WAPA’s position on markets and industry trends

North Iowa Municipal Electric Cooperative Association
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WAPA: Who we are

Federal Hydropower
- Market 10,503 MW of power from 56 dams
- Buy and sell power to provide firm electric service

Transmission System & Service
- 17,000+ miles of transmission lines
- Operate 3 balancing areas
- 15-state operating region

Transmission Infrastructure Program
- Separate $3.25 B borrowing authority
- Projects must facilitate renewables
- Projects must have a terminus in WAPA’s footprint
WAPA: Where we are
Change is upon us

WIND-PENETRATION RECORD
54.22% AT 00:55
ON MARCH 19, 2017
Change is upon us

Oahe Generation: Actuals
April 9, 2016 (4-second data)
Change is upon us

Oahe Generation: Actuals
2015 v. 2016
Making market decisions

• Have studied RTO participation since 1990s
• Began evaluating SPP in 2011
  • Examined three options
  • Six criteria across each option and risk
    • Trade benefit
    • Administrative costs
    • Transmission expansion
    • Capacity benefits
    • IS transmission revenue
    • Drive out impacts

• Joining offered the least risk and most benefit to customers
• Same matrix resulted in decision NOT to join CAISO (2015)
Mountain West

- Formed 2013
- Evaluating options
- Announced decision to pursue talks with SPP
- Making decision within 60 days
- If applicable, market implementation 2019
Southwest Power Pool
Change brings challenges

- Aging infrastructure
- Increased regulation
- Intermittent resources
- Decreased hydro production
- More customer-side resources
- Changing markets
- Security
Fundamental change

The challenge for the utility of today is not only what is real but what is perceived as real.
Home tech drives benefits

4.92 billion wireless devices globally / 66% penetration

Source: Hootsuite, January 2017
Radical thoughts ...

• kWh is dead
• All-you-can-eat electricity
• Time-of-purchase rates NOT time-of-use rates
• Flexing your distribution system with customers
• Utility is the network provider
Economic challenge

How can we manage in a Twitter–centric world?
What are we doing about it?
Shift in strategic thinking

- Broader perspective
- Data-driven decisions
- Industry impacts to customers
Lifecycle considerations
Increasing requirements

- Investments in Security
- NERC requirements
  - CIP version 5
  - Audits, mock audits
  - Alerts
  - Standards
  - FAC-003 & FAC-008
  - NATF peer reviews
- FITARA
- FISMA modernization
- OMB Circular A130

- New endangered species
- DHS binding operational directives
- OSHA requirements
  - Fall Protection 100% attachment
  - Transient over-voltage compliance
- Formalized grounding cable procedures
- GPR monitor for t-lines
Cost containment

CPI projects: $2,729,766
FEDERAL REGISTER
ex: Federal Register Notice Process

Just Do It projects: $1,391,871
ex: Oil-filled equipment disposal (SN)

WAPA Strategic Initiatives: $29,954,086
ex: AmpJack Tower Raising

Total WAPA Cost Savings and Avoidance: $34,075,723 as of March 31, 2017
Key takeaways

Focus on value and business excellence.
Be aware of industry trends and changes.
Continue delivering on mission.
Contact/follow me

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