



Western  
Area Power  
Administration

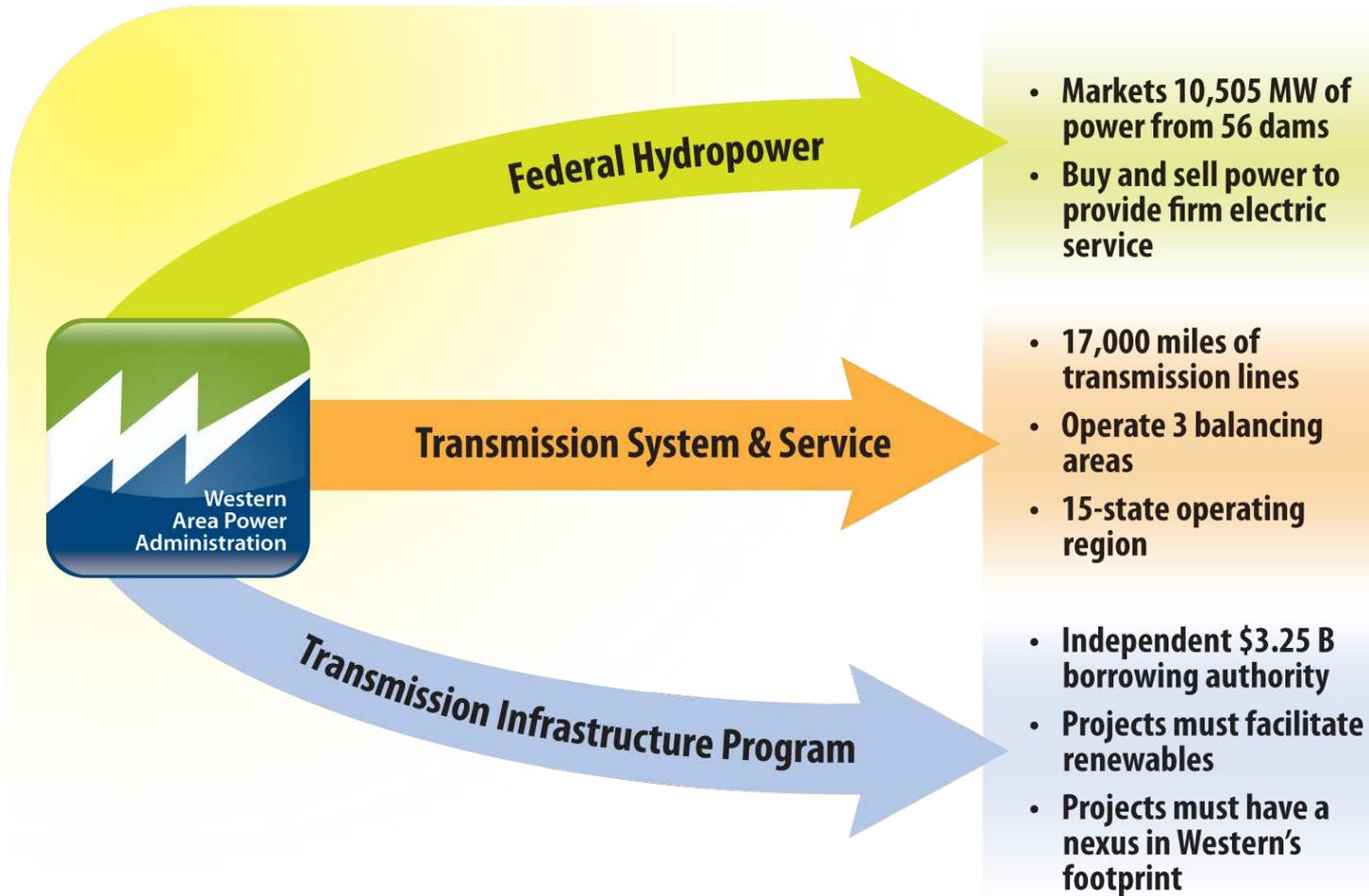
# Nevada Rural Electric Association

September 29, 2016

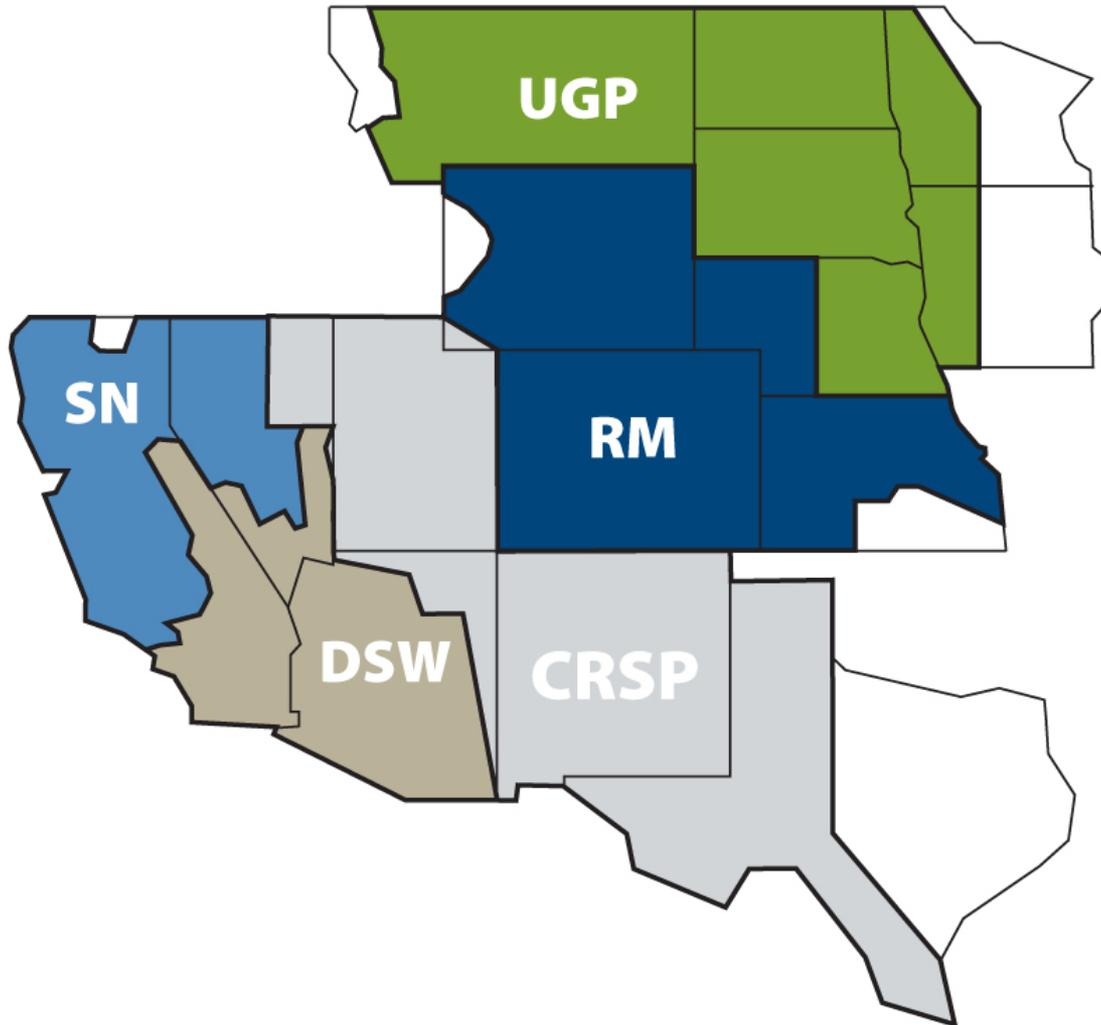
Steve Johnson  
*Manager,  
Energy Management and Marketing  
Office,  
CRSP MC*

