

# Budget and TYCP Process Discussion

**Bob Harris**  
**UGP Regional Manager and PM**

# WESTERN'S ROADMAP

## ROBUST ASSET MANAGEMENT PROGRAM/WESTERN-WIDE CAPITAL BUDGET

Preliminary 10-Year  
Capital Budget/Funding

Sustainable Funding Discussion

Establish Programmatic Asset  
Management/Capital Funding Process

Utilize Programmatic Asset  
Management/Capital Funding

Asset Management Customer Networking

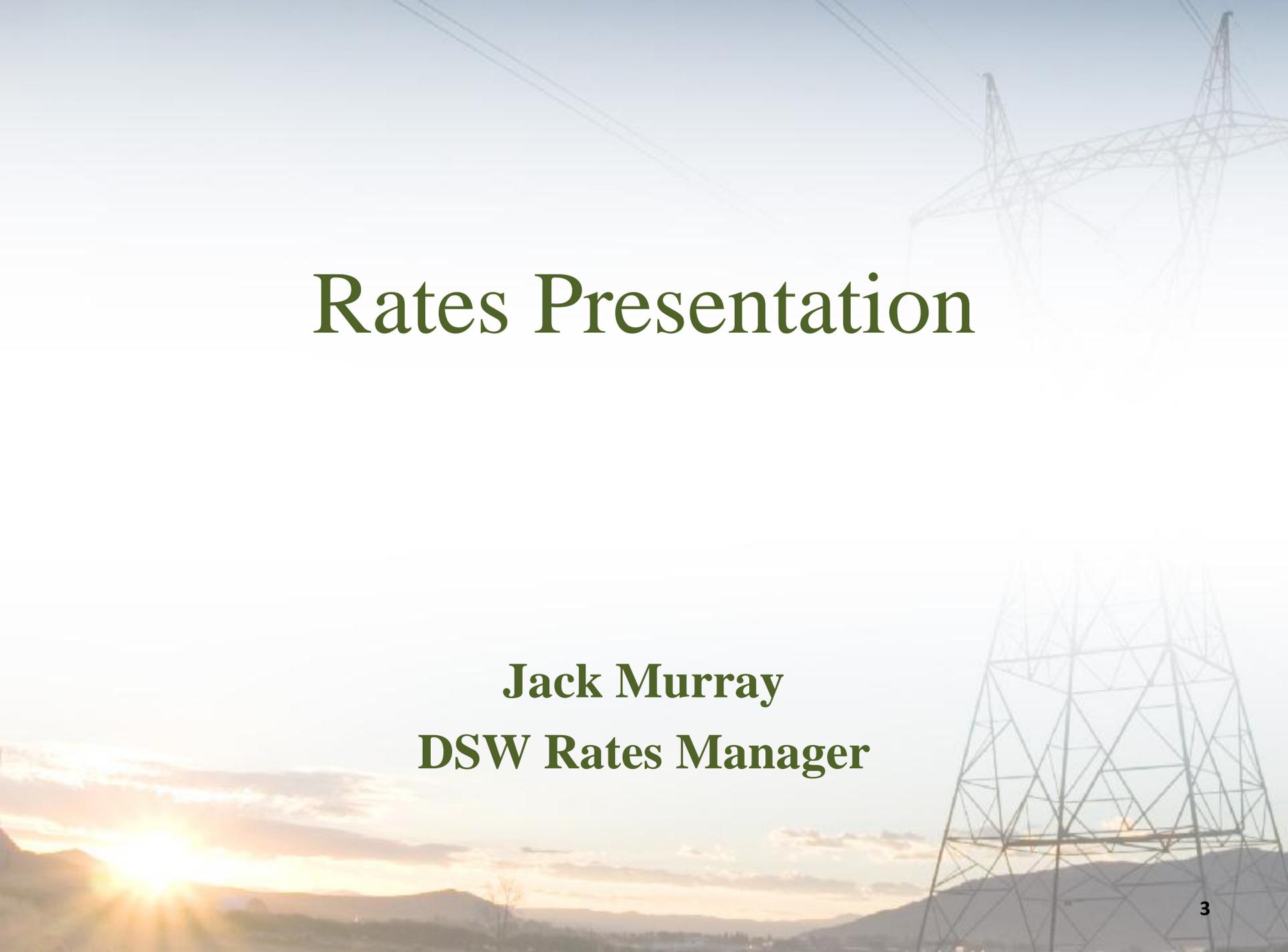
AMPIP

2013

2014

NOV

MAY

The background of the slide features a scenic sunset over a mountain range. The sun is low on the horizon, creating a warm, golden glow. In the foreground, several high-voltage power lines and a large transmission tower are visible, extending from the right side of the frame towards the left. The sky is a mix of light blue and orange, with some clouds catching the low sun.

# Rates Presentation

**Jack Murray**  
**DSW Rates Manager**

# P-DP Rate Discussion

- Transmission rates experiencing long-term upward pressure.
- Cost of rebuilding aging infrastructure a key component responsible for potential rate increases.
- As additional plant completed and placed in service, annual costs to service debt increase, pushing up transmission rates.

