Introduction

The **Consumer Liaison Group (CLG)** is a forum for sharing information between ISO New England (the ISO or ISO-NE) and electricity consumers in New England. The CLG meets quarterly and attracts a diverse group of attendees at each meeting. Meetings are free and open to the public. Participants generally include consumers and consumer representatives (including state consumer and ratepayer advocates), state business and industry associations, chambers of commerce, individual businesses, trade groups, nonprofit organizations, and other end users. Several New England Power Pool (NEPOOL) members and state regulators are also regular, active participants in CLG discussions. CLG meetings generally follow the same format:

- **Opening remarks** from the CLG Coordinating Committee Chair
- A representative from the ISO, who provides an update on regional energy issues and
 initiatives that have or will be taking place at NEPOOL and ISO stakeholder meetings that
 can have an impact on electricity prices
- **A keynote speech** typically from an industry or business executive, policymaker, or regulator—who provides a unique perspective on a particular topic or issue
- **A panel discussion**, often representing industry, the ISO, regulators, and consumer perspectives, facilitated by a moderator

The following is a brief summary of the meeting, which was hosted in a hybrid format – remotely (via WebEx) and in-person in Peabody, Massachusetts – on **June 8**, **2023**.

The topic, moderator, and panelists were selected by the Consumer Liaison Group Coordinating Committee (CLGCC). The June 8 meeting did not include a keynote speaker, and instead included a community welcome and community roundtable. The meeting summary is intended to capture the general discussions that took place at the meeting; it does not necessarily reflect the views of the ISO or the CLGCC.

June 8: Challenges of Long-Duration Storage: Where Are We Now with Battery Storage and Where Are We Going?

Meeting objective: Discuss the current status of battery energy storage on the ISO-NE electric system, and discuss perspectives of the future and potential technological advancements of long-duration energy storage in New England.

Welcoming Remarks

Liz Anderson, chair of the Consumer Liaison Group Coordinating Committee (CLGCC) and chief, Energy and Telecommunications division at the Massachusetts Attorney General's Office, offered welcoming remarks and provided background on the CLG and its Coordinating Committee.

A community welcome was provided by Peabody residents involved in Breathe Clean North Shore: Susan Smoller, Steven Andrada, and Jerry Halberstadt. Smoller, Andrada and Halberstadt provided information about the history of Peabody, local energy generation facilities, and environmental justice concerns.

¹ NEPOOL is a group formed in 1971 by the region's private and municipal utilities to foster cooperation and coordination among the utilities in the six-state region for ensuring a dependable supply of electricity. Today, NEPOOL members are ISO stakeholders and market participants. More information is available at www.nepool.com.

Panel Discussion

Regine Spector, a CLGCC member and associate professor, Department of Political Science and Legal Studies, University of Massachusetts, Amherst, introduced and moderated a panel of energy leaders to discuss long-duration energy storage in New England. Spector provided an introduction to the opportunities and challenges of long-duration energy storage to aid in electric grid reliability.

Panelists included: **Rosemary Wessel**, founder, No Fracked Gas in Mass; **Chris Sherman**, vice president of development, Cogentrix; **Colette Lamontagne**, director, clean energy development, National Grid; **Jason Houck**, policy and regulatory affairs lead, Form Energy; and **Priya Gandbhir**, senior attorney, Conservation Law Foundation.

Rosemary Wessel introduced No Fracked Gas in Mass. Wessel illustrated the "peaker plants" located in Massachusetts, and the health impacts of air pollution from burning fossil fuels, with a particular focus on Pittsfield and Berkshire county. Wessel discussed the opportunities for battery storage to replace "peaker plants," particularly large grid-scale batteries, and the potential of long-duration storage to address needs of the New England electricity grid. Wessel discussed "peaker plant" generators and energy storage participation in the ISO-NE markets. Wessel highlighted coordinated efforts with Cogentrix to retire two "peaker plants" in Berkshire County and replace the facilities with renewable energy and energy storage.

Chris Sherman further elaborated on coordinated efforts to redevelop "peaker plants" and convert them into clean energy generation and energy storage facilities. As an example, Sherman presented the proposed redevelopment of the West Springfield Generating Station site to host solar and battery energy storage. Sherman discussed the ISO's interconnection study process. Sherman emphasized the potential benefits of utilizing incentives through the Massachusetts Clean Peak Standard, and highlighted suggestions for further encouraging clean energy development.

Colette Lamontagne began by introducing National Grid. Lamontagne provided a brief overview of the various technologies that serve as energy storage, described how energy storage is utilized on the electric grid, and noted the differences between short-duration and long-duration storage. Lamontagne highlighted a number of companies working to develop new long-duration energy storage technologies. Lamontagne discussed the role of energy storage on Nantucket Island for reliability, and explained that National Grid is investigating opportunities to use energy storage to defer or avoid transmission upgrades necessary for electric vehicle (EV) charging.

