Summary of Presentations by the Electric Power Research Institute (EPRI) Related to the Clean Energy Transition

In March and May of 2024, EPRI[1] executives visited with Austin Energy executive team members to discuss the clean energy transition facing the electric utility sector with an emphasis on technology solutions and their expected timelines for adoption. In support of the current Resource Generation Plan work Austin Energy is releasing the two presentations provided by EPRI[2], highlighting key EPRI points (**in bold text below**) and including additional comments (in blue text below) relating the material to the ongoing Resource Generation Plan. While EPRI's view is nation-wide, many of their points are applicable in the ERCOT region.

- **The on-going clean energy transition provides new opportunities for utilities, but will be progressively more challenging.**
    - Based on our experience over the last two decades being a leading utility in transitioning our energy supply to cleaner resources, Austin Energy agrees with EPRI's core conclusion. We are now among the leading utilities facing challenges in attaining greater carbon-free supply while ensuring affordability and reliability for customers.
- **2030 Strategic Imperatives for the utility sector include:**

    Accelerate Energy Supply Innovation
    Maximize Existing Resource Utilization
    Advance Load Forecasting, System Operations, Integrated Planning
    Enhance Grid Climate Adaptability and Resilience
    Reimagine Shared Customer Resource

    - Austin Energy aims to incorporate these imperatives into our Resource Generation Plan and/or related operational plans. We agree with EPRI's statements that solutions to address all the imperatives may not yet be viable, and their successful commercialization will require contributions from other sectors such as government, manufacturing, and research/academia.
- **Emerging low-carbon dispatchable technologies will be required to manage intermittency associated with bulk renewables. Most of those technologies are not yet commercially available.**
    - Austin Energy agrees and notes that the intermittency of resources in ERCOT is resulting in financial and reliability risk. Addressing intermittency will be a focus of our Resource Generation Plan efforts. Further clean energy transition will require consideration of

[1] Electric Power Research Institute. "EPRI is a research organization that follows the science to help power society toward a reliable, affordable, and resilient energy future. Rigorously objective in our role and our research, we do not advocate for any specific company, sector, or technology. With a foundational mission to benefit society, EPRI delivers independent, objective thought leadership and industry expertise through a highly collaborative approach." (https://www.epri.com/about)

[2] EPRI has given Austin Energy permission to share these presentations.

emerging and innovative technologies, and greater focus on understanding the risks vs benefits of those investments.

- **Balancing supply and demand with increasing amounts of distributed energy resources requires advances in grid planning and operational technologies.**
    - Austin Energy invests in advanced applications and technologies needed to meet current and future goals for demand side management (DSM) and distributed energy resources (DER), and we expect continued investment in the future.
- **Utilities need to increase resources dedicated to grid hardening and community resilience in anticipation of more extreme weather: 1-in-100-year events are now 1-in-10.**
    - Austin Energy has historically not included grid hardening goals/actions as part of its Resource Generation Plan but addresses those areas in its strategic and other operational plans. We are open to considering where these tie to the Resource Generation Plan to the extent they address values and priorities heard from our stakeholders.
- **A 2030 future could see significant new, controllable load behind the meter, depending on the extent of electrification.**
    - Austin Energy has been an industry leader in promoting electric vehicles, rooftop solar, demand response (DR) and other DSM programs. We have incorporated aggressive goals in previous Resource Generation Plans and will continue to position ourselves to accommodate the growth of customer-sited resources in a way that provides value to our customers.
- **Significant and rapid changes to load such as interconnection of high-MW data centers and shift of peaks to winter due to electrification will challenge the ability to maintain a reliable grid.**
    - Austin Energy agrees and will formally incorporate load pattern uncertainties into the resource planning process via scenarios and sensitivity analyses. Furthermore, the current resource planning effort will quantify the impacts of these load changes on reliability, affordability, and environmental sustainability. Austin Energy is partnering with third parties including EPRI to understand how to account for future load uncertainty.
- **Done right, the energy transition should improve energy affordability.**
    - EPRI's conclusions are based on a nationwide analysis of cost savings associated primarily with transition to electric vehicles. We note that EPRI's slides indicate the analysis does not factor in capital costs of new electrified equipment. Austin Energy agrees that a clean energy future has the potential to be more affordable for many customers, but this depends on many utility- and region-specific factors. Cost-to-customers is an important output and decision criterion used in this Resource Generation Planning effort.