Reflect, Recharge, Resolve

Mid-West Electric Consumers Association
Summer Board Meeting
June 23, 2022

Lori Frisk
VP of Power Marketing
Upper Great Plains Region
Agenda

• WAPA-wide overview
  • Leadership updates
  • FY 2022 theme
  • Strategic Plan update
  • Critical issues

• UGP update
  • Leadership update
  • Markets
  • Generation
  • Rate process
  • Contracts and Energy Services
  • Renewable Energy Credits
  • Polar Vortex update

We are WAPA

Mission

Safely provide reliable, cost-based hydropower and transmission to our customers and the communities we serve.

Vision

Empowering communities, securing a resilient energy future.
Leadership updates

• Rodney Bailey selected as Senior VP and CRSP Manager.
• New Senior VP and TIP Manager Paul Schwabe.
• Jack Murray selected as Senior VP and DSW Regional Manager.
• Acting Executive VP and COO Tina Ko from BPA.
• Ron Klinefelter is acting Senior VP and General Counsel.
FY 2022 theme

REFLECT
• Mission and vision
• Core Values
• Transparency commitments
• Recent successes
• 45-year anniversary

RECHARGE
• New strategic plan
• Future work environment
• Renew our connections & collaborative partnerships

RESOLVE
• Define our future
• Solve today’s challenges
• Evaluate opportunities
• Make best decisions for regions, customers, WAPA and our mission
Strategic Plan progress

• Senior Leadership Team reconvened in late April to incorporate feedback from WAPA mid-level managers on the proposed strategic themes and long-term results.

• More discussion was needed on WAPA’s purpose and value proposition to ensure that our proposed strategic themes and objectives help WAPA continue to provide valuable products and services to our customers in 2030.

• Senior Leadership Team meeting this week to continue discussions.

• We will continue to engage with you as this process moves along.
COVID-19 and Future of Work

- Re-entry completed April 24.
- Pilot project will maximize telework opportunities for employees based on position, performance and desire to work from home.
- Travel and visitor restrictions lifted.
- Visitor requirements and guidance available on the wapa.gov COVID-19 webpage.
Drought Map – June 14, 2022

Map from University of Nebraska-Lincoln Drought Monitor for June 14, 2022.
Markets in the West – WEIS & SPP RTO-West

SPP Western Energy Imbalance Service market
• New members joining: PSCO, Black Hills & Platte River.

SPP RTO-West
• Membership updates: Colorado Springs Utilities 2021; Platte River 2022.
• Performing an updated market benefits study (Brattle Study). Results due in late summer.
• If we propose a decision to move forward, we will initiate a public process in a Federal Register notice in summer/fall 2022.
UGP Update
UGP leadership update

• Lloyd Linke is the UGP Senior VP and Regional Manager.
• Mark Kress is the VP of Maintenance.
• Gayle Nansel is the VP of Operations.
• Lori Frisk is the VP of Power Marketing.
• Steve Sanders is the Strategic Advisor.
SPP WEIS Market participation – UGP experience and benefits

- Provides load following within the WAPA West Balancing Authority Area (WAUW BAA) every 5 mins.
- Increases efficiency of selling of surplus or buying of energy during tight market conditions within the operating hour.
- Reduces manual transaction timing dependencies within the operating hour.
- Slight increase in trading partners in the Western Interconnection.
- The first year of operations in the WEIS included impacts related to the “conservative operations,” which reduced the financial positive impacts of the WEIS for UGP.
- Now UGP always has an outlet for our generation resources.
- Pricing has tended to be less volatile during MCDC outages.
- Increased our “tools in our toolbox” to ensure more efficient utilization of generation resource.
- Increase in economies of scale in acquiring the resources from the expanded pool.
- Increase in assisting WACM BA with imbalance service requirements.
- Increased collaboration between WAPA regions in meeting Resource Adequacy requirements for all parties.
SPP WEIS Market participation – UGP experience and benefits (Cont.)

- UGP participates in the WMEC, which is the advisory and policy making committee for WEIS. WAPA holds voting rights on the WMEC.
- UGP holds voting rights on the WMWG, which recommends tariff and protocol changes to WEIS.
- WEIS helps address issues and limitations related to the rapidly changing generation mix.
- WEIS, with its added flexibility, and economy of scale is helping to accommodate operational balancing requirements with the addition of renewables in the WAPA BAAs.
- WEIS has created competitive options and helped prepare WAPA regions for a potential Day-2 Fully Integrated Market (FIM) in a Regional Transmission Organization (RTO) or another construct.
- Digestible change step between where we were (bilateral market) and the next-step option of pursuing a FIM migration.
- Allows for controlled migration in tools, processes, and employee skills for the next step in energy markets for these WAPA regions.
Potential SPP RTO-West – UGP expected benefits

Expand its participation/membership.

• Extend the SPP Integrated Marketplace into the WAUW BAA footprint and merge its WAUW BAA into the SPP BAA with SPP assuming the balancing authority responsibilities.

