



## **NCPA Comments to U.S. Department of Energy Regarding Quadrennial Energy Review May 23, 2016**

The Northern California Power Agency (NCPA) is pleased to provide comments to the Department of Energy as it embarks on the second installment of its Quadrennial Energy Review (QER). Established in 1968, NCPA is a non-profit joint powers agency that generates, transmits, and distributes electric power to and on behalf of 15 municipalities, special districts, and rural cooperatives in Northern and Central California.<sup>1</sup> The agency serves more than 650,000 customers, representing 3% of California’s electricity demand.

NCPA applauds DOE’s efforts to explore the challenges facing the electric utility sector and identify opportunities. For NCPA and its members, climate change is shaping every aspect of utility operations:

- drought limits the availability and timing of hydropower generation and water needed for cooling;
- wildfires have increased in frequency and intensity, threatening both the greenhouse gas reductions achieved by the utility sector and the renewable generation (which is frequently located in fire-prone areas) needed for future reductions;
- State policies are setting aggressive policies for distributed generation, energy efficiency, and renewables—with associated challenges in electric system reliability, consumer rate equity and affordability, and operational adaptability.

NCPA urges the Department to use the QER to identify, explore and advance policies that address our collective objective of reducing greenhouse gas emissions while ensuring electric consumers continue to receive affordable and reliable service. We believe this dual objective can be advanced through:

- modernization of the licensing process for hydropower projects;
- reformation of the budgeting process to suppress catastrophic wildfires;
- balanced policies on distributed generation that both foster innovation and aligned costs and benefits; and

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<sup>1</sup> NCPA members include: the cities of Alameda, Biggs, Gridley, Healdsburg, Lodi, Lompoc, Palo Alto, Redding, Roseville, Santa Clara, and Ukiah; the San Francisco Bay Area Rapid Transit (BART), the Port of Oakland, the Truckee Donner Public Utility District, and the Plumas-Sierra Rural Electric Cooperative.

- meaningful workforce development programs designed to both retrain existing employees and educate future employees capable of addressing the complex and evolving needs of the utility industry.

Each of these topics is addressed in greater detail below.

## **Hydropower Licensing Reform Is Critical for California’s Energy Future**

California is reshaping its electricity portfolio, as it pursues a comprehensive set of aggressive carbon reduction targets. Paramount to this effort will be the continued availability of hydropower, which presently represents more than 15% of California’s installed generating capacity. These projects are a critical part of the California electricity system for a variety of reasons:

- hydropower’s operational flexibility is vital for maintaining system reliability. Output from the state’s hydropower resources can quickly be adjusted to provide voltage support, synchronization, storage, and fast-start response to keep the power system in balance;
- hydropower projects are easily dispatchable. This operational flexibility plays an essential role in integrating a growing fleet of intermittent resources that the California Independent System Operator estimates will exceed 13,000 megawatts statewide as early as 2024;
- as a carbon-free resource, hydropower provides a well-established resource to further reduce greenhouse gas emissions in California. Hydropower generation is already responsible for avoiding seven million metric tons of carbon dioxide per year. Its value only increases when it integrates with other intermittent carbon-free resources; and
- hydropower also provides an important financial hedge to swings in natural gas prices.

Hydropower’s unique attributes are vital in ensuring a reliable, resilient, cost-effective, and environmentally benign energy portfolio.

Under existing law and regulations, the process for licensing and relicensing takes, on average, five times as long as the time needed to obtain regulatory approval for a gas-fired generation or wind project. Multiple agencies control overlapping pieces of the hydropower regulatory approval process, requiring duplicative studies and often make conflicting recommendations. The result of this byzantine process is regulatory uncertainty, costly license conditions, and unnecessarily constrained operational requirements. It is common for the licensing process

and resulting conditions to cost almost \$200,000 per installed megawatt. Moreover, rather than producing increased generation through installation of more efficient equipment, the relicensing process typically results in a reduction in generation. In the worst situations, license conditions render projects uneconomic and projects are often abandoned. With approximately 4,000 megawatts of hydropower capacity scheduled for relicensing over the next 15 years, California cannot afford continuation of the status quo.

