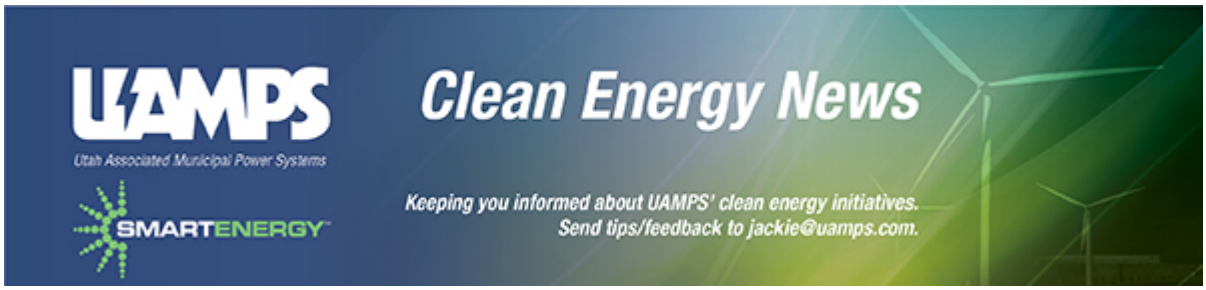

May 14, 2020

UAMPS Works Toward a Clean-Energy Future

Welcome to the third edition of Clean Energy News, a publication of UAMPS' SmartEnergy Initiative.

As UAMPS' members move toward a clean, carbon-free energy future, much of our effort has been focused on developing the Carbon Free Power Project (CFPP), the nation's first small modular nuclear reactor project.

However, no one should lose sight of our continued commitment to energy efficiency, conservation, and development of renewable resources like wind and solar. Indeed, an important purpose of the CFPP is to back up and enable additional renewable projects that are intermittent by nature.

The best of all worlds is a diverse, clean, carbon-free energy portfolio, comprised of a variety of renewable projects complemented by steady, affordable nuclear energy.

Articles & Updates

NuScale DCA Short Delay. On Friday, May 8, the Nuclear Regulatory Commission (NRC) informed NuScale Power in a letter that Phase 5 of the Design Certification Application review will require an additional month to complete, concluding in July rather than June. The reason for the minor delay is design changes NuScale will submit on May 20. Fortunately, this delay will have no impact on the UAMPS CFPP schedule.

In February 2020, NuScale engineers through normal quality verification activities identified that for a particular event scenario, there was a need for additional analysis to verify design margins. In keeping with NuScale's corrective action

program, they promptly notified the NRC.

Submission on May 20 is too late in the Phase 5 review to complete the NRC staff evaluation and ACRS review by the June 2020 milestone for Phase 5 completion. NuScale expects to complete the work and all NRC reviews to maintain the Phase 6 Final Safety Evaluation Report (FSER) issuance milestone date of September 2020. UAMPS has no concerns with the design changes or the slight delay in the NRC approval schedule.

The Center for Climate and Energy Solutions (C2ES) has written this letter to UAMPS member governing boards supporting the CFPP. It notes, in part:

> As the nation's first small modular reactor (SMR), UAMPS Carbon Free Power Project will be building on a solid half-century record of reliable, safe, emission-free nuclear power in the United States. And, since the early 1990s, nuclear has been consistently providing 20 percent of U.S. electricity, while helping to avoid millions of tons of carbon pollution and other criteria pollutants, e.g., nitrogen dioxide, particulate matter, and sulfur dioxide.
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> A strong body of scientific evidence underscores the imperative of decarbonizing the global economy in order to avoid the worst potential impacts of climate change. This monumental task will require reducing greenhouse gas emissions 80 percent or more by mid-century. To date, the U.S. has only managed to reduce its net emissions 13 percent below 2005 levels. That leaves a significant margin yet to account for.
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> Modeling to date clearly shows that we need nuclear power, renewables, carbon capture, and improved energy efficiency to achieve large-scale, economy-wide emission reductions. It is absolutely necessary to pursue all promising zero-emissions technologies with equal vigor. Importantly, the same modeling shows that a having a diverse, 100 percent carbon-free portfolio (e.g., SMRs, wind, solar, hydro and battery storage) is far more cost-effective in terms of total system cost and future electricity prices when compared to a renewables only portfolio (e.g. wind, solar, hydro and battery storage).