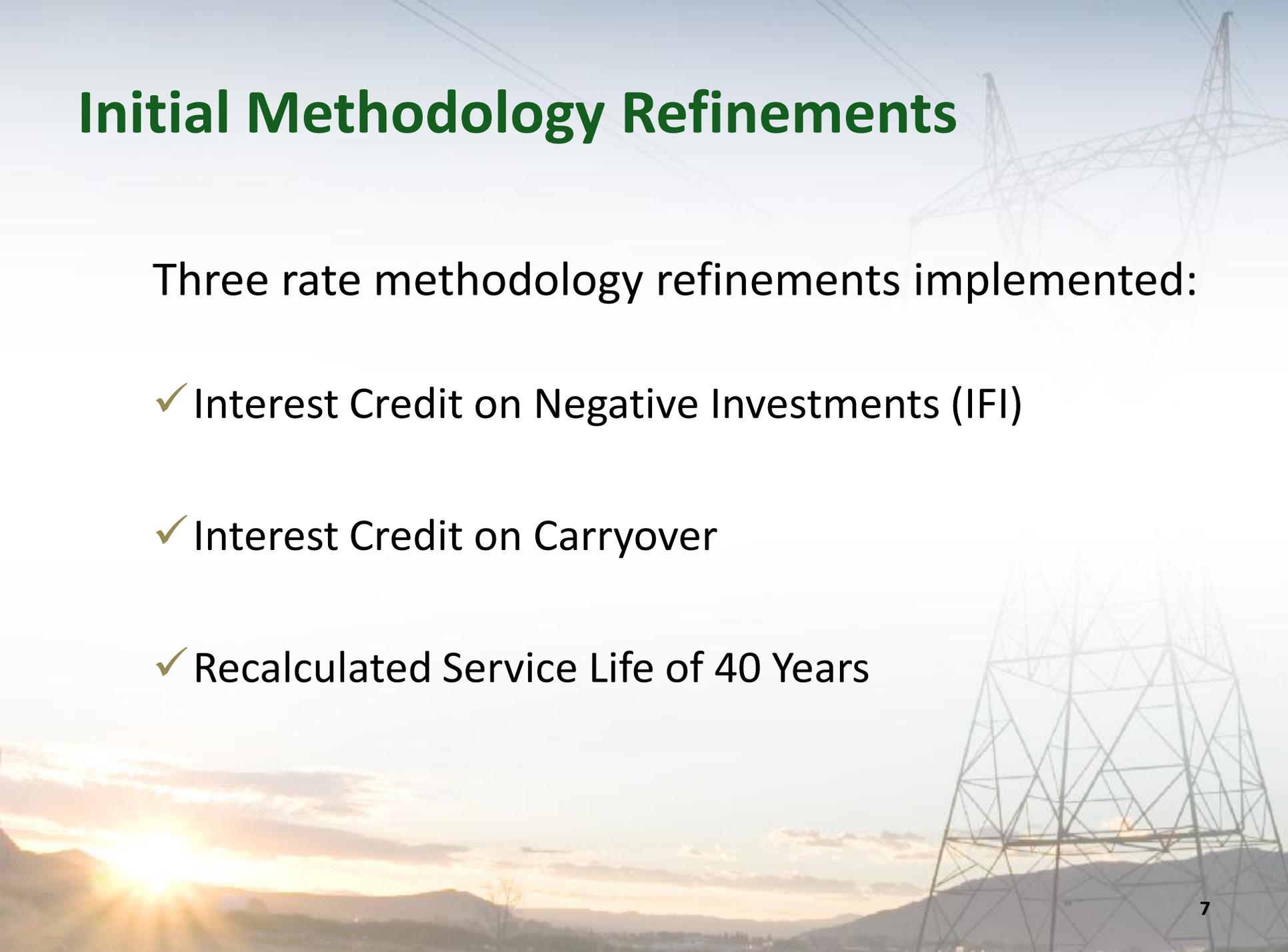
# P-DP Rate Discussion

- Without revisions to existing P-DP rate methodology, transmission rate would show increases even without new construction (would include CWIP already on the books, approved pre-payment projects & RRADS only).

# P-DP Rate Mitigation

- Recommended to P-DP customers to work together with Western to develop/revise existing methodology in effort to mitigate upward rate pressure. Customers concurred.
- Initially, implemented 3 strategies for FY14 rates to keep FY14 increase to just over 3%.
- Without additional mitigation or methodology changes, planned TYP will result in more upward rate pressure.

# Initial Methodology Refinements



Three rate methodology refinements implemented:

- ✓ Interest Credit on Negative Investments (IFI)
- ✓ Interest Credit on Carryover
- ✓ Recalculated Service Life of 40 Years

# Continuing Efforts

- Work with P-DP customers to review existing rate methodology to determine what actions could be taken to mitigate rate volatility and keep future rate adjustments in check.
- Initial meeting anticipated in December.
- Considerable time will be required to vet potential rate elements and modify rate methodology.
- Believe rate methodology can be modified to successfully accomplish addressing our infrastructure challenges while moderating future rate impacts.

# Intertie TYP

- The Intertie Project is much newer and not facing the level of rebuilding that P-DP faces.
- Current TYP draft includes one project not envisioned prior to rate calculation: spacer-dampers for Mead-Phoenix.