Las Vegas, NV

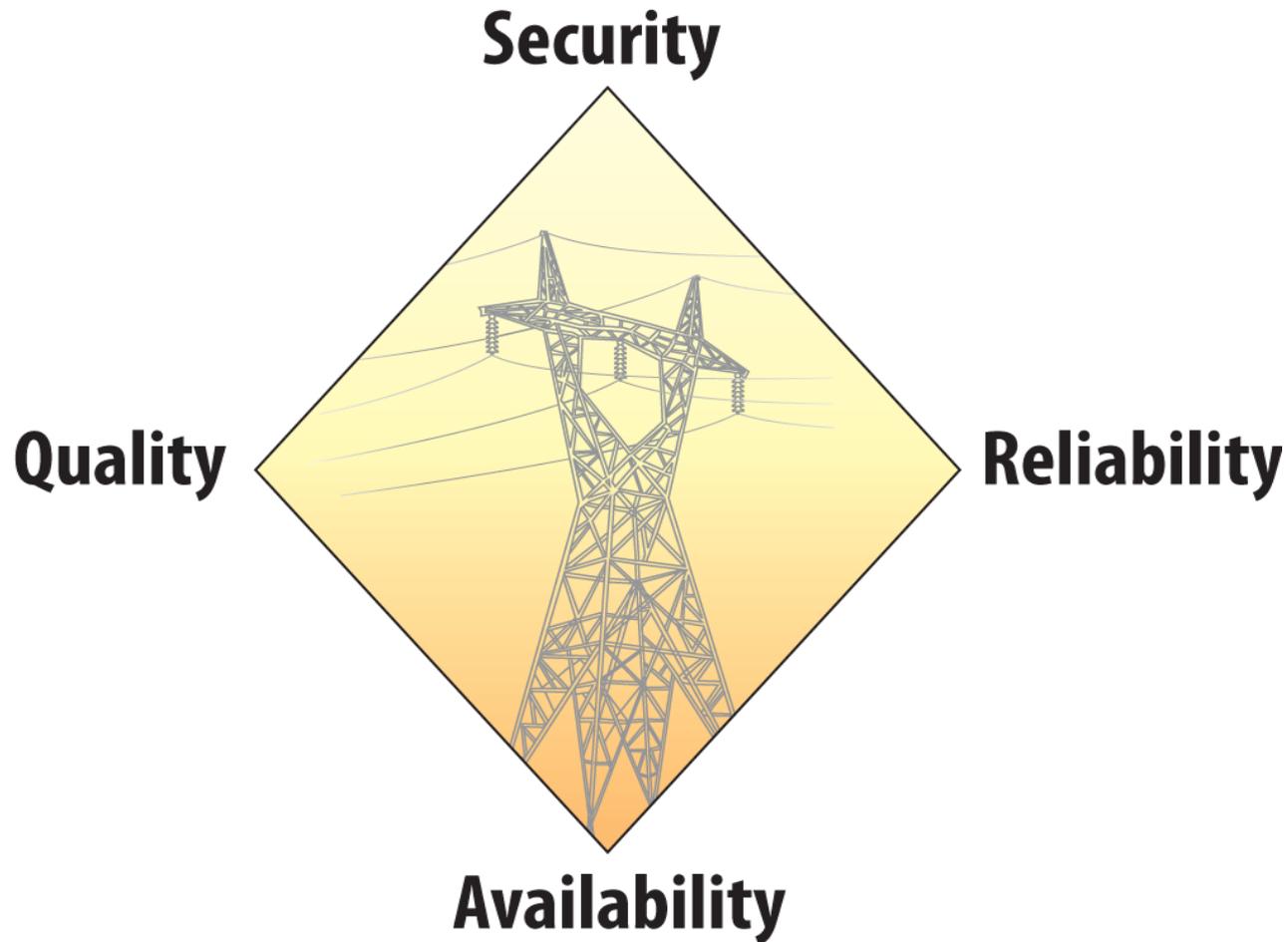
# Three Lines of Business



# WAPA's Footprint



# Balancing needs

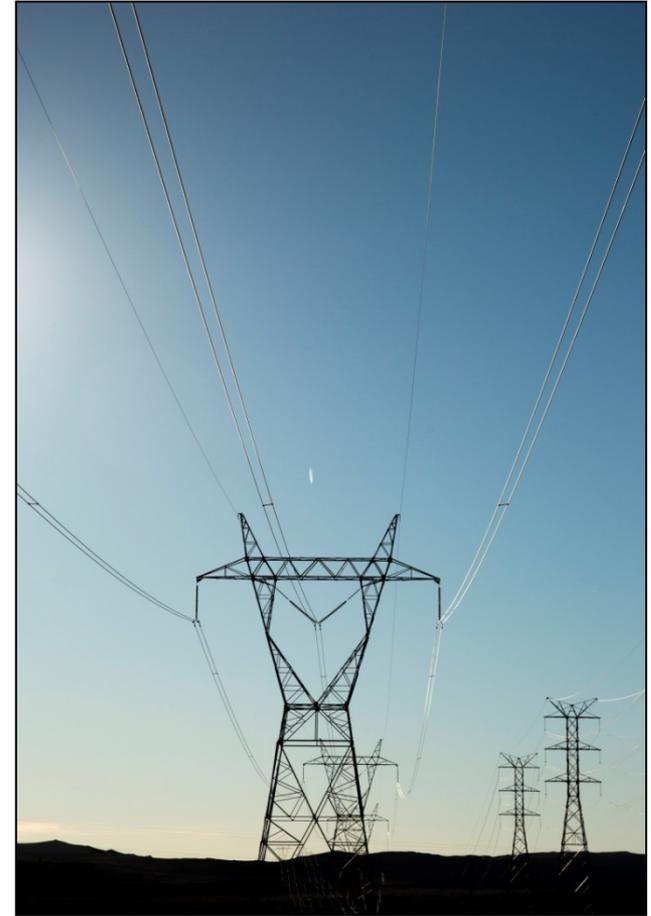


# Security

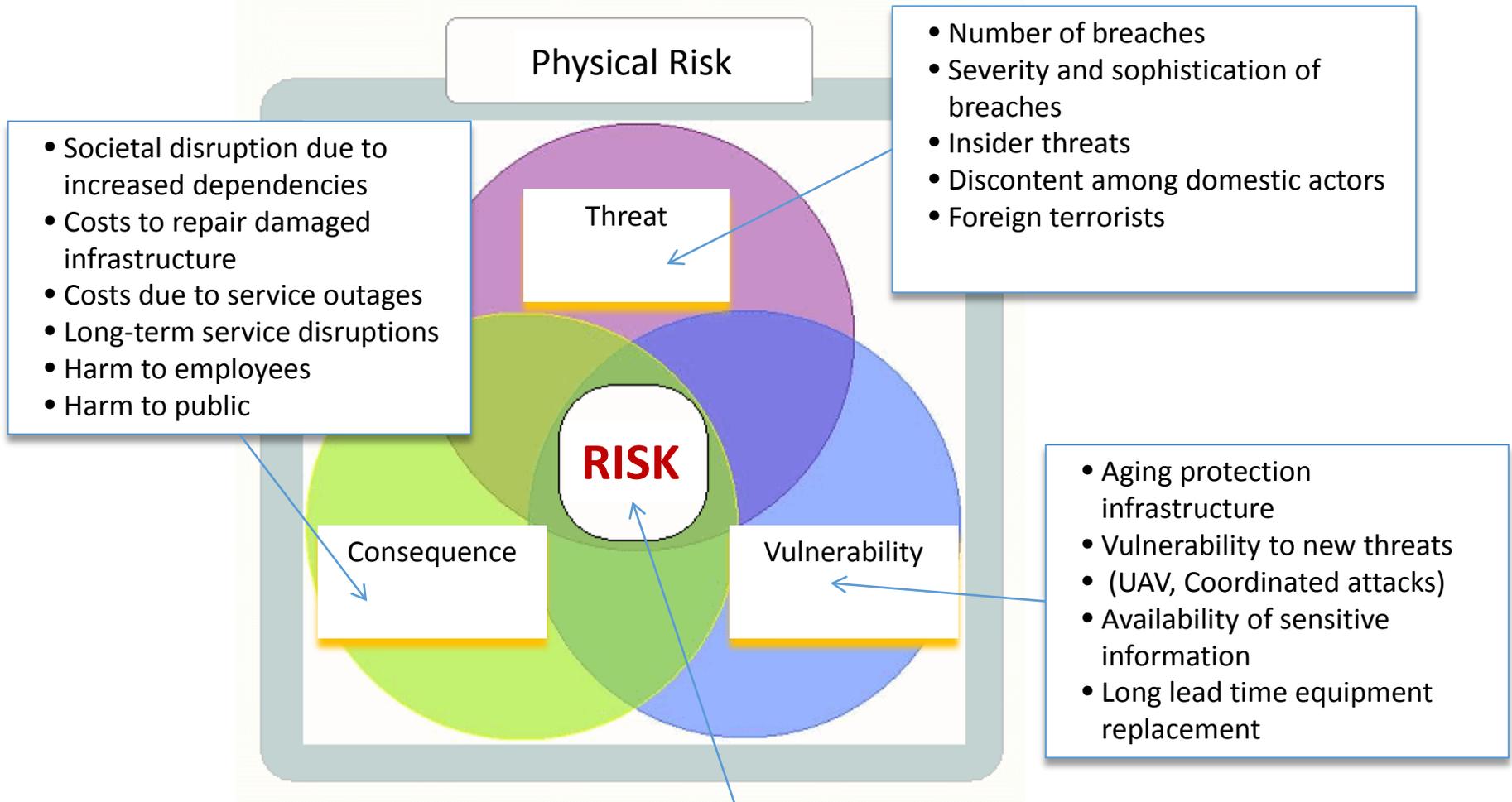


# Growing changes in security

- Meeting growing challenges
  - ✓ Met CIP requirements ahead of schedule and affordably
- Multi-factor authentication
  - ✓ \$265K vs. up to \$1.8M at other organizations
- IT Evolution
  - ✓ \$5M in cost avoidance
  - ✓ Controlling middle-ware costs



