16th Edition, August 31, 2021

August CFPP Project Update

Work and progress continue on the Carbon Free Power Project, which will provide firm, dispatchable, carbon-free energy to participants. Here are some of the highlights, as reported to the Project Management Committee Aug. 18 by CFPP Project Director Shawn Hughes and others:

- Negotiations are ongoing with Bank of America for a revolving credit agreement to finance project development costs.
- Work with outside utilities continues to achieve full project subscription. Interest in the project remains high and is increasing.
- A great deal of work is underway at the Idaho National Laboratory site to begin developing the Combined Operating License Application for the Nuclear Regulatory Commission.
- Three firms, Fluor, RIZZO, S&ME, are mobilized at the site, setting up operations, doing site surveys, surface seismic activity investigations and road upgrades.
- Next major site activities include using eight drill rigs to drill 50 boreholes and 10 wells for groundwater monitoring and an aquifer pump test. Coring and drilling will continue for the next three months.

2021 Member Conference Report

UAMPS held its 2021 Member Conference Aug. 15-18 at The Village at Squaw Valley, near Lake Tahoe. At the Member Pre-Conference Meeting, speakers focused on important and timely topics, including cybersecurity;

responding to extreme weather events; rate structure for renewable marketing; developing a utility roadmap for the future via strategic planning; and dealing with wildfire mitigation liabilities.

At the Member Conference general session, the focus was on moving toward a carbon-free energy future, state energy policy, energy market dynamics, and green hydrogen developments and technologies. Here are some of the highlights:

- **A Reliable & Sustainable Energy Future.** In an opening speech, UAMPS CEO & General Manager Doug Hunter noted that energy resources must be both sustainable and reliable. Those two objectives create a great deal of debate and seem to be at odds but, in reality, both can be accomplished. And we have no choice but to address both objectives. Both are top priorities.


Doug Hunter

  Utility leaders understand the critical nature of reliability, Hunter said, especially as we're seeing more outages due to fires and weather events, along with growth in demand, which will be exacerbated in the future with the electrification of transportation.

  On the other hand, there is a great deal of discussion about the social costs of greenhouse gas, and governments and citizens are demanding clean energy. Taxes or sanctions may be imposed on fossil fuel generation. "The impacts are real," said Hunter. "We could have major stranded investment if concern over greenhouse gas shuts down fossil fuel production."

  Thus, dispatchable (always available) fossil fuel energy must be replaced by a carbon-free combination of intermittent renewable energy like wind and solar, and firm dispatchable energy like nuclear and other resources, Hunter said. "We can have a sustainable, reliable energy future with a mix of clean resources." Batteries, pumped storage and hydrogen may all play a role. The Carbon Free Power Project has the unique ability to follow load, he said, meaning it can complement wind and solar and provide reliable, clean energy at a very affordable price to ratepayers.

- **Embracing 100% Carbon Free Energy.** Keynote speaker Roger Ballentine, from Green Energy Strategies, Inc., said the underlying driver of the major disruption in the energy industry is climate change.

  
  Roger Ballentine

  With global rising temperatures and a four-fold increase in natural disasters, climate change is "whacking us on the side of the head," he said, forcing action.

  However, to hit climate goals, the world must cut greenhouse gas by 50% in the next 10 years, and the electric sector is the easiest target to decarbonize -- although still very difficult. It will require conservation, efficiency, demand- management flexibility, transmission/grid modernization, storage and, most important of all, clean generation.

  Drivers pushing toward clean energy will be federal and state policies requiring clean energy; next-generation technologies like small modular reactors; and major customers demanding clean energy. Wind, solar and batteries won't be sufficient to keep the grid reliable and clean. "The world is starting to recognize the value of firm, dispatchable, carbon-free resources" like the Carbon Free Power Project, Ballentine said.

  Major energy consumers like Google, Microsoft, Walmart and the federal government are demanding clean, dispatchable energy, Ballentine said. "This is where it's going. You must understand that this is real. But don't be intimidated. You don't need to sacrifice economics or reliability. You can still be both reliable and resilient. UAMPS is checking all the fundamental boxes of where this is going."

- **State Energy Policies.** A panel of leaders from state energy offices and utility associations strongly made the point that if wind and solar are going to become a larger part of utility portfolios, then the federal government must reform its policies for permitting transmission on federal lands. It's impossible to have both carbon reduction and reliability without new and better transmission policies. It takes 7-10 years to get approval for a new transmission line across federal land, and that's unacceptable, they said.

- **Green Hydrogen.** Billions of dollars are being invested to produce green hydrogen, said participants in a panel discussion on the potential of hydrogen. This fuel can be produced without carbon, which can power vehicles, ships, trains and airplanes, and used in industrial applications like manufacturing, mining, electricity generation and agriculture. Hydrogen today is expensive and most is produced using natural gas. But high demand and technology solutions will eventually bring costs down.