- Given projected decrease in costs of Mead transformers, no rate impact anticipated due to spacer damper project



# Asset Management Program Improvement Project (AMPIP)

Customer Briefings/Outreach  
Don Roberts, Project Manager  
Summer/Fall 2013



# Agenda



- What is Asset Management
- Western Asset Management
- Work Products & Progress to Date
- Additional Information Slides
  - AM Basics
  - AMPIP
    - Project Goals and Requirements
    - Project Stages
  - Next Steps

# What is Asset Management?



**“Systematic and coordinated activities and practices through which an organization optimally and sustainably manages its assets and asset systems, their associated performance, risks and expenditures over their life cycles for the purpose of achieving its organizational strategic plan”** (PAS 55-1; 3.2)

# AM Basics – Risk



**Risk = Probability of Failure X  
Consequence of this Failure**

- Probability of failure (PoF):
  - Determined by asset historical performance and current condition
  - Best analytically determined, but consistent, subjective criteria is ok
  - Responsibility of maintenance community

# AM Basics – Risk cont'd



- Consequences of Failure:
  - Must be quantified in some matter
  - Best analytically determined, but consistent, subjective criteria is ok
  - Responsibility of operations, marketing & others
- Criticality: quantitative description of risk tolerance – willingness to accept risk of event
- Risk Register: AM term for the location of asset risk-related information

