic locations, to safeguard specifically identified activities.[16] Said differently, if grid power offered the same services as installed BUGs, owners/operators would not have had to invest in these assets, collectively saving billions of dollars. CPUC policies should

[12] This statute requires the IOUs to "furnish and maintain . . . adequate, efficient, just, and reasonable service" in their service territories.

[13] BUGs-in-5-CA-Air-Districts.pdf (lgsec.org)

[14] Based on $687 per kilowatt (kW) installation costs, $0.010 per kW-hour operating expenses, and 874,654 MWh of "permitted generation" a year. See www.eia.gov/electricity/generatorcosts/ www.facilitiesnet.com/powercommunication/article/Onsite-Options--1679#:~:text=The%20average%20operations%20and%20maintenance,kWh%2C%20according%20to%20the%20GTI.

[15] Dataset provided through a public records request to SCAQMD, PRR #1401086, April 29th, 2020.

[16] Absent a transparent process that values LGs' definition of energy resiliency with IOUs, it is unclear why ratepayers are required to pay for IOU-deployed BUGs but not BUGs fielded by LGs for essentially the same purpose.

acknowledge this value and encourage pathways to create more benefits and reduce the emissions consequences of resiliency investments. Such an approach would sync with Commission attitudes related to EV deployment in part as a means to provide backup power.

Well-developed microgrids, that interact with the grid commensurate with IOU service, would advance this goal. Microgrids that are sited on or affect public assets serve not just the LG, but the associated community.

Energy Efficiency Offers a Potential Model

The framework by which energy efficiency (EE) goals are pursued provides a potential model to organize resiliency efforts.[17] This structure includes the following key elements:

- A comprehensive database of measures, and their associated costs and benefits.[18] These should include interventions that can be adopted in front of and behind the meter. In the case of resiliency, actions could include grid hardening, risk mitigation through deployment of dispersed resources, service redundancies, and outage amelioration, such as resiliency centers.
- An explicit recognition of the importance of funding interventions that encourage positive market transformation and improve energy equity. For resiliency, this includes early support for microgrids, energy and storage initiatives, as well as enhanced incentives for investments in vulnerable and disadvantaged communities. Each of these elements have been reflected in recent CPUC orders that focus on different resources.
- The ability of non-utility entities, including Regional Energy Networks, consumer choice aggregators, and third parties to develop, deploy, and be paid for resiliency work, including planning efforts. This approach would significantly widen the opportunity to invest in non-wires measures that create superior, lower cost, social and environmental benefits.

Sincerely,

Steven Moss

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[17] The California Department of Water Resources Integrated Reginal Water Management initiative may also provide a mode; IRWM Grant Programs (ca.gov).
[18] For example, the Database for Energy Efficient Resources.