



2022 LES SUSTAINABILITY INITIATIVES – REPORT TO THE LES ADMINISTRATIVE BOARD JUNE 16, 2023

The following is a summary of the various sustainability initiatives either introduced or continued by LES in 2022.

LOC solar

LES installed 144 kW_{DC} of solar photovoltaics on the roof of the new reel & transformer storage building constructed at the LES Operations Center. The solar panels were arranged to represent the LES logo when viewed from above.



Installation of EV charging stations at LES sites

LES installed Level 2 EV-charging stations in the parking areas at the Terry Bundy Generating Station and Rokeby Generation Station sites. The chargers are accessible to employees and visitors.

Continued sponsorship of the Low-Carbon Resources Initiative

LES continued its role as an anchor sponsor, and participant in, the Low-Carbon Resources Initiative, or LCRI, a six-year joint effort by the Electric Power Research Institute and the Gas Technology Institute to accelerate the development and demonstration of low- and zero-carbon energy technologies. LES contributed approximately \$90,000 to the ongoing effort in 2022.

Continued energy storage request for proposals

LES continued with its efforts to install an energy storage pilot project. The project is expected to provide market and reliability benefits and is also justified in part by the support it would provide to the LES community microgrid. LES engaged in contract negotiations with the lead respondent throughout the year.

Retail rate restructuring

LES initiated Phase II of its revenue-neutral restructuring of residential rates, moving fixed costs associated with the transmission system into fixed charges. Phase I, which did the same thing for the distribution system, was completed in 2019. Properly aligning fixed and variable charges improves the financial stability of LES, better preparing it for future generation-related expenditures.

Gatehouse Rows efficiency upgrades

LES entered into an agreement with Hoppe Development to support the installation of smart electric water heaters at their new 98-unit Gatehouse Rows affordable housing complex near Wyuka Cemetery. In exchange, LES will have the rights to conduct a water heater demand response pilot. LES also supplied smart thermostats for each unit in exchange for conducting a future pilot of its Peak Rewards program in a multifamily facility.



Participation in the South of Downtown Rental Rehabilitation Pilot Program, or ReRAP

Open to rental property owners in a city-designated area of town, LES is collaborating with the city of Lincoln and program administrator NeighborWorks Lincoln to provide funding for structural and energy-efficiency upgrades for qualifying applicants.

Geothermal HVAC upgrade of LES Service Center

LES completed a feasibility study for a geothermal heating and cooling retrofit of its existing LES Walter A. Canney Service Center located at 27th & Fairfield streets. Based on the promising results of the study, LES moved forward with more detailed analysis and preliminary design.

Continued expansion of LES Peak Rewards

LES continued to provide incentives and marketing to increase participation in its smart thermostat demand response program, LES Peak Rewards. By allowing LES to make brief, limited thermostat adjustments over the summer months, customers in this program helped to reduce LES' peak demand by 4.7 MW in 2022.

Development of the Solar Trade Ally Network

To educate and inform customers about solar, LES developed the Solar Trade Ally Network, or STAN. These trade allies underwent training about LES' rates and incentives and pledged to fully disclose accurate information to potential buyers so they can make an informed decision about investing in solar. LES continues to provide incentives, including upfront capacity payments, for customer-owned solar projects purchased through a STAN-participating installer.

Continued support of the LES Sustainable Energy Program

LES contributed another \$1.4 million to its Sustainable Energy Program, incentivizing customers to pursue enhanced energy-efficient building practices and equipment. The 2022 installations equated to an estimated peak demand reduction of 5.6 MW, reducing LES' future need for generation resources. They also represented an estimated annual energy savings of 5.1 GWh. As part of the 2022 Integrated Resource Plan, LES began preparations for offering new incentives for high-efficiency commercial kitchen equipment.

Continued support of customer-owned solar projects

LES incentives, including new upfront capacity payments of approximately \$400,000, supported 123 new customer-owned solar installations totaling approximately 1 MW_{AC}.

Saving with Solar program

LES partnered with Habitat for Humanity and the Leon Lowenstein Foundation on a new solar program to support low-income households. Under this program, facilitated by the World Resources Institute, virtual net metering panels from LES' community solar project were gifted to two households.

Lincoln Public Schools solar car pilot program

To help foster STEM-related careers, LES collaborated with the Lincoln Public Schools to introduce a solar car pilot program as part of their sixth-grade Design Thinking initiative. Students got the chance to create, build and race their own solar cars against fellow classmates.



Participation in the Climate-Smart Collaborative

LES, along with the University of Nebraska-Lincoln, Lincoln Public Schools, Lancaster County and the city of Lincoln, continued participation in their Climate-Smart Collaborative. The collaborative developed an electric vehicle readiness plan which detailed a communitywide strategy for EV-charging infrastructure throughout the city.

Continued Terry Bundy Generating Station energy audit

Based on the recommendations of a consultant and internal review, LES converted much of the Terry Bundy Generating Station administration building and construction office building to LED lighting.

