Integrating office & field perspectives in an electric utility

Administrator and CEO Mark A. Gabriel
Western Area Power Administration
Who we are

- Serve 40 million Americans
- 15-state footprint
- 1.4 million square miles
- 49 offices
- ~700 customers
- Top-10 largest transmission utility in country
What we do

Federal Hydropower
- Market 10,515 MW of power from 57 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
- Independent $3.25 B borrowing authority
- Projects must facilitate renewables
- Projects must have a nexus in WAPA’s footprint
What we manage

• $4.3 billion in assets
• 114,863 structures
• 17,231 miles of transmission line
• 322 substations
• 291 transformers
• 661 buildings
• 487 communication sites
Old way of thinking
Strategic Roadmap 2024

Mission
Market and deliver clean, renewable, reliable, cost-based Federal hydroelectric power and related services

Powering the Energy Frontier
Evolution of Services
Mutually Beneficial Partnerships
Business, Technology and Organizational Excellence

2014 2016 2018 2020 2022 2024
Tactical Action Plan

- **Mission Critical Customer Services in an Evolving Industry**
  - Preparing for Markets
  - Organizational Approach to Markets

- **Grid Resilience**
  - Physical Security
  - Cybersecurity
  - Emergency Management
  - Strategic Transformer Management
  - Fiber Partnerships

- **Asset Management 2.0**
  - Life Cycle Management of Major Assets
  - Life Cycle Management of Additional Assets
  - Data as a Strategic Asset

- **People and Organization**
  - Human Performance and Just Culture
  - Leadership Development
  - Program and Budget Integration
  - Acquisition Management

- **Evolution of Services**
- **Mutually Beneficial Partnerships**
- **Business, Technology and Organizational Excellence**
Tactical Action Plan

MISSION CRITICAL CUSTOMER SERVICES IN AN EVOLVING INDUSTRY
- Preparing for Markets
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GRID RESILIENCE
- Physical Security
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- Emergency Management

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PEOPLE AND ORGANIZATION
- Human Performance and Just Culture
- Leadership Development
- Program and Budget Integration
- Acquisition Management
Federal Employee Viewpoint Survey

<table>
<thead>
<tr>
<th>Question</th>
<th>FY18 Positive</th>
<th>5-year trend (FY14 thru FY18)</th>
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</thead>
<tbody>
<tr>
<td>Response Rates</td>
<td>65.0%</td>
<td></td>
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<tr>
<td>Employee Engagement: Overall</td>
<td>70.7%</td>
<td></td>
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<tr>
<td>Employee Engagement: Leaders Lead</td>
<td>56.6%</td>
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<tr>
<td>Employee Engagement: Supervisors</td>
<td>78.6%</td>
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<tr>
<td>Employee Engagement: Intrinsic Work Experience</td>
<td>76.8%</td>
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<tr>
<td>Global Satisfaction</td>
<td>71.8%</td>
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<tr>
<td>New IQ: Overall</td>
<td>63.6%</td>
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<tr>
<td>New IQ: Fair</td>
<td>50.7%</td>
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<tr>
<td>New IQ: Open</td>
<td>61.0%</td>
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<tr>
<td>New IQ: Cooperative</td>
<td>59.3%</td>
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<td>New IQ: Supportive</td>
<td>80.6%</td>
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<tr>
<td>New IQ: Empowering</td>
<td>66.6%</td>
<td></td>
</tr>
</tbody>
</table>
Role in asset management

• Relies on Craft
• Results inform decisions
• Supports maintenance schedules, trouble areas & low-quality equipment
Asset data collected

• Asset Health Examples
  – Loading and stress
  – Asset condition
  – Work order history
  – Oil samples

• Maintenance Examples
  – Labor hours invested in asset
  – Failure coding
  – Type of work. RM, EM, and CM
Right tools encourage buy in

• Value add
• Efficient, simple, safe
• Invite Craft to customize applications
• Follow up with results
• Automate
Human Performance and Just Culture

- HP: The people side of process
  - Three-way checks
  - Near-miss reporting
  - Job hazard briefings/tailboards
- Just Culture: Handling HP in a fair & objective way
  - Human
  - At-Risk
  - Reckless
Communicating about safety

Safety Works
Western Area Power Administration

Staying Out of “the Bite”

A total of half of injuries at WAPA during 2017 were "stripped" by incidents that involved employees being hit by equipment or other objects — also known as being in “the bite” or in “the line of fire.”

