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Planning for Higher Electrical Consumption

As UAMPS members forecast future energy needs, it's wise to consider the viewpoints of experts and thought leaders who believe electrical production will need to double or triple over the next couple of decades. To combat climate change, processes and industries currently powered by fossil fuels will need to be electrified.

Microsoft founder and philanthropist Bill Gates, who is spending billions of dollars to slow climate change, [told the Washington Post](#) that electrical production must become 100% clean, and then electricity must replace natural gas and fuel oil to heat homes and other buildings. Electricity must be used to power passenger cars and some industrial processes. Electrical production needs to increase about 2.5 times, he said.



Bill Gates

[In a recent speech](#), Dr Henri Paillere, head of the Planning and Economics Studies Section of the International Atomic Energy Agency, said de-carbonizing the power sector is important to deal with climate change. But transportation, buildings and industry represent 60% of carbon emissions, and they must also be de-carbonized. Abundant clean electricity can make that happen, with heavy industry, heavy trucks aviation and some industrial processes powered by hydrogen produced from nuclear energy and clean electricity.

To reach net-zero carbon emissions by 2050 will require dramatically more electrical energy, and it must be produced carbon-free.

Texas Lesson: Diversify, Interconnect, and Winterize. UAMPS members have worked hard to diversify their energy portfolios and interconnect with energy resources outside the region. The recent experience in Texas, [where massive winter storms caused widespread power outages](#) and angry criticism of electric utilities and political leaders, demonstrates the importance of interconnection and

diversified portfolios anchored by stable generation sources that are winterized to withstand 100-year weather events.

UAMPS members have worked hard to diversify and harden their resources and portfolios, with coal, natural gas, hydro, wind, geothermal, waste heat and solar all available, along with the ability to purchase power on the open market via robust interconnections to western grids. Additional resources are expected to come on-line for UAMPS members before 2030, including nuclear, more solar and wind, and additional waste heat. Battery storage is also being studied.

Electric grids are never completely secure from catastrophic natural disasters, but UAMPS customers can be confident that their public power agencies are as prepared as possible.

Update: Carbon Free Power Plant

CFPP Introduction Video.

A new video introducing the Carbon Free Power Project has been produced by UAMPS staff and Media Grabbers, a video production firm. It is designed to help potential participants understand the project, but is an excellent introduction for anyone to learn about the CFPP. The video provides a project overview, safety features of the NuScale power module, and



updates progress in project development, including reactor design approval by the U.S. Nuclear Regulatory Commission. It describes energy output and scalability of the project, transmission interconnection, reliability and dispatchability, power pricing, integration with renewables, and partnerships. The video can be viewed [HERE](#). Password is UAMPS4U.

NuScale Wins Innovation Award. NuScale Power, the provider of nuclear power modules for the CFPP and a key UAMPS partner, has won the Nuclear Energy Award from Rushlight Events. The award is designed to highlight innovation and groundbreaking initiatives and is given to the technological advancement that has contributed the most to improving environmental impacts through nuclear power generation. See NuScale press release [HERE](#).

KSL Highlights UAMPS' CFPP. [An article on KSL.com](#) outlines how UAMPS is “seeking to generate carbon-free alternatives to fossil fuel for electricity.”

Industry Articles & Developments

Earth Invades Mars Using Nuclear Energy from INL. The exciting and historic exploration of Mars by Perseverance, NASA's latest rover that landed on Feb. 18, [will be powered by nuclear energy](#). The tiny power plant uses a [radioactive generator made and designed at the Idaho National Laboratory](#) in Eastern Idaho where UAMPS' CFPP will



be located. It can power the rover for 14 years, much longer than is needed for the expected three-year mission. The power plant produces 110 watts of energy, enough to protect the spacecraft from freezing nights and winters hundreds of degrees below zero. The energy will also power Perseverance's instruments, tools, and other equipment. Some other Mars missions have been powered by solar energy, but NASA scientists decided to use nuclear energy because it is more reliable than solar.

Environmental Activists Support Nuclear. [New Yorker magazine takes an in-depth look at nuclear energy](#) through the eyes of environmental activists who support nuclear because it is clean, carbon-free, reliable and energy-dense. It is a well-balanced article and worthy a read.

Nuclear Power Poised for Resurgence. [From powermag.com and The POWER Podcast](#): “There has been a fundamental shift in the thinking around the world,” says George Borovas, head of Hunton Andrews Kurth's nuclear practice. Climate change is the No. 1 issue globally and “. . . even people that are environmental-minded—people that have been, in the past, anti-nuclear—are seeing that nuclear now is and should be part of the solution. . . . The small modular reactors—the SMRs—are very exciting . . . You have some wonderful technologies that are designed to operate in a different environment. They have much more passive systems, they have walkaway safety scenarios, and they're using technologies that have been around for a long time in a sense, but they're packaging them in a way that makes more sense for the evolving world that we live in. I think they hold a lot of promise.”

In Other News . . .

- Chris Hogge, Weber Basin Water Conservancy District's representative on the UAMPS board, is retiring the end of February. He has served on the board since 2005. We wish Chris well in retirement.
- The UAMPS board welcomes Darren Hess who replaces Chris Hogge as Weber Basin's new representative.
- We also welcome Cory Daniels as the new representative from Ephraim City. He replaces Ted Olson, who recently passed away.



Chris Hogge

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

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