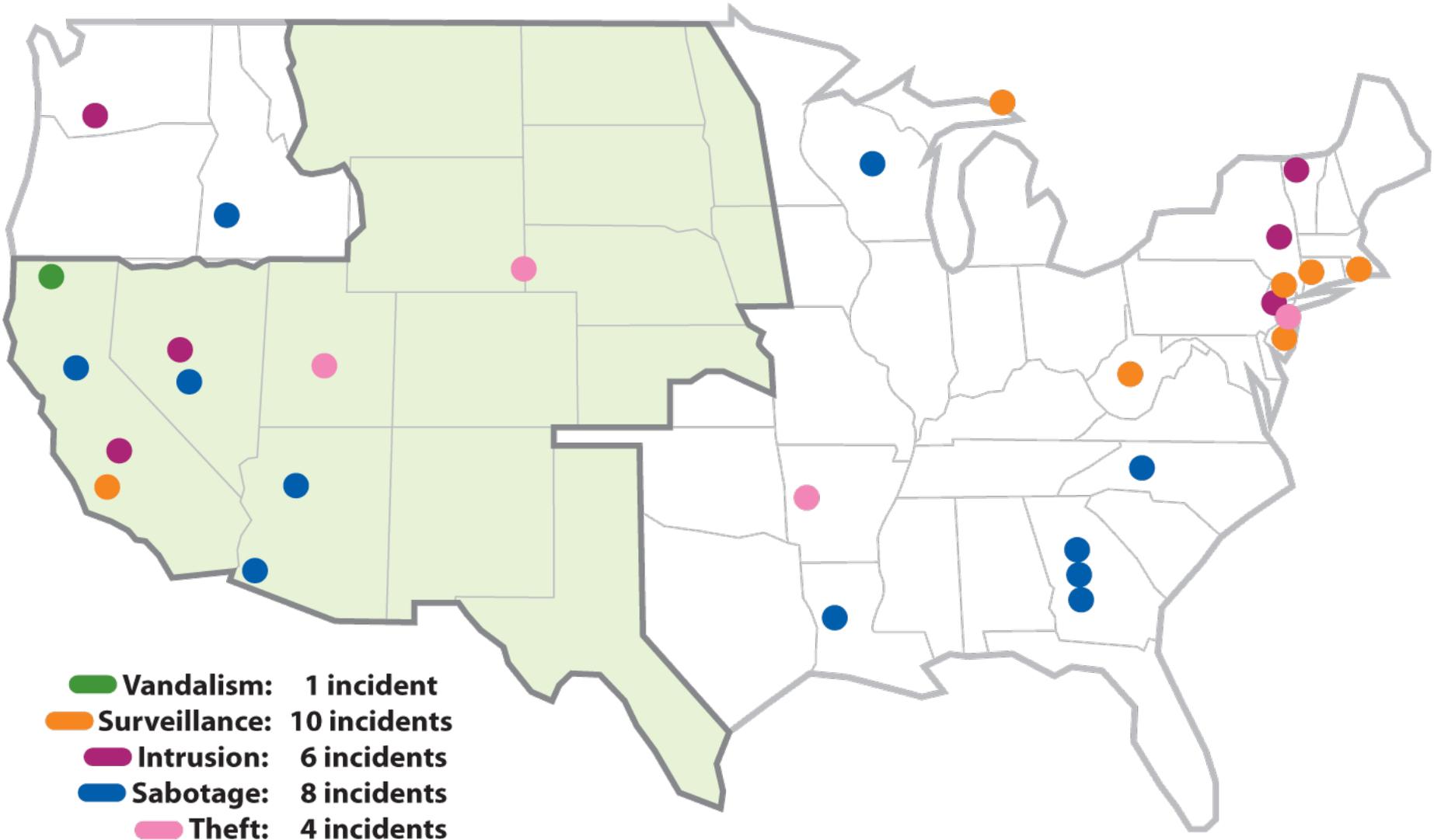
# Managing physical security risk



Risk due to malicious actor is **INCREASING!**



# National breaches



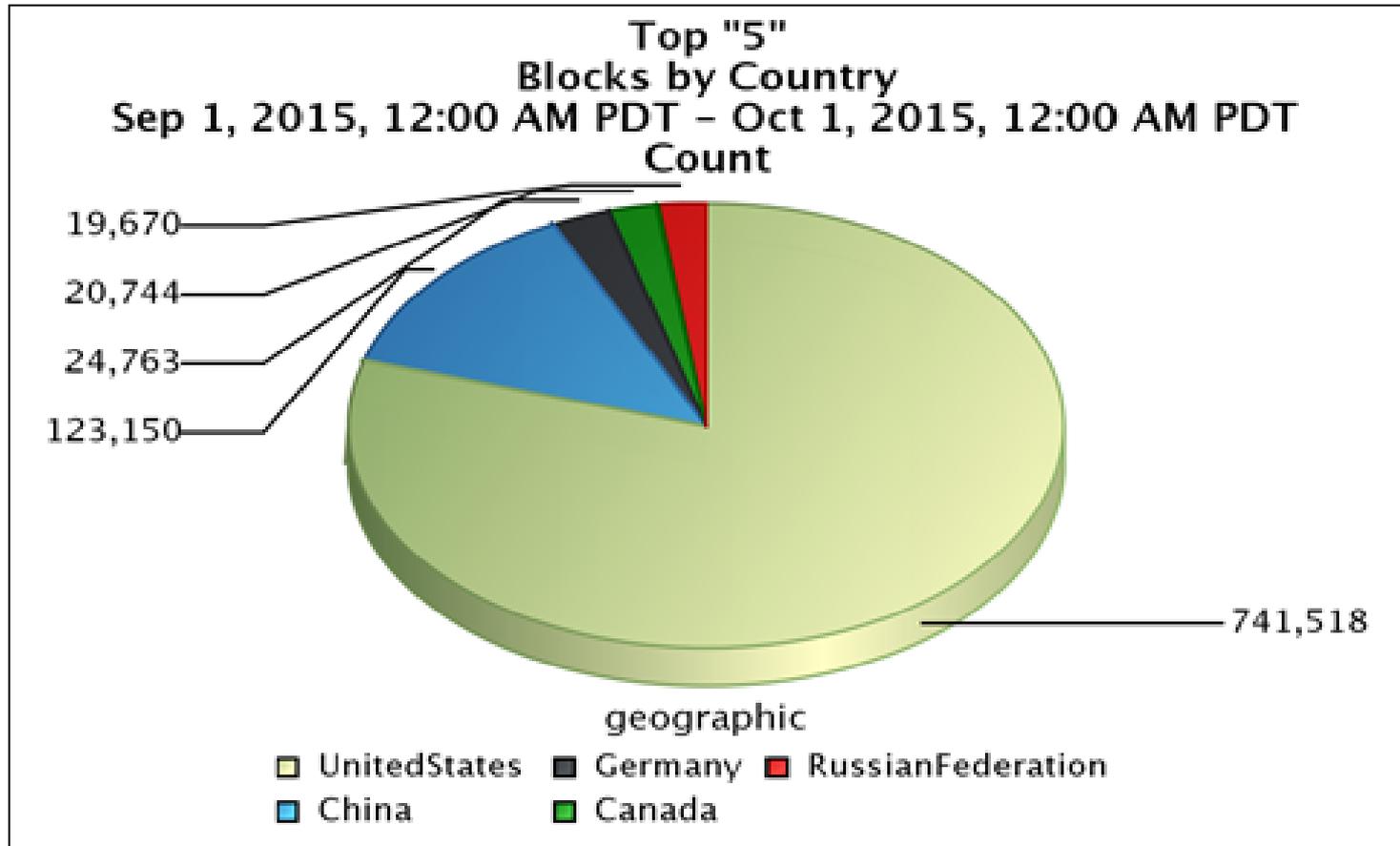
# WAPA's response

- Agile process and culture of compliance
- Making strides in all areas
- Consistent high marks in NERC, WECC, MRO
- Fundamental security commitment