# Western Asset Management



# Purpose of AMPIP



## Aging Infrastructure & Capital Funding

- Build on a programs already in place (RCM, MDCC, budget formulation, Maximo)
- Improve allocation of capital funding to reduce asset-related risks
- Provide objectivity and credibility to asset management processes
- Help Western and customers make tough decisions and set priorities

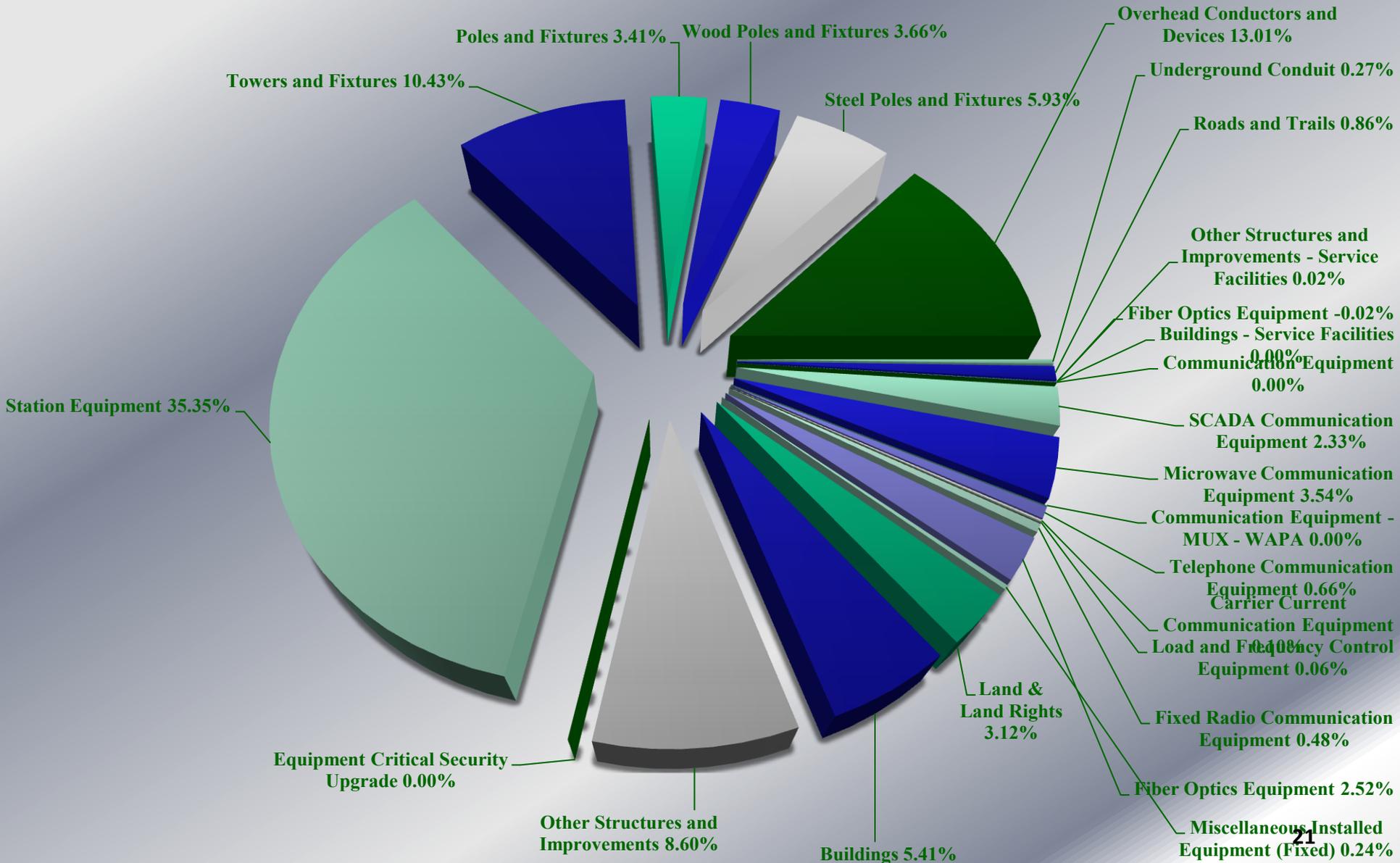
# AMPIP Benefits



- Better justification of capital funding requests
- AM program based on industry standards
- Consistent and objective evaluation criteria
- Awareness of major asset risks
- Documentation of risks and mitigation
- Credible results to guide decisions
- Prioritization of projects and reservation of resources
- Improved reliability