Feasibility evaluation of integrating a low CO₂ fuel at generating sites or DEC thermal plants

LES evaluated the supply, transportation, delivery and utilization factors related to operating with a low CO₂ fuel (e.g., hydrogen, ammonia, synthetic liquid fuels, biofuels) for either electricity production or thermal energy production at one of its generating sites or the District Energy Corporation plants.

Investigation of offering demand response aggregation services to customers

LES continued to investigate the feasibility of offering demand response aggregation services to its customers. The services would comply with federal regulatory requirements and wholesale market protocols.

Continued pollinator projects at LES facilities

LES continued its support of pollinator-friendly habitat, such as areas at both the LES Operations Center and Terry Bundy Generating Station sites, including public outreach and education efforts. In 2022, the generating station renewed efforts to remove noxious weeds, manage cold-season grasses, and increase the density and diversity of pollinator-friendly plant species.

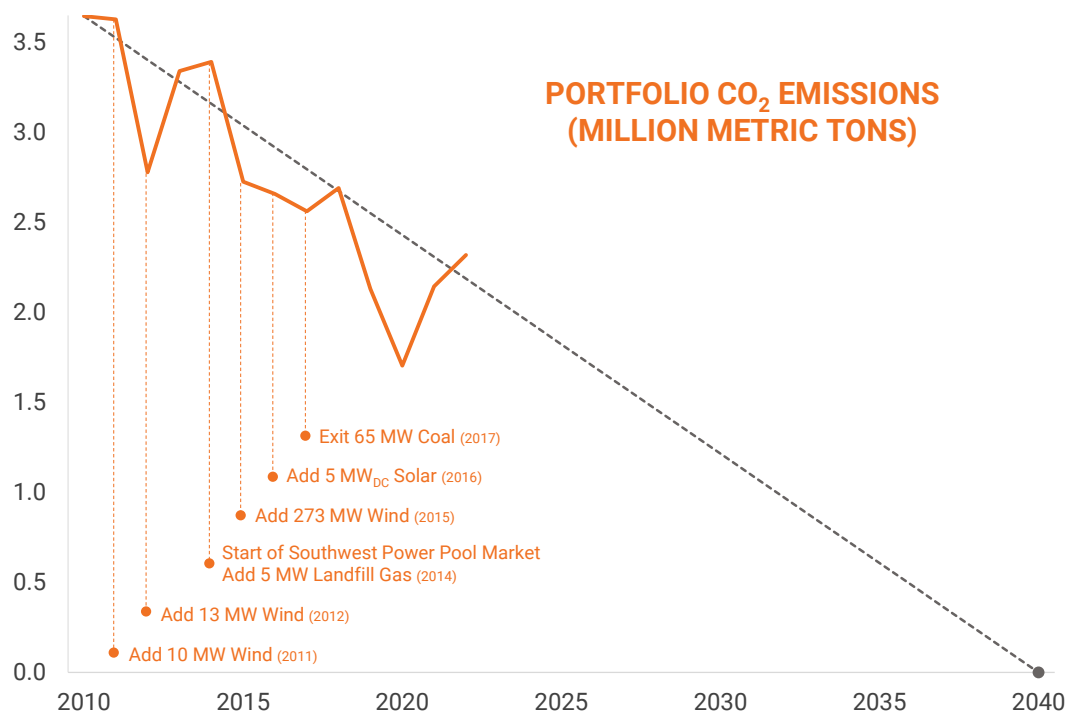
Energy Summit

LES held its annual meeting with business and community leaders. The keynote speaker was David Porter, senior director of Electrification and Sustainable Energy Strategy for the Electric Power Research Institute. He provided an overview of strategies and technologies needed to achieve decarbonization; regional comparisons for achieving “zero” targets; the impacts of electrification on energy, demand and the environment; and new approaches and customer and community benefits. *(Due to scheduling difficulties, the 2022 Energy Summit was held in early 2023.)*

Decarbonization goal

LES continued to track the state’s most aggressive electric utility decarbonization goal to date, achieving net-zero CO₂ emissions from its generation portfolio by 2040. In addition, LES leveraged the 2022 Integrated Resource Plan analysis to map out an initial plan for achieving most of the goal.

DECARBONIZATION GOAL



SNEAK PEEK AT THINGS TO COME IN THE 2023 REPORT

Electric vehicle orders

In June 2023, LES took delivery of a new Ford F-150 Lightning. LES has pending orders for two other all-electric pickups: a Rivian R1T and a Silverado EV. Outside of the direct environmental benefits, vehicles like these are poised to further change the load LES serves, so it's useful to gather firsthand experience with them.



Battery storage project

In June 2023, LES announced the ongoing energy storage request for proposals resulted in a 10-year power purchase agreement for a new 3 MW/12 MWh battery storage project. The zinc-based battery technology used for the project is in its infancy, but with durations of up to 12 hours, it's poised to help the industry take the next step in longer duration storage. The project is to be located within the LES Community Microgrid, helping to ensure resiliency and continuity of service in the downtown Lincoln area in the event of widespread outages.