# What WAPA sees monthly:

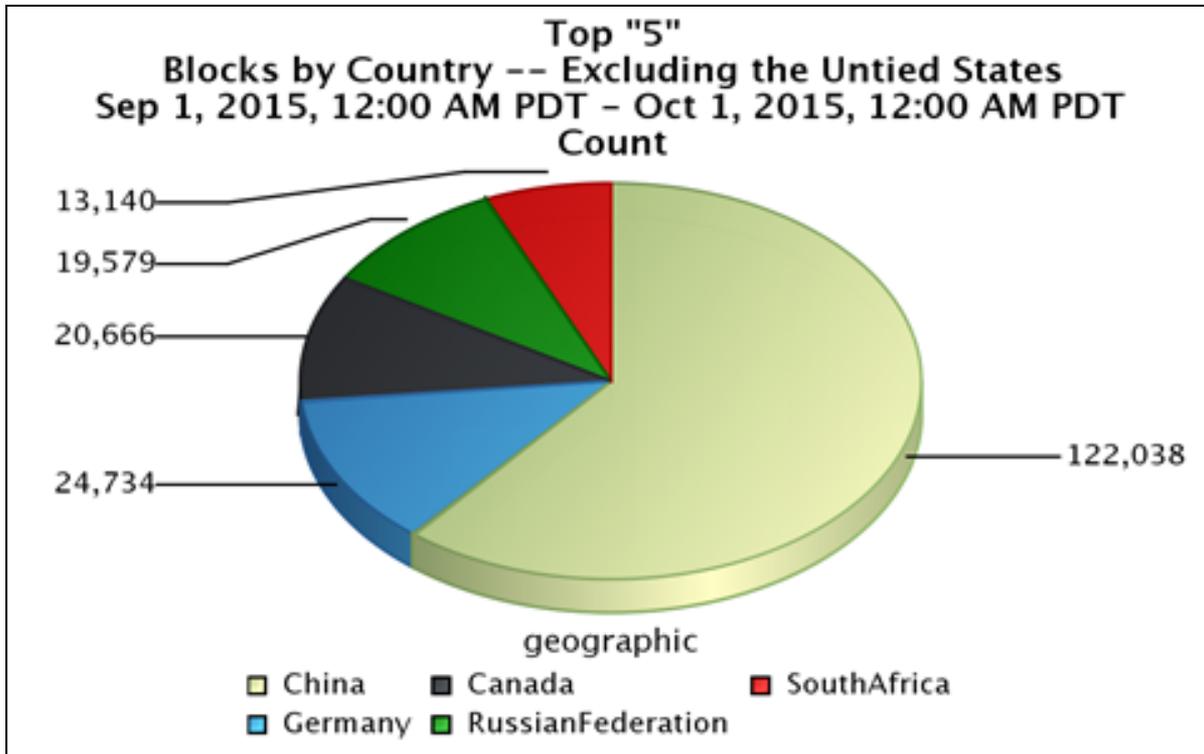
Including hits from within U.S.



# Removing the U.S. hits

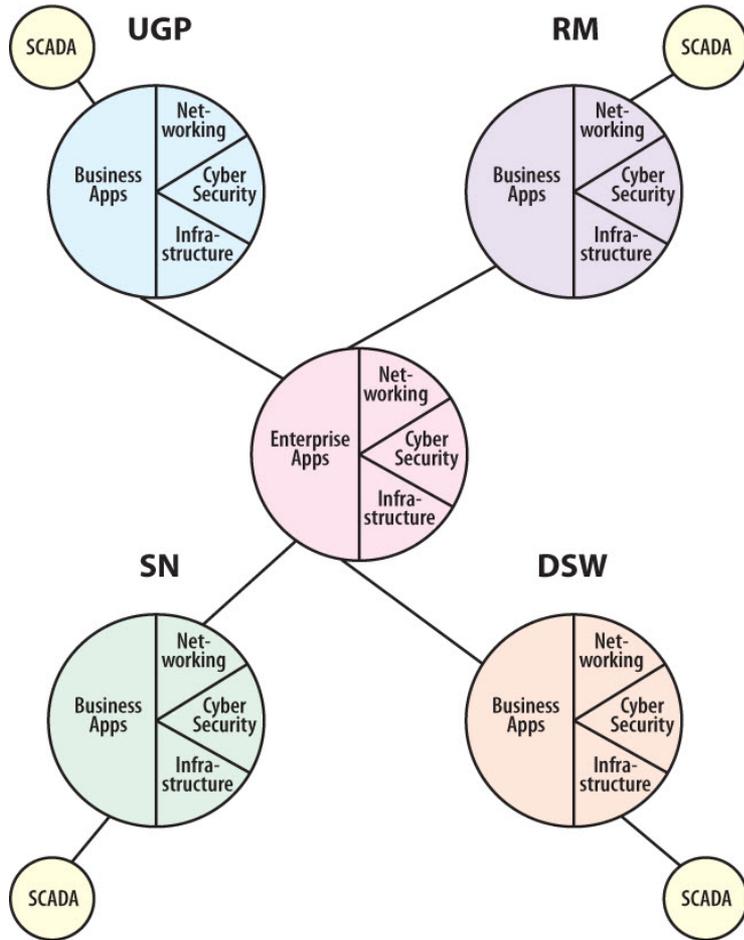
## Other Hits

South-Korea	10,708
United Kingdom	10,522
Japan	10,486
Vietnam	8,197
Netherlands	7,013
Ireland	6,371
France	5,370
India	5,014
Poland	4,275
Kuwait	3,897
Ecuador	3,733
Mexico	3,553
Brazil	3,363
Italy	2,866
Ukraine	2,803



