

Strategic Plan: Electric Utility Infrastructure Planning

June 16, 2010

Energy, Technology and
Civil Rights Committee



Proposed Long-Term Strategic Priorities

1. Infrastructure Maintenance and Renewal



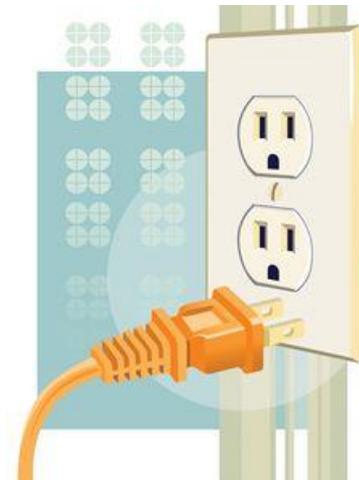
- **Maintain Reliability**
- **Provide Services Desired by Customers**

2. Environmentally Responsible Operations

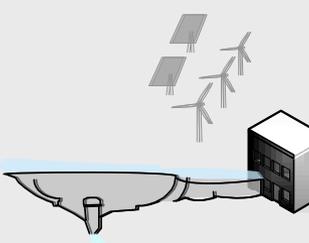
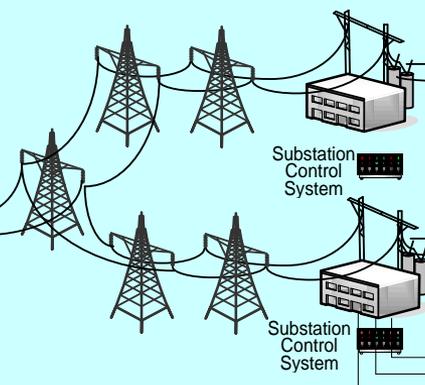
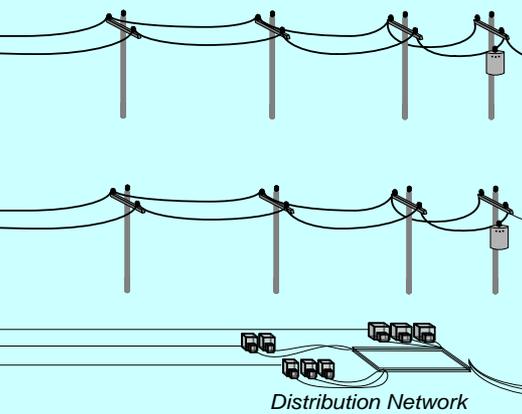
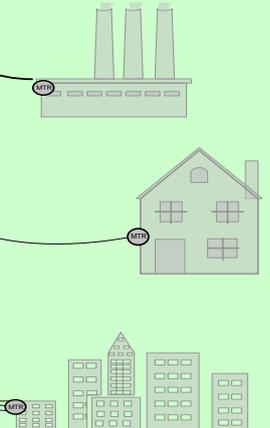


- **Green Portfolio Management**
- **Environmental Stewardship**

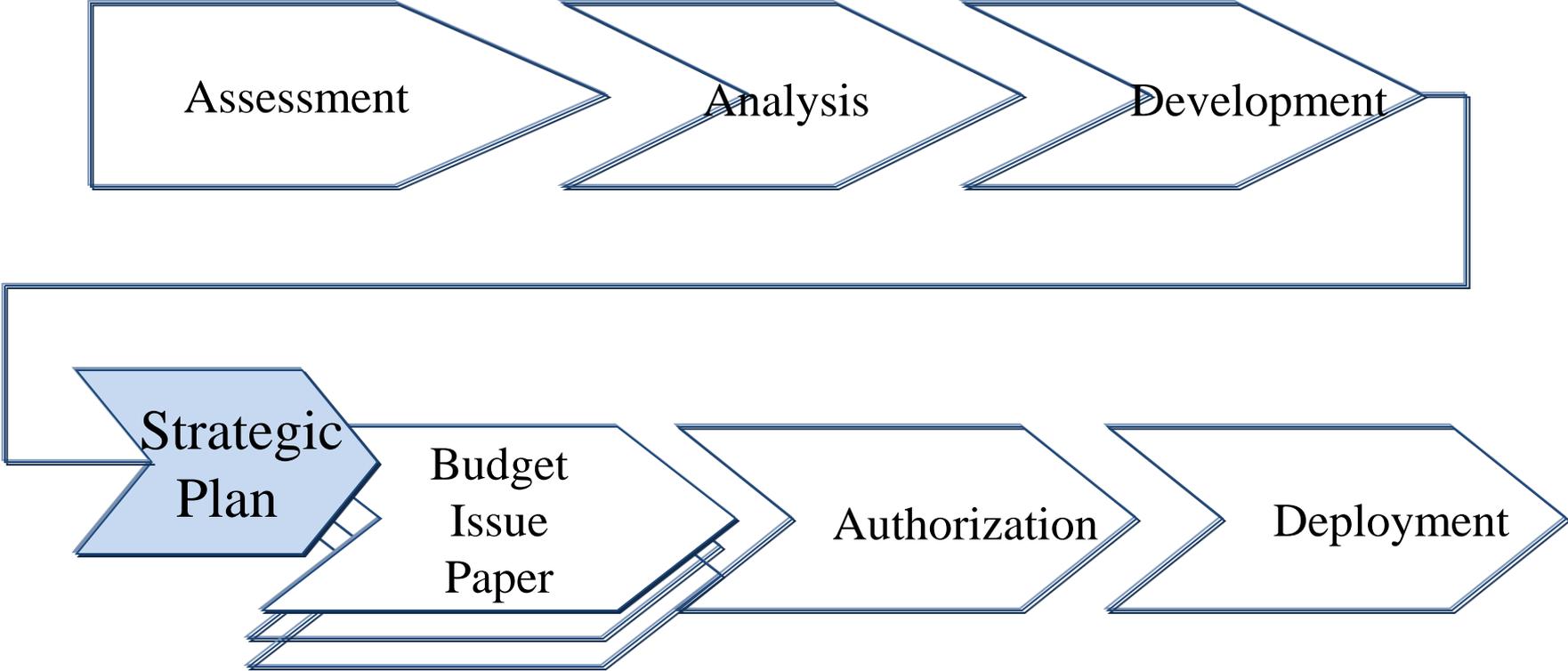
3. High Performance Organization & Workforce