# Western Physical Assets

- Western Plant by FERC Task 35000 to 39800 (In Total) based upon Investment Costs -



# AMPIP Stages/Schedule



- Stage 1: Initial Risk Assessment (August 2012 – April 2013)
- Stage 2: Develop process details for program elements (December 2012 – August 2013)
- Stage 3: Populate risk registers (collect data) (September 2013 – December 2013)
- Stage 4: Produce program results (December 2013 – Spring 2014)
- Transition to Program (Summer – Winter 2014)

# Work Products and Progress

# Four Sub-Teams



- Equipment Condition Assessment (Power Transformers & Breakers)
- Transmission Line Condition Assessment
- Consequence of Failure Processes and Analysis
- IT (MAXIMO) Design and Development

# Transformers



## Parameters:

- All oil-filled power transformers, including units with LTC's, and oil-filled reactors
- All mobile transformers (separate asset class)
- All phase-shifting transformers (separate asset class)
- Includes units owned or maintained by Western
- Excludes pole mounted
- Excludes station service

Region/ MC	Quantity (517 total)
DSW	71
RM	111
UGP	211
SN	57
CRSP	67

# Breakers



## Parameters:

- Power circuit breakers, oil, air, vacuum, and SF-6
- 100-kV and above
- Excludes circuit switchers or other switchgear.
- Includes units owned (fully or partially) by Western
- Includes units maintained by Western

Region/MC	Quantity (1,446 total)
DSW	311
RM	253
UGP	546
SN	156
CRSP	180



# Transmission Lines



## Parameters:

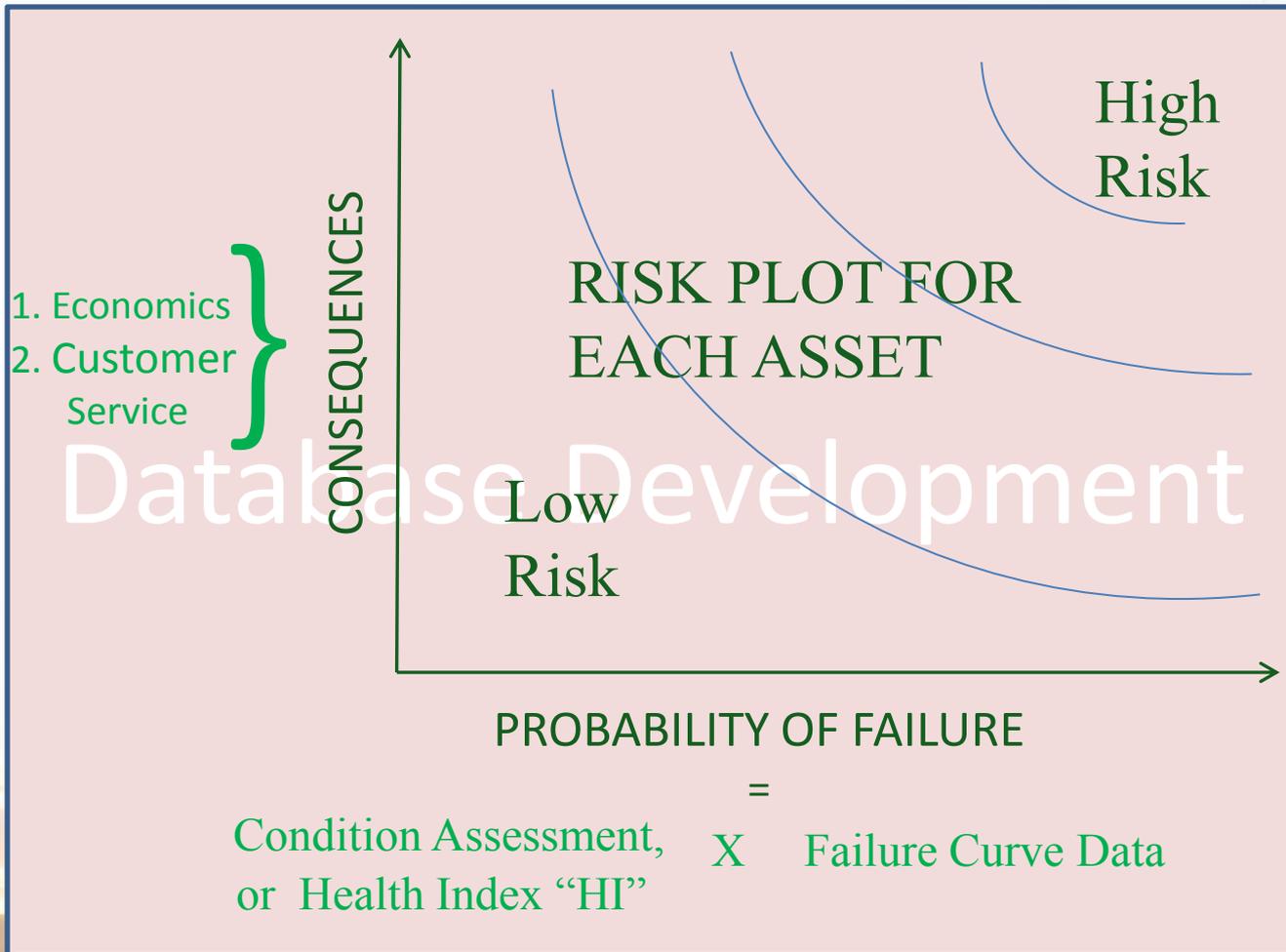
- 100-kV and above
- Breaker to breaker
- No underground
- Segments that Western owns or maintains