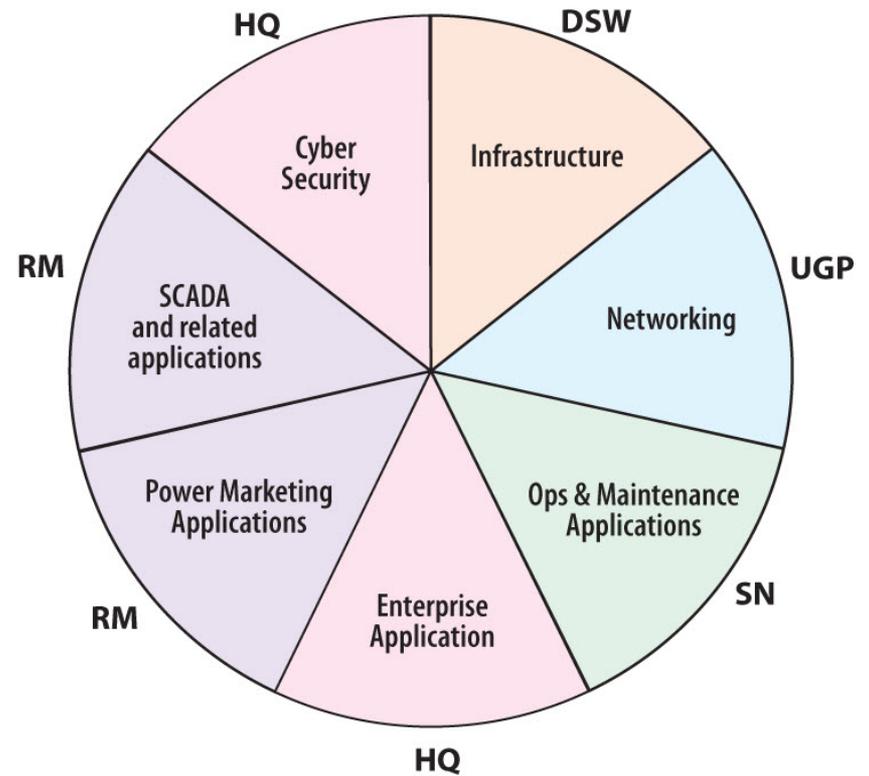
# IT Evolution

IT 5 years ago



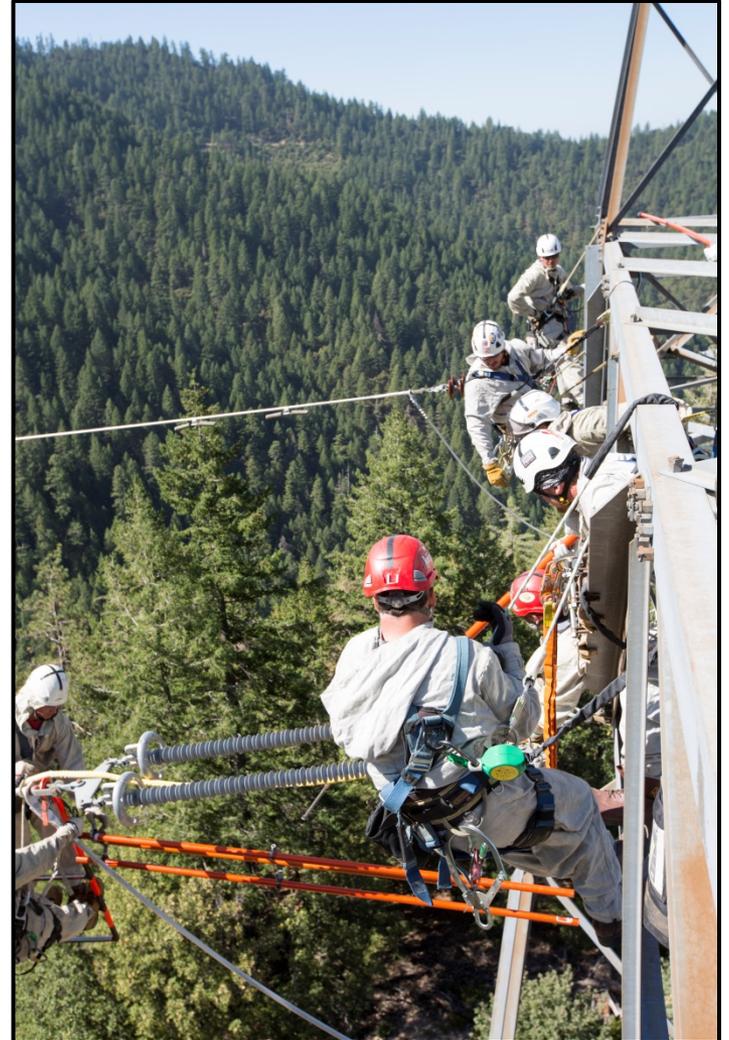
IT Today

Western wide



# E-ISAC: communicating saves

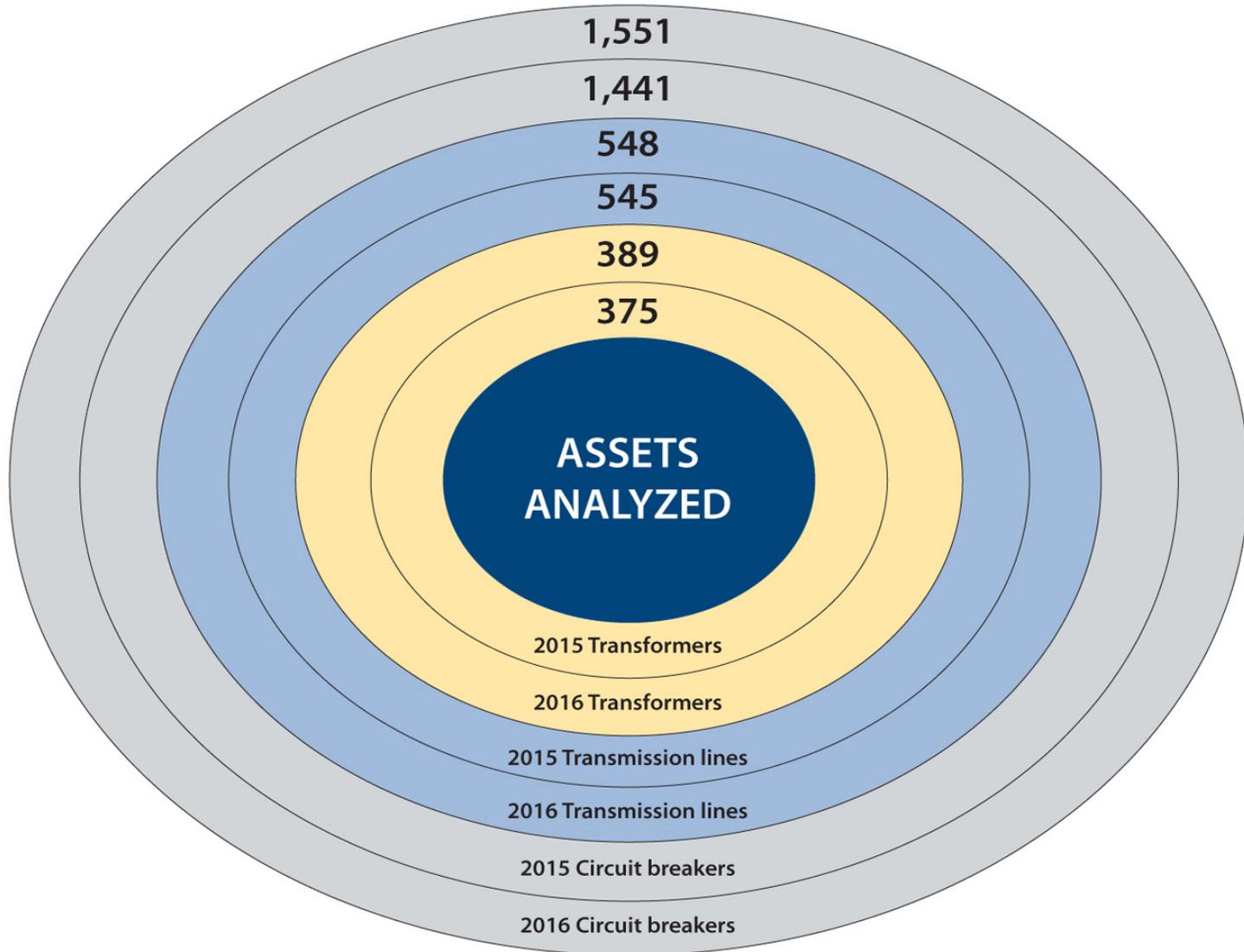
- Create real time, actionable items
- Build trust environment where who needs to know, knows
- Improve timeliness
- Anonymity versus specificity
- Sign up today!