NCPA encourages the Department to support hydro licensing reform provisions included in the respective House and Senate energy bills that:

- make common-sense revisions to the licensing process paralleling changes already in place for federal regulatory review of other infrastructure programs, including highways and water projects;
- require early collaboration among federal and state agencies to organize all federal authorizations, consolidate environmental studies where possible, and save time;
- enable the Federal Energy Regulatory Commission to set schedules for each step in the licensing process based on consultation with other agencies;
- encourage new hydropower development at existing infrastructure, while protecting environmental values; and
- improve resource agency environmental reviews by authorizing third-party direct funding of environmental studies.

## **Support Efforts to Reform Fire Disaster Funding**

Last year's Valley and Butte fires in Northern California had a devastating impact on natural resources, property, and lives, and directly impacted NCPA's facilities and employees. In addition to the devastating and immediate impact on families and businesses, the significant carbon emissions associated with these wildfires undermined the efforts of NCPA and others throughout the electric industry to reduce greenhouse gas emissions. Federal wildfire management needs to be overhauled to boost funding, prevent the raiding of needed fire prevention funds, and treat the most serious fires as natural disasters.

Wildfires release tons of uncontrolled carbon emissions into the atmosphere, and if the damaged and fallen trees are left to decay, even more tons of carbon are released. The Rim Fire near Yosemite National Park in 2013—burning approximately 242,000 acres in the Stanislaus National Forest and was the third largest wildfire in California—released an

estimated 11,352,608 metric tons of GHG emissions. Based on the US EPA's website, those emissions are roughly equivalent to the following:

- annual greenhouse gas emissions from 2.3 million cars;
- carbon dioxide emissions from 1.2 billion gallons of gas consumed;
- carbon dioxide emissions from the electricity use of 1.5 million homes for one year; and,
- annual carbon dioxide emissions of 3.2 coal fired power plants.

These fires compromise significant efforts and resources utilities have put into reducing greenhouse gas emissions in the state. The intensity and frequency of wildfires will only worsen, as forests that may have normally hosted 50-60 trees per acre can now average 350 trees per acre, resulting in dangerously high fuel accumulations. This is a critical challenge that warrants immediate action.

Yet, the current funding system to address fire suppression is deeply flawed. Under federal law, the Departments of Agriculture and Interior forecast fire suppression budgets based on an average of the past ten years' spending. When budgeted resources are inadequate, as frequently occurs, the agencies take funds from other accounts—including dollars that are needed for forest management to prevent future fires and funds needed to properly restore the forest after a fire. This cycle of "fire-borrowing" denies the agencies of critical funds needed to maintain healthy forests and leads to a cycle of more devastating fires and continued depletion of forest management funds.

Major fires need to be treated like other major natural disasters. Bipartisan legislation has been introduced in Congress to ensure adequate and equitable funding for major fires. Under this legislation, catastrophic fires would be funded under a separate disaster account—just like funding for other catastrophic natural disasters. Any spending above 70% of the 10-year average for fire suppression would be eligible for disaster funding, with the remaining funding secured through annual appropriations.

Removing those megafires from the regular budget—which is supported by the Administration as well as both Republican and Democratic leaders in Congress—will free up substantial new funding for essential fire prevention and hazardous fuels reduction projects that can help break the cycle of increasingly dangerous and costly fires.

NCPA encourages swift enactment of legislation to provide predictable, adequate, and equitable funding of fire suppression and prevention activities.