Safe Driving Shorts

Distracted Driving: Think about driving the entire length of a football field at 10 MPH with your eyes closed. That’s what it’s like when you are distracted from the highway for five seconds. Distracted driving includes any activity that takes your mind or eyes off the road: eating, talking on the phone, cell phones, texting, emails, social media and more.

Solutions: Don’t do distracted drive and arrive safely.

Back-up: Since 1999, more than 50 driving accidents at WAPA have involved backing up.

Solutions: Perform vehicle walk-arounds to identify obstacles, eliminate distractions, focus on the task, designate a spotter when backing up and almost backing up during transit meetings.

What Went Right?
The response to this incident included:
- Immediate help was given to the injured employee, who sought medical attention.
- Notification was given to the appropriate offices and personnel.
- Subsequent documentation and processing.

At WAPA, we are dedicated to enabling our employees to practice safe working habits. As part of this effort, we commit ourselves to learning and improving continuously.
Near-miss reports

U.S. Department of Energy
Western Area Power Administration
"NEAR-MISS" REPORT

To include information that would identify you or your location is optional (it may help if we need more details or to return feedback to you.)

Date of Incident: 10/4/2018
Location of Incident: Grape Vine Pass (GVP) communications site

Equipment Involved (if any):
2016 Ford Expedition

Describe, in detail, exactly what happened (continue on back sheet or add pages if necessary): I was going to the site to perform microwave maintenance. There is a rugged dirt/gravel road going to the site, with the upper half having some steep sections. It had rained a few days before but the current road condition was dry and no rain was forecasted. I placed the vehicle in 4WD (my usual procedure) and proceeded up to the site. About 3 hours on site, it started to rain hard for about 20 minutes. I completed my work 2 hours later and prepared to depart the site. Still in 4WD. I started down the hill slowly and immediately started to slide. I was able to stop the slide. I tried to back up but was unable due to the slope and slick road. I decided to proceed with caution down the hill, incline my way down. The rear-end of the vehicle started coming around several times and I had to "cross it up" to keep it on the road. What normally takes 10 minutes took me 35 minutes.

Recommended Actions and/or Lessons Learned:

- Don't assume that making it up a grade is hard part. Coming down is just as important.
- I recommend the road be graded with more rock base to prevent mud from clogging the tires and providing better traction.

The dealership admitted failing to tighten the lug nuts and accepted full responsibility.

U.S. Department of Energy
Western Area Power Administration
"NEAR-MISS" REPORT

To include information that would identify you or your location is optional (it may help if we need more details or to return feedback to you.)

Date of Incident: 2/22/18
Location of Incident: I-10 west bound and 51st Ave.

Equipment Involved (if any):
Ford F-350

Describe, in detail, exactly what happened (continue on back sheet or add pages if necessary): A lineman turned his F-350 in for an oil change and tire rotation/balance to the DSW fleet department. On February 22 he was informed by fleet that the work on the vehicle was completed and he should return to the dealership to get the vehicle. The linemen then drove the vehicle back to the shop and parked up with no issues. As he left the shop he heard a noise and felt some vibration. The linemen then pulled over and called fleet to report that he was taking the vehicle back to the dealership. After merging onto I-10 going west the vibration worsened and in the process of coming to a stop the tire fell off the vehicle leaving him stranded in heavy traffic. The dealership admitted failing to tighten the lug nuts and accepted full responsibility.

Recommended Actions and/or Lessons Learned:

- When vehicles are taken in for service by fleet management they should verify that the services are properly done before removing the vehicle to the owner. Although the work is done by professionals the operator should always make sure the vehicle is safe to drive.
Fall protection
Drone work
Human external cargo
Disaster response
Empower innovation
Be present
Contact/follow me

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