# Reliability



# Risk asset management



# 10-Year Capital Planning



- Senior managers work directly with customers
- Provides customers opportunity to comment on the budget formulation process



# Emergency Support and Response



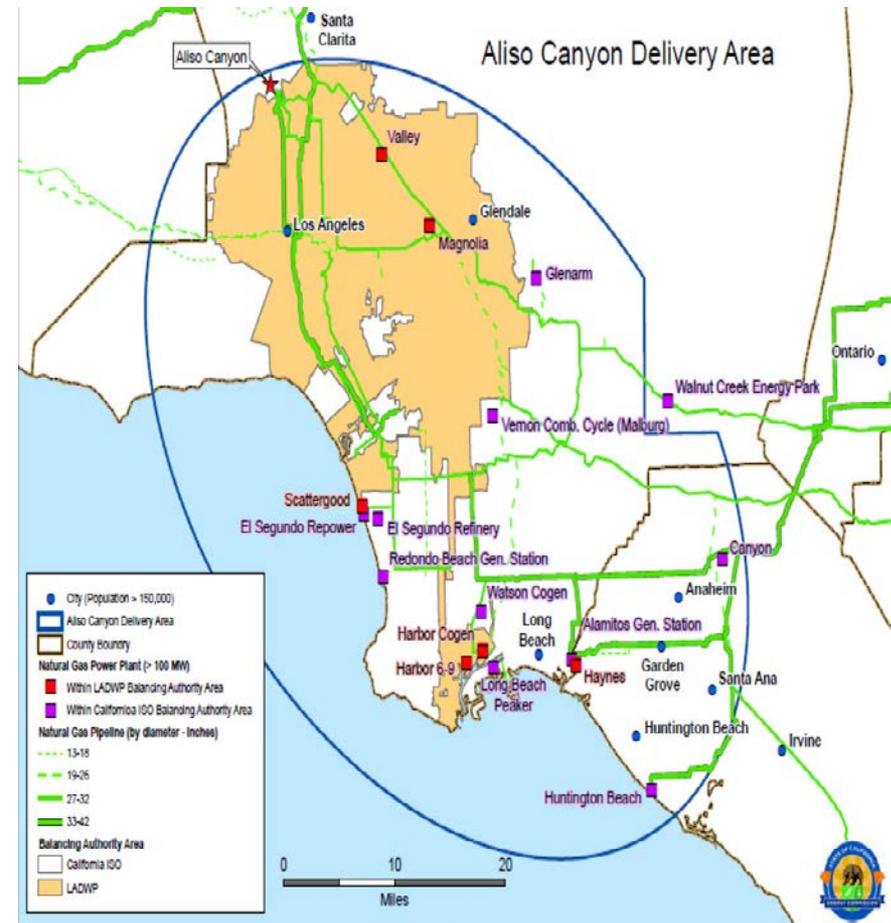
# Emergency Energy Support for Grid Reliability

- Aliso Canyon gas storage facility
- Leak Discovered on October 23, 2015
- Leak stopped, but 114 other wellheads to be tested before refilling to capacity



# Emergency Energy Support to Grid Reliability

- Requires Stage 3 emergency
- No power available anywhere else
- Initiate emergency protocols at GCD
- Desk top exercises conducted with BOR
- Actual delivery amount depends on availability of power and transmission



# Availability



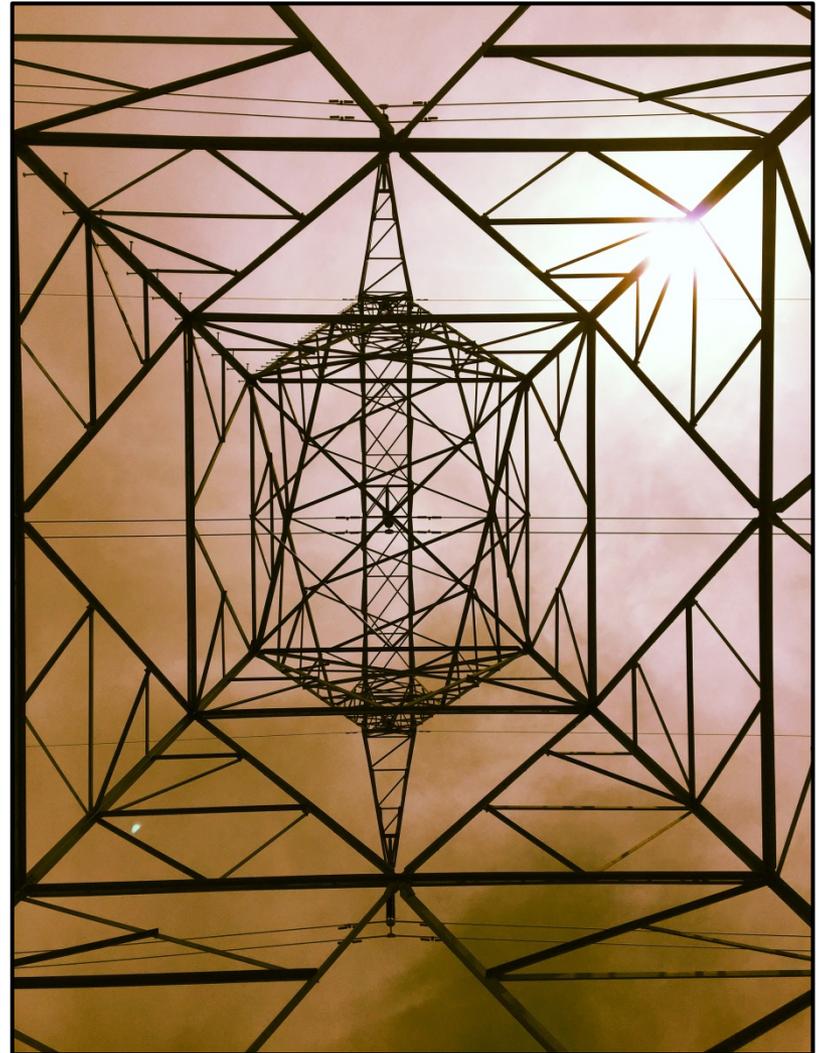
# Balancing competing demands

- Many issues impacting hydro
  - ✓ Snowpack, drought
  - ✓ Reservoir elevation
  - ✓ Environmental Considerations
    - Varying downstream flows
    - Varying power production
- Project purposes (water, power)
- Non-project purposes (recreation, environment)



