Reflect, Recharge, Resolve
2022 WAPA Update

Gayle Nansel
VP of Operations for UGPR

Upper Missouri Power Cooperative
Annual Meeting
April 7, 2022
WAPA-UGPR 2022 Update

- WAPA-wide Overview
  - Leadership Update & Overview
  - Drought
  - Markets in the West
- UGP Update
  - Leadership Update
  - Rate Process
  - Contracts and Energy Services
  - Polar Vortex Update
  - Transmission 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 acting as Senior VP and CRSP Manager for 120 days followed by Adam Arellano for another 120 days.
- Paul Schwabe is the new Senior VP and TIP Manager.
- Ron Klinefelter is acting General Counsel.
- Jack Murray is the new Senior VP and DSW Regional Manager.
- Tina Ko is acting Executive Vice VP and Chief Operating Officer.
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
Drought – 3/29/2022
Markets in the West update -- Timing and decision process

SPP Western Energy Imbalance Services (WEIS) Market

- New members joining:
  - PSCO, Black Hills, Platte River

SPP RTO-West

- Colorado Springs Utilities looking to join
- Platte River evaluating joining
- Performing an updated market benefits study (Brattle Study). Results due in late May.
- If we propose a decision to move forward
  - Administrator will make decision to move forward.
  - Public Process to seek comments.
  - Issue a Federal Register Notice in mid 2022.
UGP Update
UGP Leadership

• 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.
2022 Missouri River Mainstem System Forecasted Energy Generation

Upper Basic: 7,300 GWh
Basic: 7,200 GWh
Lower Basic: 7,200 GWh
Mainstem System Generation
Million Megawatt Hours

April 1, 2022 Forecast
Upper Basic: 7.3
Lower Basic: 7.2
On April 3, 2022 the mountain Snow Water Equivalent (SWE) in the “Total above Fort Peck” reach is 12.0” and 75% of the (1981-2010) average. The mountain SWE in the “Fort Peck to Garrison” reach is 10.1” and 71% of the (1981-2010) average. The normal peak for both reaches occurs near April 15. The 30-year average lines (1981-2010) for both reaches will be updated when the data becomes available to (1991-2020).
2023 Rate Adjustment Schedule

1. Informal meetings Feb/March 2022
2. FRN Proposals Published ~mid-May 2022
3. Formal Information and Comment Forums June 2022
4. Final FRNs Approved November 2022
5. Final Rates 30-Day Notice NLT December 1, 2022
6. New Rates January 2023
P-SMBP--ED UGP Composite Proposed Base and Drought Adder
P-SMBP--ED UGP Composite Rate
Contracts and Energy Services


• Kicked off the FES Exhibits B & C Project.
  • New Exhibits being offered to over 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 the B&C Project will continue through 2023.

• Questions Contact Contracts & Energy Services Manager Nancy Senitte @ senitte@wapa.gov (406) 545-9284.
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.
  • Have started 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.
Development of Load Shedding Plan

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.
UGP Transmission Operations

UGP is a NERC registered Transmission Operator in both the Eastern and Western Interconnection and a registered Balancing Authority in the Western Interconnection.

- Staff a control center in Watertown SD with NERC certified system operators.
  - A North Area Desk, a South Area Desk, a BA Desk and a Real-time Engineer Desk
- Operators monitor substations and transmission lines, including those under the functional control of SPP and included in the Upper Missouri Zone.
- WAPA-UGP System Operators coordinate with the respective Facility Transmission Owner on many items including outage coordination.
  - Prior to the summer and winter season, an updated seasonal operating study is done for the Bakken Western North Dakota area
  - Updated Operating Guide documenting prior outage limitations is developed based on the Operating study and submitted to SPP RC.
TOP Services - NERC and Regional Reliability Organization Compliance for BES Facilities

Normal Transmission Operations
  • Real-time Monitoring
  • Real-time Assessment
  • Operational Planning Analysis for next-day operations

Emergency Transmission Operations
  • Emergency Operating Plans
  • EOP Event Reporting
  • Blackstart and System Restoration

System Operating Limits for the Operating Horizon

Coordination with the Reliability Coordinator
Host TO and WAPA TOP Study Requirements

• If WAPA is the HTO for the AQ request, WAPA’s General Requirements for Interconnection (GRI) will apply.
  • The AQ request application satisfies the WAPA’s GRI application need.
  • WAPA collects a $20,000 deposit to support its work on the AQ request. This includes the coordination with IC, LCS, facility evaluation and contract development if needed.
  • WAPA targets completion of the LCS within 60 days receiving the deposit.
  • WAPA coordinates results with the IC and SPP.

• If WAPA is not the HTO, WAPA as the Transmission Operator (TOP), will complete an operating study of the system modifications to determine if mitigation is needed to maintain system reliability under system intact and prior outage conditions.
  • No fees or deposits collected for this. This is a service WAPA provides as TOP.
  • WAPA requests that AQ requests be sent to WAPA even if WAPA is not the HTO so that WAPA can be aware as the TOP.

• Questions on WAPA study requirements can be directed to Dirk Shulund at shulund@wapa.gov
SPP Transmission Planning

• Integrated Transmission Planning (ITP) process
  • An annual planning cycle that assesses near- and long-term economic and reliability transmission needs
  • Produces a 10-year transmission expansion plan each year
    • Combining near-term, 10-year, and NERC transmission planning (TPL-001-4) assessments into one study
  • Performs a 20-year assessment once every five years unless otherwise directed by the SPP board of directors
  • Target a reasonable balance between long-term transmission investments and congestion costs to customers
  • Works in concert with SPP's existing subregional planning stakeholder process and continues in parallel with the NERC TPL-001-4 compliance process

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SPP 2021 ITP Report Final – NTC issued

- Increase clearances and upgrade terminal equipment on the Oahe - Sully Buttes - Whitlock - Glenham 230 kV.
- Terminal upgrades at Hinton 69kV
- Reconfigure the Moorhead 230 kV substation
- **East & north of Lake Sakakawea**
  - Build a 71 mile 345 kV line from Leland Olds to Finstad.
  - Build a 48 mile 345 kV line from Finstad to Tande.
  - Expand Finstad to accommodate 345 kV terminals, installing a 25 MVAR switched shunt and parallel 345/115 kV transformers.
  - Build a 5 mile 115 kV line from Finstad to Vanhook.
  - Install a 150 MVAR STATCOM at the 115 kV East New Town bus.
- **West & north of Lake Sakakawea**
  - Tap the 345 kV line from Judson to Tande approximately 18 miles from Judson at 115 kV East Fork.
  - Build a new 4.5 mile 115 kV line from NE Williston to Folvag.
  - Install a 15 MVAR capacitor bank at the 115 kV Squaw Gap.
- **South of Lake Sakakawea**
  - Build 36 mile new 345 kV line from Kummer Ridge to Roundup.
Questions
Contact information

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