Jason Houck introduced Form Energy and their efforts to develop technology to address the need for long-duration energy storage as the electric sector transitions to more renewable energy, noting the challenge of weather-driven multi-day reliability challenges and the opportunity for energy storage to fill the gap of intermittent resources. Form Energy is developing an iron-air battery targeting multi-day duration storage and has over three gigawatt-hours (GWh) of commercial engagements across the country. Houck explained the potential applications for this type of multi-day storage technology to aid in reliability, including to replace "peaker plants," optimize transmission capacity, and provide firm energy storage reserves. Houck specifically highlighted analysis regarding the needs for energy storage in New England.

Priya Gandbhir began with an introduction of the Conservation Law Foundation (CLF). Gandbhir mentioned the impact of the smoke from current wildfires in Canada, highlighting the impacts of climate change caused primarily by reliance on fossil fuels. However, Gandbir noted that the region is beginning to transition away from fossil fuels towards clean energy resources. Gandbir explained

Summary prepared on behalf of the Consumer Liaison Group Coordinating Committee

that "peaker plants" are currently utilized to meet high electricity demand above the region's baseline load, and these plants are often fossil fuel based and impact local communities where they are located, many of which are environmental justice communities. Grandbhir highlighted that progress is being made to incorporate more energy storage on the grid, and there are efforts to develop new storage technologies. Gandbhir concluded by noting that ISO-NE markets need to be reformed as the grid transitions to more clean energy resources in a cost-effective manner.

A question and answer period followed the panelists' remarks. Panelists responded to questions regarding opportunities for new storage technology project development in New England; National Grid pilot programs; energy storage technology participation on the ISO-NE bulk electric system; suggestions for ISO-NE tariff changes; the ability of iron-air batteries to function in cold weather; the cost of iron-air batteries; and the reliability of the electricity grid.

ISO New England Update

Anne George, vice president, chief external affairs and communications officer, ISO-NE, provided the ISO's regional update. George noted that the ISO works closely with the CLGCC, explained the evolution of the CLG over the years, and encouraged attendees to continue to engage, including by completing the post-meeting survey. George noted that the expansion of these meetings to a hybrid format (including both virtual and in-person attendees) has helped to extend the reach of these discussions.

The ISO released the annual Capacity, Energy, Loads, and Transmission (CELT) Report, a 10-year load forecast, on May 1. The CELT is the primary source for assumptions used in ISO system planning and reliability studies, developed in coordination with regional stakeholders and state agencies. George explained that state policies encouraging electrification of heating and transportation are projected to have impacts to both overall and peak electricity demand in the next decade. In contrast, energy efficiency and behind-the-meter solar both reduce demand on the system, and are also forecasted in the CELT report.

George provided an overview of the Operational Impact of Extreme Weather Events – Energy Adequacy Study. The ISO is working with the Electric Power Research Institute (EPRI) to conduct a probabilistic energy adequacy study for New England under extreme weather events. Study results are intended to inform the region on energy adequacy risks. George briefly reviewed the ISO's existing 21-day energy assessment as it relates to the recent analysis. Preliminary results of the energy assessments have been completed for 2027 winter events; ISO will continue reviewing outputs of the 2027 winter events while completing studies of summer 2027, and both winter and summer events for 2032.

George highlighted that ISO has implemented rule changes to better integrate energy storage technologies into the wholesale electricity markets.

A question and answer period took place following the presentation in which George answered questions regarding state and public engagement in developing solutions for reliability and energy adequacy risks; energy efficiency and demand response; the Mystic cost-of-service agreement; the role of ISO to ensure reliability; ISO's role in combatting climate change; public engagement in ISO decision-making and stakeholder processes; preparations for extreme heat events; and ISO's mission and vision statement.

Community Roundtable

Nathan Phillips, CLGCC member and professor, Department of Earth and Environment, Boston University, explained the process for the community roundtable exercises, a new feature for interaction with attendees that the Coordinating Committee introduced at the June meeting. Two prompts were provided at each table for in-person attendees and online for the virtual WebEx attendees. Attendees were encouraged to respond to the prompts, and the CLGCC will consider the feedback in planning for future CLG meetings. The community roundtable exercise is intended to continue at CLG meetings moving forward. The following questions were proposed by the CLGCC:

- Communities and ratepayers are interested in democratization of energy and electricity. What can we do in our own homes and communities related to storage, demand response, solar, and how can our grid operator, ISO New England, help?
- How can communities and ratepayers better communicate with our grid operator, ISO New England?

Closing remarks

Liz Anderson offered closing remarks and requested attendees fill out the online survey they would receive via email and invited attendees to take part in the 2023 CLG meetings, with the next meeting scheduled to take place on September 21 in Vermont.

A <u>recording</u> of the meeting can be found on the <u>CLG page</u> on the ISO website.