Region/MC	Quantity (578 total)
DSW	106
RM	136
UGP	221
SN	54
CRSP	61

*Partial ownership (capacity only) does not qualify*



# Risk Development



1. Collect Data & Populate Database
2. Asset Analysis & Reports
3. Develop Asset Strategies & Plans
4. Develop/Update Projects
5. Update Project Ranking Criteria
6. Complete Manual & Bus. Rules (Maint. & Repeat.)

# Consequence of Asset Failure

Two consolidated criteria & sub-factors:

- Economic: 50% initial weight (more objective)
  - Costs (converted to “points”)
    - Power Marketing/Merchant Services Cost
    - TBU Tariff Cost
  - Marketing Adders
    - Critical Scheduling Hub or Market Path
    - Peaking / Load Following Unit
    - Curtails Merchant Ancillary Service Sales

# Consequence of Asset Failure

## cont'd



- Customer Service: 50% initial weight (more subjective)
  - Critical Service
  - OATT
  - Impacts to Others (regional impacts)
  - Scheduling Services (Customer / Western impacts)

# Health Index (HI) & POF Determination

- Transformer Health Index (HI)
  - Oil Condition, Factor Weight = 4
  - Electrical Condition, Factor Weight = 4
  - O&M History, Factor Weight = 2
  - Age/Design/LTC, Factor Weight = 2
  - PoF based on historical records and applied Weibull curve
- Breaker HI
  - Maintenance History, Factor Weight = 2
  - Design/Obsolescence, Factor Weight = 2
  - Power System Stresses, Factor Weight = 2
  - Age, Factor Weight = 2
  - PoF based on historical records and applied Weibull curve

# Health Index (HI) & POF Determination

## cont'd



- Transmission Line Segment HI:
  - Structures
    - Age, FW=3
  - Conductors
    - Age, FW=1
  - Overhead Ground Wire
    - Age, FW=1
  - De-rating Factors (% de-rating varies by issue)
    - % Line Loading > 90%
    - ROW Encroachments Danger Trees/Vegetation #ea.
    - Outage History (based upon environmental/design/location/etc.)
    - % of features rated D or E (Low/poor failure coding)
  - Initial PoF based upon historical records