- **Bruce Rigby Earns Board Service Award.** Bruce Rigby was honored with his 10-year service award. He has served on the UAMPS board of directors representing Kaysville City since October 2011 and is currently the Horse Butte Wind Project chair, a position he has held since 2019. Bruce also served as the Hunter Project Chair from 2013 to 2015, and as the Veyo Project Chair from 2016 to 2018. UAMPS expresses its appreciation to Bruce Rigby for his 10 years of service on the board of directors.

Bruce Rigby receives service award from UAMPS Board Chair Jason Norlen

Industry Information & Developments

The Wall Street Journal: Utilities Eye Mini Nuclear Reactors as Climate Concerns Grow. U.S. utilities are looking to miniature nuclear reactors, as they seek a steady energy source that can help reduce the carbon emissions linked to climate change. While power companies have stopped building big nuclear reactors because of cost overruns and construction delays, not all utilities are giving up on nuclear power. The Utah Associated Municipal Power Systems, a consortium of city-owned utilities serving the Intermountain West, has joined with SMR developer NuScale Power and aims to bring six miniature nuclear reactors online by 2030, each producing 77 megawatts of electricity, or enough to power over 350,000 homes.

New York Times: Is There a Nuclear Option for Stopping Climate Change?
Opinion: Humanity's failure to avert the crisis of a warming climate is sometimes framed as a grand technological problem: For centuries, countries relied on fossil fuels to industrialize their economies and generate wealth, and it was only in recent years that alternative ways of powering a society, like solar and wind energy, became viable. But when it comes to electricity, at least, that story isn't true.

Today, the United States gets 60 percent of its electricity from fossil fuels and just 20 percent from renewables. The final 20 percent comes from nuclear power, a technology that has existed since the 1950s, produces no carbon dioxide and has killed far fewer people than fossil fuels.

Wall Street Journal Opinion: Small Reactors, Big Future for Nuclear Power . Far from merely being "shrunken nuclear reactors" with a smaller physical footprint, generation facilities will use advanced technology to operate at very low atmospheric pressure and use fuel and facility design that will be primarily "walkaway" safe. This is a tremendous step forward with small modular reactor (SMR) engineering that relies on gravity and other passive methods to ensure these generators cannot become dangerously overheated. Energy sources that are emission-free, safe and reliable are increasingly popular. Recent polling data from Quest Global Research shows that 76% of Americans strongly or somewhat strongly favor the use of nuclear energy as one way to provide electricity. Organizations that support many of the carbon-reduction goals being proposed and adopted increasingly recognize that without clean nuclear these goals cannot be met.

A New Frontier for Nuclear: Partnering With Utilities on Decommissioned Coal Sites. The use of retired coal plant "brownfield" sites comes with a number of perks for nuclear stakeholders, according to Dr. Jessica Lovering, founder of the progressive nuclear policy group Good Energy Collective. The sites are already zoned for industrial applications, have rail connections, are often near a water source and, crucially, come with transmission lines, which are virtually "impossible to site now," she said. "Many of the functions needed to run a new nuclear plant have direct analogs in coal plants." As utilities come to terms with the practical demands of net-zero requirements, interest in new nuclear projects has increased.

NuScale Power Secures Nearly $200 Million in Strategic Investments | NuScale Power. NuScale Power has announced that recent private capital investments from a diverse base of strategic investors total $152 million, closing out NuScale's A-5 round of investments, and bringing the company's total funding year to date to approximately $192 million. NuScale is a partner in UAMPS Carbon Free Power Project, providing the nuclear reactors. NuScale is the leading developer of a small modular reactor (SMR) that delivers scalable, safe and reliable carbon-free nuclear power. Since 2007, NuScale has invested hundreds of millions in the development and commercialization of its SMR technology, which includes both private investments and cost-sharing awards from the U.S. Department of Energy (DOE).

In Other News . . .


Dave Imlay

Dave Imlay Retires. Long-time UAMPS board member Dave Imlay is retiring after 29 years (1992 to 2021) of hard work and dedication with the Hurricane City Power Department. He has served on the UAMPS board since 2008 and chaired many projects, including Natural Gas Project, 2021; Central-St George Project, 2008-2010 and 2017-2019; Member Services Project, 2009-2011; Payson Project, 2012-2014; and San Juan Project, 2015-2016. A retirement party was held Aug. 26 at the Hurricane City Power Department. UAMPS wishes Dave well in his retirement and thanks him for his many years of service on the board.

If you have questions about UAMPS' plans for a carbon-free future, please email them to jackie@uamps.com.