• No longer have responsibility to provide regulation, load following and frequency response for the BAA.
  • The hydro resources used for those services would be utilized to fulfill the obligations of our long-term power contracts.
Missouri River mainstem system forecasted energy generation

Upper Basic: 7,200 GWh
Basic: 7,100 GWh
Lower Basic: 7,100 GWh
Mainstem system generation
(in million megawatt-hours)

June 1, 2022 Forecast
Upper Basic: 7.2
Lower Basic: 7.1
On June 20, 2022, the mountain Snow Water Equivalent (SWE) in the "Total above Fort Peck" reach is 2.2" and 16% of the annual peak remains. The mountain SWE in the "Fort Peck to Garrison" reach is 2.6" and 20% of the annual peak remains. The normal peak for both reaches occurs near April 17. The "Total above Fort Peck" reach peaked on April 29 at 13.5" SWE and 85% of the normal peak. The "Fort Peck to Garrison" reach peaked on May 3 at 13.4" SWE and 92% of the normal peak.

System storage comparison

*In January 2011, the Base of Flood Control was 56.8 MAF, and the Top of Exclusive Flood Control was 73.1 MAF.

Fort Peck elevation

*In 2011, the elevation in Fort Peck exceeded the Top of the Exclusive Flood Control zone by 2.3 feet.
Garrison elevation

*In 2011, the elevation in Garrison exceeded the Top of the Exclusive Flood Control zone by 0.5 feet.
Oahe elevation

[Chart showing Oahe elevation over time with key elevations and months indicated]

Maximum (1969-2020)
Top of Exclusive Flood Control (1620)
Base of Exclusive Flood Control (1617)
Average (1969-2020)
Base of Flood Control (1607.5)
Minimum (1969-2020)
(Base of Multiple Use/Carryover = 1540)

Month:
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec

Elevation (Feet):
1625.0
1615.0
1605.0
1595.0
1585.0
1575.0
1565.0
Drought outlook

U.S. Seasonal Drought Outlook
Drought Tendency During the Valid Period

Valid for June 16 - September 30, 2022
Released June 16

http://go.usa.gov/3eZ73
2023 rate adjustment schedule

• FRNs on proposed rates published.
• Public Information Forum scheduled for June 15.
• Public Comment Forum scheduled for June 29.
• More information on proposed rate available on UGP website.
Contracts and Energy Services

• New 30-year FES contracts began Jan. 1, 2021.
• Kicked off the FES Exhibits B & C Project with 350 FES customers.
  • Exhibit B – Operating Agreement Including Quantitative Determinations
  • Exhibit C – Transmission Path and Delivery and Measurement Conditions
• Contract & Energy Services staff starting with ND, SD, IA, MN, MT then NE.
  • Some of the FES customer contracts are much more complex.
  • Some also require updates to their Consolidated Facility Arrangements (maintenance) and Interconnection Agreements.
• Estimate project will continue through 2023.
• Contact Contracts & Energy Services Manager Nancy Senitte; senitte@wapa.gov; (406) 545-9284.
Renewable Energy Credits Program

• Held two informational REC meetings with FES customers Dec 2021.
• Outlined UGP REC principles.
• Completed Contracts with generating agencies.
• Registered generation in the M-RETS System.
• M-RETS approved our waiver for 2020 and 2021 generation data.
• Next steps:
  • Calculate FES customers’ proportionate share of RECs.
  • Issue RECs first quarter of 2023 for the calendar year 2022.
• Contact Contracts & Energy Services Manager Nancy Senitte @ senitte@wapa.gov (406) 545-9284.
Polar Vortex update

- Price risk mitigation steps.
- Load shedding improvement.
- Developing load shedding plan.
- Energy emergency communication.
Polar Vortex – Price risk mitigation steps

• Worked with Corps of Engineers on process for releasing additional water during reliability events.
• Reviewed internal UGP processes and procedures.
• Work with SPP on options for protecting UGP’s customers in the future.
• Making bilateral power purchase arrangements to protect against exposure to potentially high market prices (e.g., during Winter 21-22).
Polar Vortex – Load shedding improvement

• Utilize an email exploder to send the required load shed amount to UMZ load-serving entities.
  • Have gathered emails.
  • Plan to do testing of broadcast during our Spring training in April.
• WAPA will operate customer’s approved, non-critical load breakers, if needed.
• WAPA will split the load sheds between the load-serving entities on a fair and equitable manner (based on load ratio share) as best we can.
• Not a one and done. Will be looking for continued process improvement. New Advanced Apps project may provide more opportunity for improvement.
WAPA has been coordinating one on one with load-serving entities with >10 MW of load to identify:

- Critical loads (hospitals, gas plants, pipeline, etc.).
- Loads available for manual shed (independent of UFLS).
- Breakers available for WAPA TOP to open, if needed.
  - SPP expects WAPA and the load-serving entities to implement our required load shed within 30 minutes or less.
  - May be no time for notification.
- Information will be updated annually.
Energy Emergency communication broadcasts

• Will broadcast to email contacts collected from the SPP Energy Emergency Alerts.
  • Email exploders will be a cut and paste of SPP-directed Emergency Actions.
    • Include specific directions added for each action.
    • If an Emergency Actions call for manual load sheds, a spreadsheet will be provided that will show granularity of directed manual load sheds for each UMZ load serving entity.
  • Will be asking for acknowledgement of email of EEA3 from >10 MW load-serving entities.
  • Plan to test the emails during our upcoming Spring training sessions in April.
  • SPP quarterly simulated testing of load shed should allow us to keep emails up to date going forward.
SPP grid conditions

- [https://www.spp.org/markets-operations/current-grid-conditions/](https://www.spp.org/markets-operations/current-grid-conditions/)
- The following chart shows the relative severity of the Resource Advisory in effect from 4 p.m. CT Tuesday, June 21, 2022, through 8 p.m. CT Friday, June 24, 2022.
Questions