WAPA’s position on industry trends and changes

Upper Great Plains customer tour
December 2017

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Administrator and CEO
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
56.25% at 5:20 a.m.
on Dec. 4, 2017
Change is upon us

April 9th Comparison for Oahe Generation

4-second data for hours ending 1 - 24

2015  2016  2017
Mountain West

- Formed 2013
- Evaluated options
- Announced decision to pursue talks with SPP
- Making decision soon
- If applicable, market implementation 2019
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
ex: Federal Register Notice Process

Just Do It projects: $23,229,957
ex: Conservation Strategy (SN)

WAPA Strategic Initiatives: $28,002,492
ex: AmpJack Tower Raising

WAPA cost savings and avoidance: $50,000,000+ as of Sept. 30, 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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