## **Encourage Distributed Generation That Doesn't Create Cost Shifts Among Customers**

As described in the February Stakeholder Briefing Memo, distributed generation is beginning to play a greater role in meeting the needs of electricity customers across the nation. NCPA supports the ability of customers to access such resources provided that it does not adversely impact the ability of the distribution utility to provide reliable and affordable power. To that end, NCPA members have made significant investments in distribution infrastructure to serve growing demand for rooftop solar and are now considering the deployment of community-based solar projects, providing customers who cannot directly invest in clean generation with an approach to do so through the utility.

While these activities are viewed as positive movement toward deploying clean energy technologies directly to consumers, there is considerable debate across the nation about the extent to which such investments are being subsidized by customers that do not or are unable to participate. A central point of focus in this regard has been placed on net energy metering (NEM) programs.

Included in NEM programs are billing mechanisms that require a utility in many cases to compensate a rooftop solar customer at the full retail rate for electricity generated by the customer's solar panels. One of the downsides to this program is that it allows a rooftop solar customer to avoid the utility's transmission and distribution costs, even though the customer relies on these assets to remove their over-generation and receive the utility's energy supply when, for example, the sun is not shining. This leads to a revenue shortfall for the utility, which is recouped through a cost-shift to non-solar customers, many of whom are low-income, elderly, or live in multi-family buildings. This cost shift is neither fair, nor sustainable.

NCPA encourages DOE to only support rooftop solar programs that do not result in a cross-subsidy between and among customers.

## **Promote Workforce Development**

The power sector's workforce is "graying," creating great concern about the future ability of utilities to effectively respond to the rapidly changing needs of electricity customers. A workforce survey performed in 2015 by public power's national trade association highlights the extent of the problem:

- a significant portion of the workforce will be eligible to retire in the next 5-7 years, and,
- the positions that will experience the greatest level of retirements may be the most difficult to replace (skilled trades, engineers, and high-level management).

The loss of existing expertise, combined with the need for our utilities to acquire new skills to meet the needs of today's rapidly changing industry, has increased the demand for programs to retrain existing workers and recruit new workers into utility jobs. There is a significant shortfall in programs designed to address this issue and funding is required to provide the training needed to meet our nation's energy goals.

The electric utility industry is undergoing a technological renaissance, requiring the recruitment of employees with new skill sets, as well as new training for current employees. NCPA has been proactive in this area, especially with regard to fostering student interest in the power sector. NCPA, along with Alameda Municipal Power, the City of Palo Alto, Roseville Electric, and Silicon Valley Power, is a member of the California Energy & Utility Workforce Consortium, an organization that provides information, resources, and opportunities for students considering a career in energy.

NCPA initiated a separate internship program in March 2015, providing students with mentoring and educational work experience working for various NCPA member utilities. The program is a success, providing employment for nearly a dozen interns in the first year. Interest remains strong as the program begins its second year of operation. Leaders in the NCPA utility community have also been active in shaping curriculum at Sacramento State University to help interested students develop the skills needed to work in the modern electric utility environment.

The need to develop new skills and attract well-trained qualified people to work in the power sector is expected to accelerate in California as utilities position themselves to meet the state's ambitious 2030 energy goals. The industry will continue to experience new developments in technologies, new state and federal regulation, changing customer expectations, an evolving power market, and additional services not traditionally offered by electric utilities. For these and many other reasons, the power sector in 2030 is unlikely to resemble the current industry.

NCPA encourages support for, and expansion of, current legislation designed to address energy sector workforce development. Workforce programs need to:

- expand STEM education (Science, Technology, Engineering, Mathematics);
- boost technical training and college opportunities, especially for under-served communities;
- provide retraining and continuing education opportunities for existing utility personnel;

- ensure the eligibility of local governments and public power utilities in any federal workforce development program; and
- coordinate resources between the federal government and education/job-training resource providers.

We look forward to seeing the efforts of the QER move forward, and would be pleased to discuss these comments in greater detail. Please contact Scott Tomashefsky, NCPA Regulatory Affairs Manager, at [scott.tomashefsky@ncpa.com](mailto:scott.tomashefsky@ncpa.com) or (916) 781-4291 for any additional information you would like.