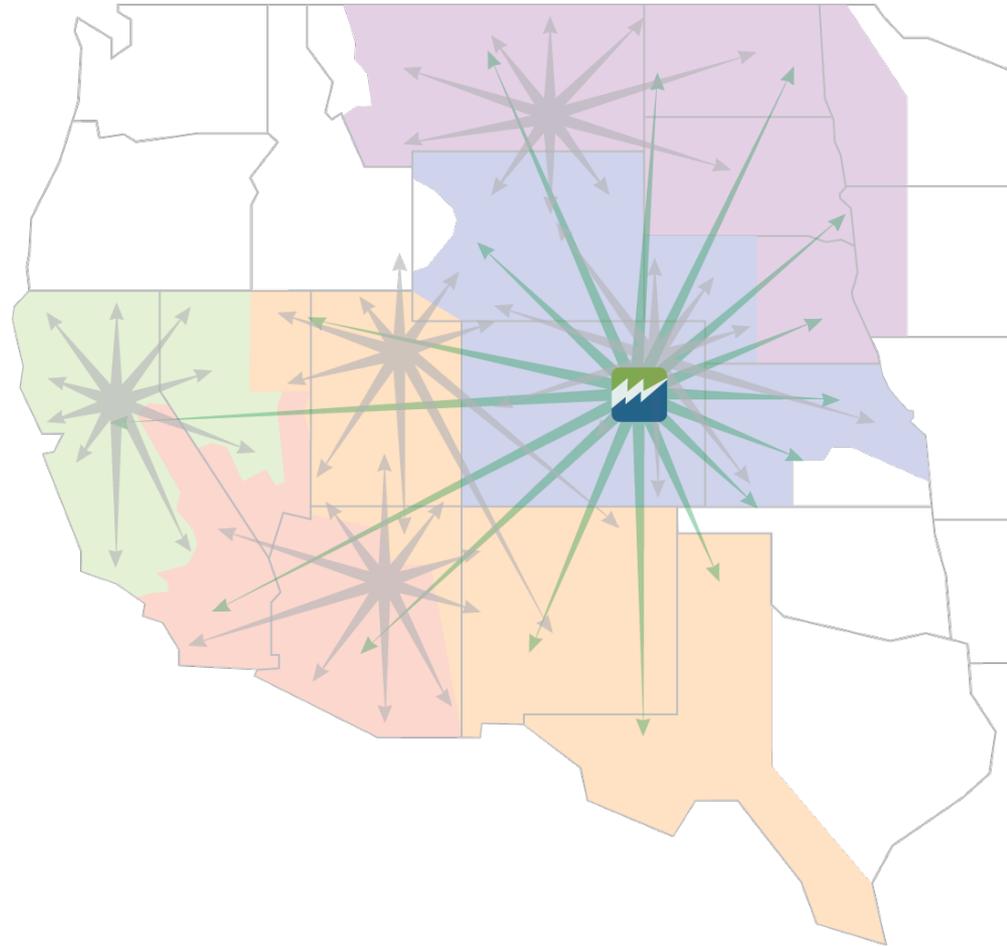
# Markets - WAPA's Interest

- WAPA's significant transmission system
  - More than 17,000 circuit miles
  - 15 states
  - Among top 10 in the country
- Expanding geographic scope of markets
- Expanding number of participants
- Increasingly limited trading partners



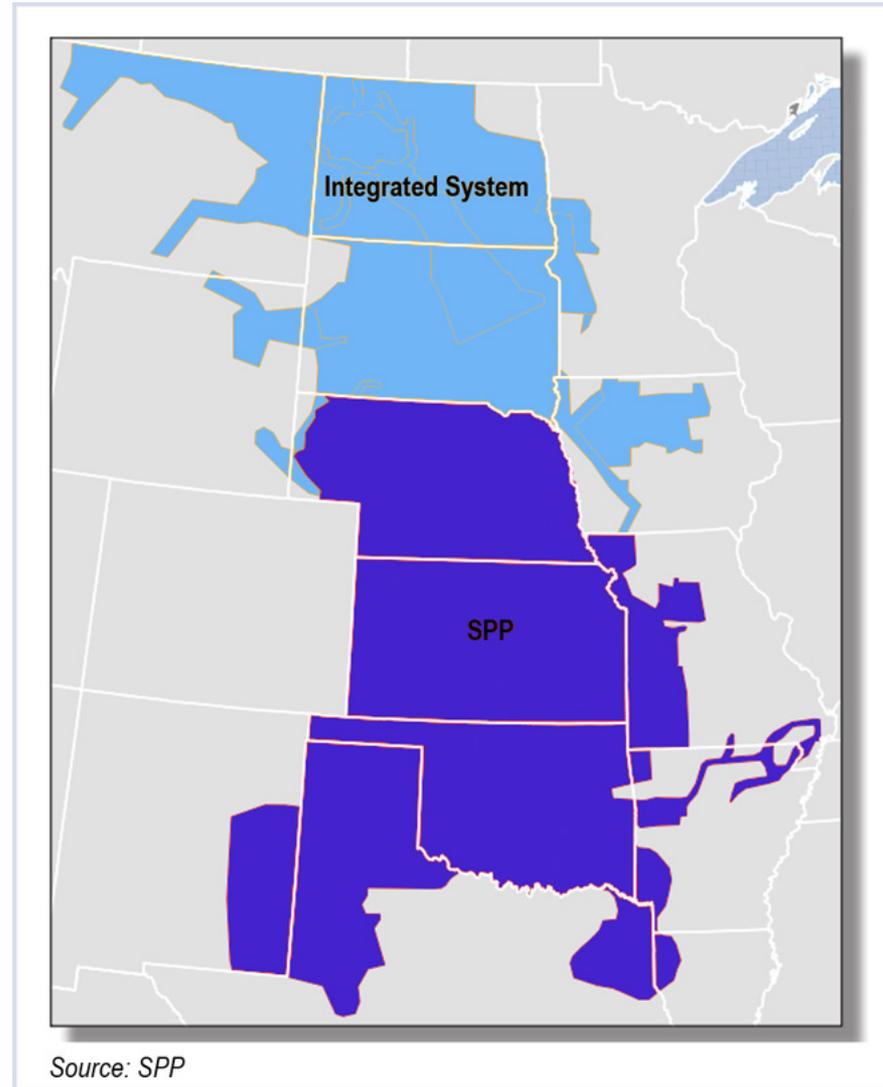
# WAPA's Concerns

- Statutory requirements
- Each region has unique legislation and needs that must be addressed on case-by-case basis
- Cost



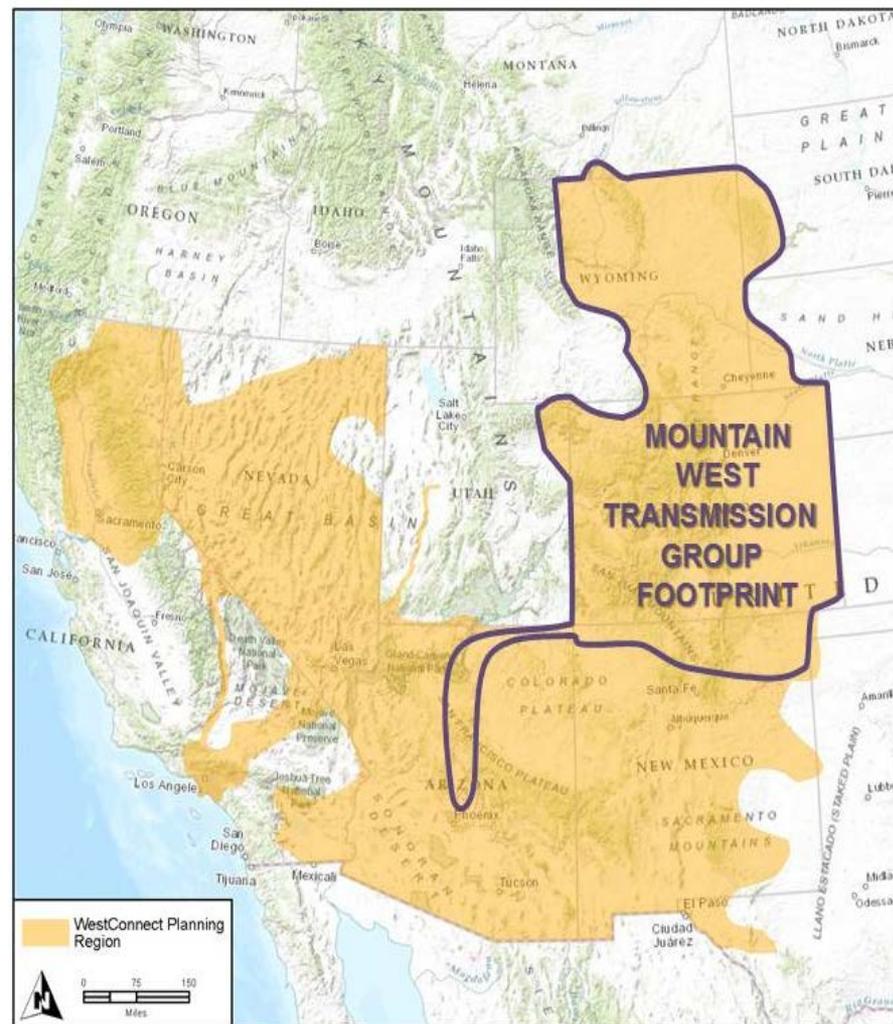
# Joining Southwest Power Pool

- Joined SPP October 1, 2015
- SPP provides greater flexibility  
Creates more options for buying and selling
- Reduces constraints in delivering power
- Helps keep costs low for customers
- Alternate Operations Study \$11.5 M net benefits predicted initial year savings/cost avoidance
- Savings estimated to be greater than the AOS