# Wrap Up

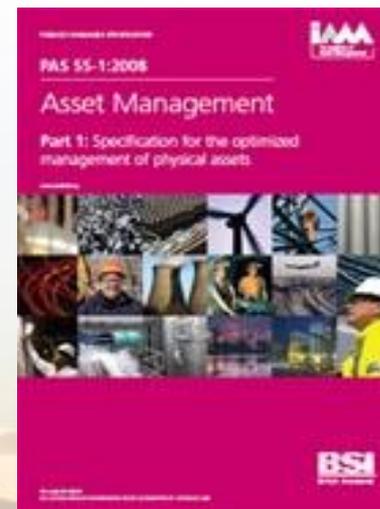
- Q/A
- Discussion

# Additional Information Slides

# Asset Management

# AM Basics

- Mature, formalized practice in wide use
- Many industry AM groups
- Key reference: *PAS 55-1*
  - Addresses comprehensive AM program requirements
  - Focus on risk assessment



# PAS-55



- *Publicly Available Specification 55-1:2008* is a product of the British Standards Institute.
- In 2011-12 AM Advance Team found that PAS-55 was widely accepted as a guide for establishing and maintaining asset management programs.
- The Advance Team document “Range of Alternative Characteristics” recommended that Western’s AM Program “Meets key/appropriate requirements of *PAS-55*”.

# PAS-55 Requirements for Successful AM Program



## Section 4: Requirements

**4.1 General Requirements** (establish, document, implement, maintain, improve)

**4.2 AM Policy** (derived from the **Organization's Strategic Plan**)

**4.3 AM Strategies, Objectives & Plans**

**4.4 Enablers & Controls**

**4.5 Implementation**

**4.6 Assessment & Improvement**

**4.7 Management Review**



# Asset Management Program Improvement Project

# Project History



## AM Advance Team (June 2011- June 2012)

- Objectives
  - Facilitate development of AM program
  - Involve business functions (i.e. Maintenance, Power Operations, Power Marketing, etc.)
  - Evaluate other organizations' programs and tools
  - Identify key assets to be managed
  - Recommend a course of action for improvement
- Resulted in the current AMPIP Project

# AM Program Requirements



- Part of Enterprise Risk Management
- Formal
- Compatible with industry standards
- Applicable Western-wide
- Objective criteria and measures
- Leverage existing tools & processes (MAXIMO, MDCC, budget formulation, RCM)
- Broad involvement within and external to Western
- On-going, dynamic, up-to-date data on assets

# AMPIP Scope



## Scope

- Improve existing processes and mature AM program
- Expand corporate knowledge of AM
- Communicate asset-related risks, and consequences of failure
- Establish an AM structure using *PAS-55*
- Initial focus on three Critical Transmission Assets:  
Power Transformers, Power Circuit Breakers,  
Transmission Line Segments (high \$ and long lead time)



# AMPIP Project Goals



**Timely list of assets ranked by condition, risk, criticality, and priority for funding requests and leadership decisions**

- Define program
- Develop and test new processes
- Apply new processes to the highest risk assets and events
- Determine sustainment needs
- Provide usable reports on infrastructure health

# Western Sponsorship



- **Regional Managers**
- **Chief Operating Officer**
- **Chief Information Officer**
- **Chief Financial Officer**

## Responsibilities:

- Approve: Critical Decision points, scope changes, funding requests
- Accept: Program Results

# Progress-to-Date



- Identified Asset Category & Populations, and Consequence Categories & Criteria
- Prioritized and selected asset classes for analysis
- Determined initial weighting and scoring criteria and ratings
- Formulated the HI
- Tested samples and re-evaluated in each asset and consequence category
- Vetted through Western leadership councils