C2ES was formerly the Pew Center on Global Climate Change. Its mission is to advance strong policy and action to reduce green gas emissions, promote clean energy, and strengthen resilience to climate impacts.

Clean Energy For All. (By Matt Jones, interviewing Boise State economics professor Geoff Black about the CFPP, planned to be constructed near Idaho Falls, published in Boise State News).

> "It's going to be big," said Boise State economics professor Geoff Black. . . . Idaho is poised to become a hotbed of production for the most innovative, carbon-free nuclear energy technology in the world within the next few years – a new energy production facility (owned by UAMPS) will be developed by 2026 at the Idaho National Laboratory in Idaho Falls.
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> The new eastern Idaho development will rely on technology from NuScale Power, a leading innovator of SMR technology based in Portland, Oregon. The company received funding from the U.S. Department of Energy and it designed the world's first and only SMR to undergo design certification review by the U.S. Nuclear Regulatory Commission.
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> "NuScale's going to be the first to deploy these things," Black said. "And if we don't produce SMRs now, we'll be importing them from other places in no time. Why not create the jobs here?"

Smart Decarbonization: Public Power's Case for Generating Diversity and Affordability. The American Public Power Association has published a new e-book that compiles research from a variety of industry sources to show potential infrastructure needs, costs, and timelines to reach different levels of emission reductions or percentages of zero-emitting generation.

A couple of conclusions:

- Clean energy targets that exclude nuclear and hydro are not realistic. "Mandates that exclude these non-emitting fuel resources would make it more difficult to achieve clean energy targets."
- The goal should be emissions reductions, not a specific resource mix. "Combating climate change necessitates removing CO2 from the generation mix as much as possible. Policy decisions should be technology-neutral . . ."

What the COVID-19 Crisis Teaches About the Wisdom of Nuclear Energy (By Beverly Barnhart, published in Homeland Security Today)

> In the March 23 issue, **International Energy Agency (IEA) Executive Director Fatih Birol** discusses why we need nuclear power now more than ever. Birol notes that the "huge disruption caused by the coronavirus crisis has highlighted how much modern societies rely on electricity." Birol refers to the importance of "firm capacity" supplied by nuclear power – a term most commonly referred to in the U.S. as "baseload" power, or what the layman may consider uninterrupted, continuous power. In a time where we want to limit fossil fuel burning and increase use of renewables, baseload is a critical infrastructure issue. Wind and solar may be "free" in the sense that the "fuel" is readily available without cost (other than the equipment to harness it), but it is not, and never will be, continuous. The sun does not shine 24/7, nor does the wind blow all the time. Nuclear is probably the only carbon-free fuel that can currently support electrical baseload on a massive scale.
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> Birol states that now, in light of the coronavirus health crisis, as major industries and government workers move to telework, the need for uninterrupted power and energy security are greater than ever.

Planet of the Humans. Filmmaker and provocateur Michael Moore has released a lengthy documentary on some of the ecological impacts of renewable energy. Michael Shellenberger writes about it in Forbes magazine HERE.

Achieving Renewable Goals. (By Darrell Proctor, writing in Power Magazine) This article discusses setting targets for renewable energy and whether nuclear energy should be considered clean energy.

In Other News . . .

Safety Award of Excellence for 2019. The UAMPS member cities of Bountiful, Brigham, Hurricane, Lehi, Mt. Pleasant, Payson, Springville and St. George, along with Heber Light & Power and South Utah Valley Electric Service District, have all achieved the APPA's highest safety award. The Safety Award of Excellence recognizes public power utilities for safe operating practices that demonstrate protecting safety of employees is a top priority.

eReliability. Two more UAMPS members, Springville and St. George, have been honored for their electric reliability. These city utilities are in the top 25% of all utilities nationwide for System Average Interruption Duration Index (SAIDI), thereby qualifying for the 2019 Certificate of Excellence in Reliability.

Reliable Public Power Provider designations. Four UAMPS members have achieved 2020 Reliable Public Power Provider (RP3) designations from the APPA. They are Brigham City (Diamond), St. George City (Platinum), Santa Clara City and Lassen Municipal Utility District (Gold). RP3 designations recognize public power utilities that demonstrate proficiency in four key disciplines: reliability, safety, workforce development and system improvement. RP3 standards are high, and achieving these designations requires great effort.

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