



Federal Grant Opportunities

On the heels of the most recent UN Climate Change Conference (COP 26), leaders around the globe are discussing new ways to accelerate the scope and timing of climate policies. In turn, both state and federal programs to provide support for clean energy and transportation initiatives have increased substantially. With greater recognition of the important role that the utility sector must play in the transition to a decarbonized economy, we must explore critical questions about how we can best partner with the state and federal government to advance this important objective, while also assuring affordability and reliability for the communities we serve. With the passage of the Bipartisan Infrastructure Investment and Jobs Act (IIJA) late last year, federal agencies have a unique opportunity to identify and support the critical role of public power systems in shaping a decarbonized future.

NCPA's Long-Standing Commitment to Clean Energy

NCPA, a joint-action agency established in 1968, is a consortium of locally-owned utility systems that invested early in renewable resources to ensure a clean, reliable, and affordable energy supply for our member communities and districts. Collectively, our members provide power to approximately 700,000 electricity customers. We maintain a resource portfolio that today is over 50 percent carbon-free and on track to meet California's carbon targets on or ahead of schedule.

Opportunities to Advance Renewable Energy Growth

Last year, both the State of California and the federal government took meaningful steps to create new programs to help fund the advancement of renewable energy infrastructure. Public power utilities, like NCPA, stand ready to work with federal and state agencies to identify and support these important programs that will help shape and

drive our state and national goals of a decarbonized economy by 2050. Among the various funding opportunities available to public power utilities as part of the Bipartisan Infrastructure Law, NCPA has identified and prioritized the following areas where our agency and member systems can help make important contributions toward the advancement of decarbonization goals:

- Green hydrogen development
- Climate adaptation—hydroelectric sediment removal
- Electric vehicle charging infrastructure
- Grid hardening to prevent wildfires

The Use of Green Hydrogen and the Pathway to Decarbonization

NCPA's generating resources include the 300-megawatt Lodi Energy Center (LEC). Constructed in 2012, the LEC was the first in the nation to use fast start technology, making it an extremely flexible and low-emitting resource that is capable of operating to support the integration of intermittent renewable energy resources on the grid. In January 2020, the NCPA

Commission agreed to move forward with the installation of an upgraded turbine capable of using combustors that can blend natural gas with a mixture of up to 45% green hydrogen, a step that would reduce the plant's greenhouse gas emissions by a third, promote grid reliability, and support intermittent renewables like wind and solar. Since this time, NCPA has initiated the process to transition toward the integration of hydrogen at this facility and is on track to be the first of its kind to demonstrate this new technology in the utility sector. The completion of the hydrogen retrofit is expected in 2023.

Advancing use of green hydrogen in the electricity sector offers myriad benefits:

- Enabling the conversion of natural gas plants with remaining useful economic and operational life;
- Decarbonizing the electricity sector, rapidly advancing state and federal clean energy and climate objectives;
- Protecting grid reliability; and
- Expanding the uses of green hydrogen, thereby making transportation and industrial applications more economic.

However, to realize these benefits, this promising technology must be demonstrated at a commercial scale, technical hurdles must be addressed, and economies of scale realized.

Because LEC is owned by public agencies—including the State of California—this project is a strong candidate for intergovernmental collaboration to expand the use of hydrogen in the utility sector. As public agencies focus on purpose, not profit, NCPA and the project participants in the LEC—longtime innovators in the utility industry—offer transparency and openness with regard to sharing what can be learned from this effort while working to further the use of hydrogen in the electricity industry.

NCPA looks forward to working with the U.S. Department of Energy to develop proposals to carry out its clean hydrogen goals as authorized in the Bipartisan Infrastructure Bill to advance utility-scale projects, like the LEC, and demonstrate the potential role that hydrogen technology can play in achieving state and federal decarbonization objectives.

Accelerated Sediment Buildup at McKays Point Reservoir

NCPA operates the North Fork Stanislaus River Hydroelectric Development Project (FERC Project No. 2409) on the North Fork of the Stanislaus River in California's Alpine, Calaveras, and Tuolumne Counties.

The Project, which has the capacity to generate 256 megawatts of power, includes the McKays Point Reservoir. When the reservoir was completed in 1989, there was an estimation made about future sediment buildup in the new reservoir—and it was projected that between 1989 and 2018, total sediment deposits would amount to approximately 43,560 cubic yards. However, the effects of climate change have led to an increased frequency of extreme weather events, including floods, droughts, and wildfires, leading to greater rates of erosion within the surrounding landscape that eventually flows into hydroelectric reservoirs. As a result, debris flows into the reservoir *from USFS land* in 2018 amounted to 519,040 cubic yards—nearly *12 times* greater than originally anticipated. This sediment buildup has limited the water storage capability of the reservoir, degraded the water quality, and reduced overall generation of a clean and renewable resource that plays a key role in advancing the state's decarbonization goals. The McKays project is not alone—these effects of climate change are impacting reservoirs across the West.

Addressing this challenge at our facility will require the removal of 300,000 cubic yards of sediment from McKays Point Reservoir. Preliminary estimates put the cost of removing, hauling, and disposing *half* of this sediment on private lands between \$50-\$80 million.

Federal investment is needed to mitigate the need for further climate adaptation and to realize immediate results with regard to increased clean energy generation and water storage—particularly against the backdrop of ongoing drought conditions.

NCPA urges the U.S. Department of Energy, as it implements its hydroelectric incentives program, to consider the climate adaptation needed at existing reservoirs. Sediment in hydroelectric reservoirs throughout the West has significantly increased due to erosion caused by upstream wildfires and extreme weather events related to the ongoing effects of climate change. Sediment removal is needed to increase emission-free power production and the water storage capabilities of these projects, assure the future safety of the facilities, and promote the availability and quality of water needed to support downstream fishery habitats.

Transportation Electrification is Critical to Achieving GHG Emission Reduction Goals

The California Air Resources Board (CARB) estimates that more than 40% of California's GHG emissions come from the transportation sector. As the U.S. Department of Transportation gears up to administer billions in new federal funding to rapidly deploy electric vehicle infrastructure, California utilities are well-positioned to deploy clean technologies at a pace not seen before. NCPA stands ready to lead in this effort.

Federal agencies have an opportunity to fill investment gaps in areas that are not being pursued by private investment. In California, private investment has made progress in the installation of infrastructure along key transportation corridors across the state; but rural, underserved, and disadvantaged communities are in need of additional investment. Consideration should be given to making these funds available to public entities that will build EV infrastructure in areas that would otherwise be underserved by private investment.

NCPA urges the U.S. Department of Transportation to support the role of public power utilities in addressing the lack of EV infrastructure in rural and underserved communities needed to advance state and federal climate and clean energy goals.

Hardening Electric Infrastructure and Decreasing Wildfire Risk

As many NCPA members are local government entities, they are uniquely positioned to coordinate closely with other city departments on wildfire planning and response efforts. From evaluating opportunities to harden utility infrastructure in fire-prone areas, to increasing investments in vegetation management, NCPA members continue to make proactive operational and maintenance decisions with a focus on public safety and reliability.

NCPA is pleased that federal funding has been made available to public utilities through new competitive grant programs administered by the Department of Energy. These programs provide critical support for small and rural utilities to improve the resilience, safety, and reliability, of their electrical grid infrastructure. With millions of acres of public land at high fire risk in

California, this important federal funding will go a long way in helping offset the significant costs needed to modernize the grid, protect public safety, and keep the lights on.

NCPA urges the U.S. Department of Energy to strongly consider the value of providing much-needed financial assistance to public power utilities located in high fire risk areas in California to effectively minimize the occurrence and impacts of wildfires.