## Progress-to-Date cont'd

- Developed Failure Curve data for asset classes
- Obtained independent A-E review
- Combined HI and Failure Curves to determine “Probability of Failure”
- Determined IT solution for data storage and analytics
- Started training
- Began regional data collection for each asset (Start August)
- Begin regional consequence analysis (Start September)



# AMPIP - Next Steps

- Complete Condition Assessment Training
- Develop Consequence Analysis guidance document
- Prioritize regional assets for data collection and analysis
- Begin collecting needed Condition Assessment data using spreadsheets
- Scrub data for quality
- Begin mining/collecting operations data
- Begin running consequence analysis processes using spreadsheets
- Complete design and testing of new MAXIMO data fields and analytics

# Additional AM Program Elements

- Risk register structure
  - Define document structure to record information
- Sustainability requirements
  - Organizational structure and staffing plan
- Program guidelines and business rules
  - AM Policy
  - AM Manual
  - Framework for Asset Strategies & Plans

# Stage 4 – Produce Program Results

## Rank Assets based on Risk

- Produce reports
- AMPIP Assets Plans tied to next cycle of budgeting process and 5/10-Year Plans
- Implement changes for sustainability

# Strategic Roadmap Update

Working Draft Introduction and  
Discussion

Theresa Williams  
September 23, 2013

# Overview

- Purpose of Strategic Roadmap
- Next Steps
- Importance of Engagement and Collaboration
- Working Draft Roadmap: Discussion and Feedback

# Purpose of Strategic Roadmap

- High-level directional guide to meet mission requirements in the future
- Define role in industry, with customers, within government in 2024
- Protect and improve execution of mission
- Anticipate and prepare for future
- Continue to add value to customers, DOE and industry

# Purpose of Strategic Roadmap

- Create vision that can tie together strategy, capital budgets, annual targets and initiatives



# Next Steps



**Collaboration and Communication**

# Importance of Engagement and Collaboration

- Thank you for your input
- Active communication/collaboration is critical
- Helps us better define destinations
- Reach common understanding of path ahead
- Need your support

# Discussion and Feedback

## Working Draft roadmap

- Draft Destinations and Definitions
- Areas of Focus: FY 2014 Strategic Targets
- Tactical plans
- Open discussion and collaboration; opportunities for feedback

# Draft Destinations and Definitions



# Draft Destination 2024

## *Western: Powering the Energy Frontier*

To advance the Nation's economic security and stability as a premier provider of energy and transmission services to our customers by applying expert resources and building mutually beneficial partnerships.

# Intermediate Destinations

## 1. **Business and Organizational Excellence**

Integrating best business practices in business approaches and internal and external engagement while optimizing organizational capability and adaptability creates a strong foundation

## 2. **Mutually Beneficial Partnerships**

Sustaining and building productive relationships enhance trust, operational effectiveness and business opportunities

## 3. **Evolution of Market Services**

Evolving Western's services in a changing industry environment by utilizing proper cost allocation principles and maintaining operational excellence responds to the needs of a diverse customer base

# Aligning Mission, Roadmap, Strategic Targets

## Vision, Mission and Roadmap

**Purpose:** Establish long-term direction

*(10- to 20-year horizon)*

## Roadmap Destinations:

Prioritized objectives essential to achieving vision, etc.

*(8- to 12-year horizon)*

## Strategic Targets:

Action items that accomplish the Destinations.

*(2- to 5-year horizon)*

# Areas of Focus: FY 2014 Strategic Targets

- Asset Management
- Communication
- Energy Infrastructure
- Human Capital Management
- Partnership and Innovation
- Power and Transmission-related Services
- Safety and Security

# Tactical Plans

- How we achieve targets and destinations
- Still being created
- Fall under Strategic Targets
- Expect draft plans in early fall 2013

# Information and feedback

- For more information please visit:

<http://ww2.wapa.gov/sites/Western/about/Pages/Roadmap2024.aspx>

- To provide feedback, please contact:

[StrategicPlanning@wapa.gov](mailto:StrategicPlanning@wapa.gov)