

Engaging in a world of change
Colorado River Energy Distributors Association Board meeting
Jan. 30, 2020

In recognition of the significant strides we have taken to preserve the value of WAPA and the way of life of the communities we serve, the 2020 theme is Engaging in a World of Change.

- The partnerships and common goals we share are the foundation of a bright future that is stable and progresses WAPA toward a successful, relevant and valuable future.

Stability and progress at first glance sound antithetical to one another, but they are inextricably linked and, in reality, co-dependent on one another.

- We cannot be a progressive organization without stability in our purpose, finances, people and operations.
- We cannot be a stable organization without making progress in our ability to deliver on our mission in a changing energy world, modernizing our operations, securing our financing and developing our people into thoughtful, collaborative leaders capable of carrying on our legacy.

It is no coincidence that three of our six core values are directly tied to engagement:

- Listen to understand, speak with purpose.
- Seek. Share. Partner.
- Respect self, others and the environment.

Engaging at all levels pays dividends to WAPA and customers; it is vital we are present in discussions about the energy industry and with people who can control our destiny with or without our input.

We have, through frequent and respectful discourse and collaboration, found ways to better understand our customers, manage the many opportunities before us and develop better tools for communicating and working together that yield tremendous results.

We must make a concerted and purposeful effort to engage customers in their worlds and see firsthand their specific and unique needs, challenges and opportunities so we can optimally position ourselves to meet their needs in the future.

Accomplishments since 2013

We have made a number of accomplishments since I posed the 10 Big Rock questions to customers in 2014. None of these successes were achieved in a vacuum, and all required dedication, respect, communication, professionalism and a staggering amount of knowledge and expertise across the board.

The answers to the Big Rock questions are available on The Source, but to highlight a few:



- Returned about \$2 billion to the Treasury, helping pay down that debt and ease pressure on cash flow.
- Rates have held steady or declined for 80% of our customers.
- The Continuous Process Improvement Program topped \$93 million this year in mostly cost avoidance.
- Using drones and helicopter-assisted maintenance, we can avoid costs, reduce time spent on maintenance projects and avoid environmental impacts.
- Created a three-pronged reserve balance strategy to support purchase power and wheeling, capital expenditures and operations and maintenance.
- Submitted a report to Congress about the PPW authority to explain our need.
- Created and expanded upon an asset management program to help us make the right investments at the right time and the right place.
- Added real-time engineers to dispatch centers to meet a compliance requirement and the real-world need to evaluate system conditions more frequently and comprehensively.
- Increased our employee satisfaction in virtually every area for the past five years.
- Leveraged unique hiring capabilities for hard-to-fill positions.
- Embarked on new and more modern recruitment efforts to motivate people to apply to WAPA.
- Improved retention of employees by adding new work-life programs for employees, like telework and flexible hours (for applicable positions), ensuring career progression opportunities and offering leadership development programs.
- Gained support for increased appropriations from DOE starting in fiscal year 2021 and are currently coordinating with OMB.

New requirements in the new decade

The more efficient we become, the better we will be able to hold down rates and meet the changing requirements. Cost savings and avoidance through continuous improvement allows us to redeploy limited resources to other pressing priorities, ensuring we are spending money and time on the right programs and requirements, including:

- Spending about \$160 million of investment into our system each year.
- New records managements laws and regulations.
- Continued scrutiny and demands of integrated vegetation management and reduced vegetation and powerline interactions
- Increased need to protect our physical and cyber systems from threats.
- The rise of markets in the West.
- New Critical Infrastructure Protection standards from the North American Electric Reliability Corporation.
- Ever-growing demand for more network capacity.

Value of hydropower and WAPA

As baseload generation resources continue to retire, hydropower and by extension WAPA, will become more critical.



- Hydropower is the ultimate generation source, providing both grid stability and low-cost and renewable energy, which is a combination not present in any other form of electric generation today.
- Hydropower is the proverbial goose that laid the golden egg: it pays not only for itself through power rates, but also supports the other critical missions of the dams.
- Hydro is one of the main remaining baseload resources—the supercomputer of the energy world, given its unique black start capabilities and low-carbon emissions.
 - Large, rotating mass, not just energy, is necessary to maintain grid reliability and provides critical capacity resources. This mass cannot be met by intermittent resources, which provide only energy, and on average, at significantly less output than nameplate capacity.
 - Hydropower helps provide stability to the increasing fragility on our grid as other large inertial masses leave the system, such as coal and nuclear. Hydropower also possesses flexibility in its ability to ramp up and down generation as needed.
- Hydropower continues to be the ideal partner to wind, solar and (potentially) battery storage.
 - As we have seen in our participation in the Southwest Power Pool market, hydropower is providing backbone base resources that allows for system stability, moderating costs to consumers and improved river and dam operations.
 - In fact, much to our surprise when we entered the market in 2015, hydropower acts as a base resource allowing wind to capture more and more of the energy component.
- Hydropower is also a common blackstart unit, critical for bringing the grid online after mass power outage or system disturbance.
- Finally, hydropower is also critical in terms of national security, providing Blackstart capabilities, resiliency and direct power supply to many of the nation’s military bases and national laboratories.

The challenge for society is how to quantify the value of hydropower beyond traditional means, which places preeminent value on energy.

- The challenge is exacerbated by the current crash of spot market prices, which pressures fossil resources to disappear and take with them their carbon and related issues but also their value in keeping the lights on.
- How do we ensure the capacity, reliability, black start capabilities and other operational benefits of hydropower—ignored in today’s market structure—are appropriately and adequately compensated?

WAPA and markets

- Last year, we decided to move toward energy imbalance management solutions as our hydropower resources in the Western Interconnection are anticipated to no longer be able to meet the real-time demands of a more variable energy mix.
 - This will be the most important activity before us in 2020 after keeping the lights on and the power flowing.



- You will receive specific information on where we are in that effort today.

In terms of markets, WAPA is a major player. Any serious market initiative in the West would have to involve WAPA due to our sprawling transmission system.

We have power as WAPA. We have influence to shape the future of the energy industry, even without load.

- It is our responsibility and obligation to use that power and influence to benefit our mission and our customers.
- We must be involved in the other matters that affect WAPA, the grid and our customers. Failing to do so is equivalent to failing at our mission because we must proactively carve a place for preference power in the future. That place is not guaranteed.

We secure a spot for WAPA and preference power by engaging with the many players in the energy industry. We engage with:

- Our entire customer base to understand and help meet their unique needs;
- The generating agencies, DOE and other federal partners who have their own mandates;
- Congress who, in many cases, barely knows who we are;
- Neighboring utilities that need us to move forward to their own bright futures; and
- Regulators who expect compliance.

I am confident that together, WAPA and customers will continue the collaborative and fruitful discussions and activities to make our intertwined futures a continued success. We may not always agree, but with respectful dialogue, continuous engagement and understanding of everyone's needs, we can continue to navigate this changing world and define a relevant and valued future for all of us.

Personnel updates

We have a new Senior VP and Chief Information Officer: Mike Montoya. He has been acting in this position for a while, and I have full confidence he will continue to modernize our IT functions.

Senior VP and Chief Financial Officer Dennis Sullivan will be retiring at the end of February. We will announce acting CFOs next month while we search for a replacement.

The Senior VP and Desert Southwest Regional Manager position closed a few weeks ago.