# MWTG

- Goal – Create a single multi-company transmission tariff and explore “Day 2” market alternatives
- MWTG TSPs include: two IOUs, two municipals; two REA G&Ts; two Federal PMA projects
- MWTG members are a sub-set of the WestConnect planning region members and are members of the Colorado Coordinated Planning Group (CCPG)
- Currently includes seven parties with nine transmission tariffs



# Exploring EIM Alternatives

- DSW exploring and analyzing existing markets and EIM alternatives
- Participation in EIM or alternative must provide value for DSW customers
- Ultimate Objectives: Determine any customer benefits of EIM or potential alternatives
  - Weigh opportunities for market participation
  - Evaluate operational benefits, including renewable integration
  - Provide stakeholders and customers with thorough analysis of all options



# BANC emerging market initiative

- Partnering with customers
  - ✓ Pursuing alternative markets
  - ✓ Assessing benefits, costs, opportunities
  - ✓ Investigating risks
- Situational awareness
  - ✓ What's happening in industry
  - ✓ Maintaining open and flexible view

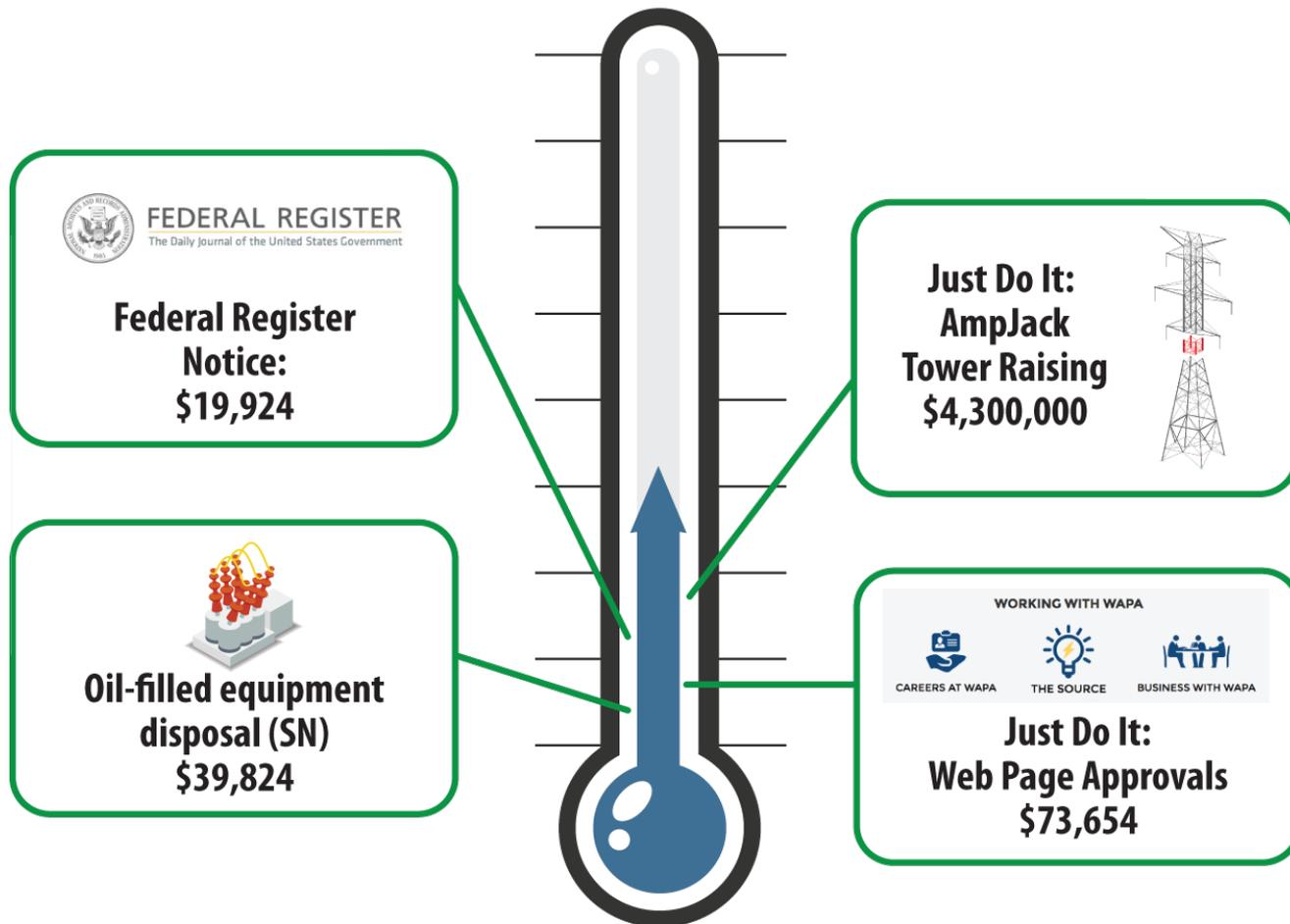


# Quality



# CPI: latest savings

## Unlocked Potential



**\$9.3 million program cost avoidance as of 7-15-16**



# Customer Service Survey

- Sought input to better understand needs
- 857 customers, stakeholders, generating agencies
  - 123 total responses (response rate: 14.35%)
  - 64 complete – 59 partial
  - All 123 responses are included in results
- Convergence of technology, rates, customer engagement and regulations are driving significant changes in the utility industry



# Industry Trends: WAPA Survey

- Key trends:
  - Regulatory burdens / environmental concerns
  - Cyber Security
  - Coal plant closures
  - Aging infrastructure / Asset Management
  - Transmission reliability
- Importance of WAPA services to customers (all > 60% important/very)
  - *Cyber Security*
  - *Reliability compliance*
  - *Transmission operator / Planning / Provider*
  - *Balancing Authority*
  - *Purchased power*
  - *Scheduling*
  - *Emergency crews (Disaster Recovery)*
  - *Facilitating Multiparty Agreements*
  - *Advanced funding*
  - *Bill crediting*



# Five Most Important Services— CRSP

▶ 1. Transmission Service Provider

▶ 2. Energy Exchange Displacement

▶ 3. Transmission Operator Functions

▶ 4. Balancing Authority Functions

▶ 5. Scheduling Coordination



# Five Least Important Services— CRSP

- ▶ 1. Market Assessments
- ▶ 2. Renewable Purchases
- ▶ 3. Project Development Assistance
- ▶ 4. Dispatch Continuing Education
- ▶ 5. Congestion Analysis

# Committed to transparency

- Lowest possible rates consistent with sound business principles
- Critical to focus on the big issues we are all facing
- Need customer input and support to meet your changing needs
- Customer engagement is critical
- *The Source:* [www.wapa.gov](http://www.wapa.gov)



# Key take aways

*Many challenges and changes in the future.*

*Customer engagement is critical.*

*Cooperative efforts result in shared success.*



# Thank you

[www.wapa.gov](http://www.wapa.gov)

