Thank you all for joining us for this workshop.

We are here to continue discussions on how we are going to prepare for a future with markets.

This is our third markets meeting in six years. Some of you have been to those meetings; for others, this is your first time.

Deciding what to do about markets is the most important issue facing WAPA and is likely the most important initiative in my time as Administrator.

At our annual customer meeting in December, we received multiple requests to have more conversations about markets.

Unlike previous meetings, which were more educational, this meeting is a workshop to openly discuss our share our goals and objectives regarding markets and our joint future.

Everywhere we look, the industry is undergoing significant changes:

- Reliability Coordinator service transition
  - You will hear more about this today.
- New regulations
- Changing fuel mix
- Emphasis on security and resilience
  - This should be a priority for all of us, not just FERC and DOE

Nearly every day a new state, locality, utility or major corporation announces their commitment to a renewable-only or carbon-free future.

Although fuel demands are shifting, they will not shift enough to meet the peak generation of wind, which is typically in the early hours of the morning.

- ERCOT: 56 percent wind penetration at 3:10 a.m.
- SPP: 62 percent wind penetration at 1:54 a.m.
- CAISO: 64 percent wind & solar penetration at 2:28 p.m. (carried by solar)

As more renewables are interconnected to the grid, we need a better strategy to manage the variable generation that is prevalent when we do not need it.

We need to remain agile in these changing times and not assume that what worked well yesterday will continue working tomorrow.

Our market goals in the energy frontier are simple:

- Take control of our own destiny
- Identify and travel a path we choose
- Gain advantageous market access for our customers
• Preserve the benefits of our transmission system
• And most importantly, protect your investment in WAPA, its assets and the generating agencies’ assets

These are lofty aspirations without measure or specificity on what a path looks like or where the desired end state lies. That is why we are here.

If we do not take control of our own destiny, our path will be decided for us, likely to the detriment of our customers, the value of hydropower and transmission and the organization as a whole.

Markets are inevitable. We have seen the developments in California and in various collaborative efforts designed to find more efficient ways of dispatching resources:
  o Southwest Market Alternatives Group
  o Mountain West Transmission Group
  o Multiple reserve sharing groups – like the Northwest Power Pool.
  o SPP WEIS
• Trading partners are decreasing.
• Load demands are flattening. What loads are is changing as well due to the popularity of electric vehicles.
• In a market or working with a market, we need to determine how to receive appropriate compensation for our transmission services and how to transition from contract paths to flow gates.

These developments beg the question of the bigger picture – what would a full market or markets in the Western Interconnection look like? What would serve WAPA and its customers best?

There are other changes that are also proving to be an existential threat, or opportunity, for the utility business.

Battery storage
• First battery storage connected to WAPA system in Colorado, in partnership with United Power Cooperative, occurred in December.
• Biggest technology disrupter customers are facing right now.
• We want to work with our customers to identify opportunities to interconnect transmission-scale battery storage to WAPA’s system.
• We seek to take advantage of the benefits it would offer, including balancing load, increasing resource diversity and managing the variability of water.
• We have zero interest in owning this storage asset, just like we have zero interest in owning a wind or solar farm.

Disruptive Innovation
• Advances in artificial intelligence
• Blockchain
• Consumer choice and control
• “Electrification of Everything”
Taken together, these changes will create a grid that is smarter, more complex and more integrated than ever before.

In 2014, we released Strategic Roadmap 2024, which identified our goals over the next 10 years.

As we come closer to 2024, we are continuing to work on Business, Technology and Organizational Excellence.

Now, we are increasingly finding new opportunities for mutually beneficial partnerships and evolving our services to meet your needs in the future.

Accommodating markets is one of the opportunities before us.

In the recently refreshed Tactical Action Plan, one of our four Strategic Target Areas is Mission Critical Customer Services in an Evolving Industry.

For the next two to three years, that target area is about markets in the West, and this meeting is one step in that effort.

These conversations and plans for the future support a connected WAPA that is agile, responsive and engaged with our customers and the issues surrounding us.

Today is an opportunity for us to look into the crystal ball together, to share our thoughts and talk collaboratively about the common objectives and goals we share for the future.

We appreciate your active participation. There are no pre-determined solutions here, and we encourage open dialogue and lively debate about the best future for WAPA and our customers.

Together, we will help take control of our destiny in a dynamic energy frontier.

Customers and WAPA have achieved success by working together. Let us find that successful path again today.