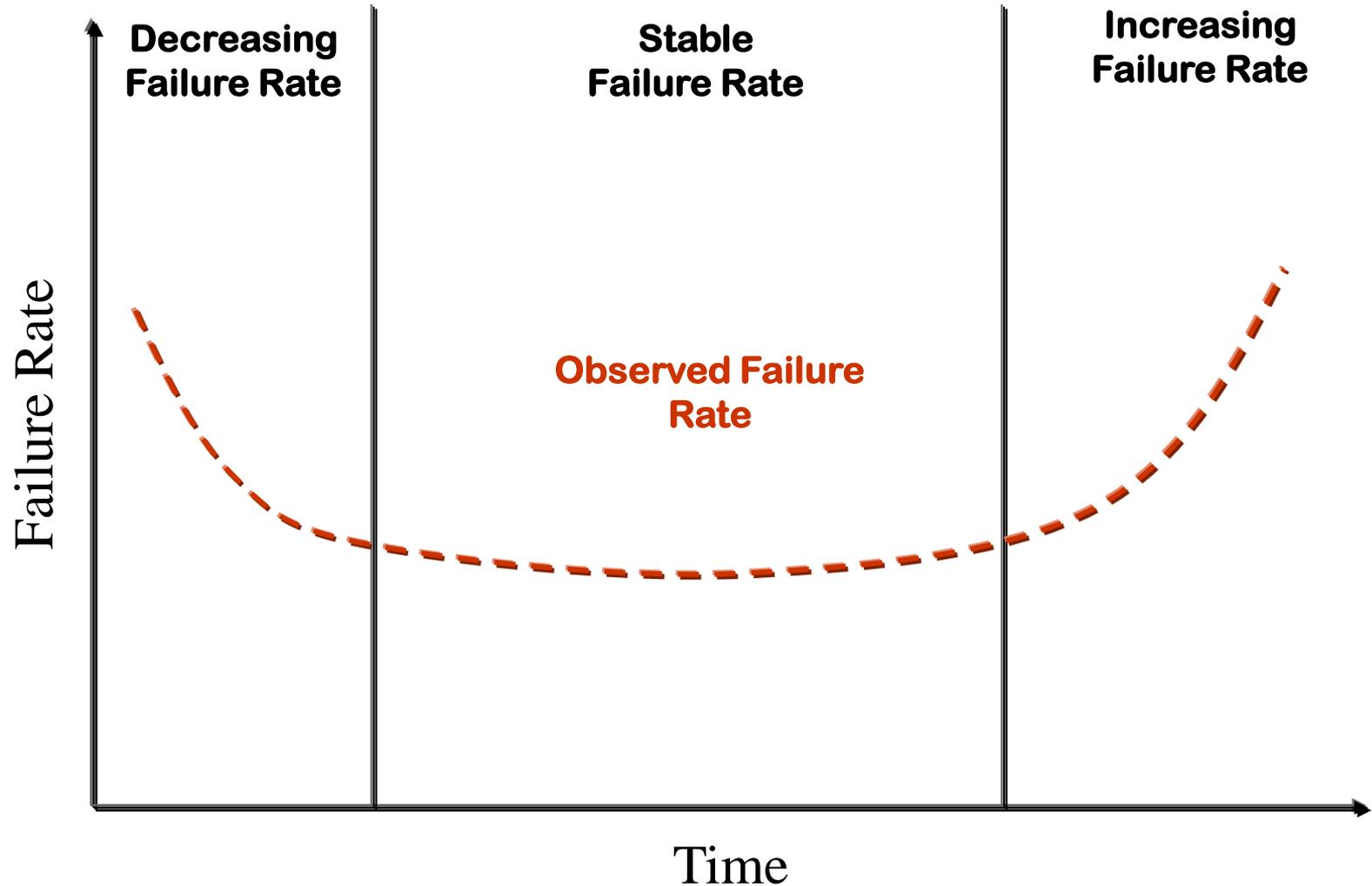
Utility Infrastructure and Assets

<p>Generation</p> 	<p>Transmission/Substations</p> 	<p>Distribution System</p> 	<p>Customer End Systems</p> 
<p>7 dams</p> <p>7 Generation Stations</p> <p>26 powerhouse transformers</p>	<p>650 Circuit Miles of Transmission (22 miles UG)</p> <p>1200 Steel Lattice Transmission Towers</p> <p>700 Transmission Poles</p> <p>15 major substations</p>	<p>54,000 Transformers</p> <ul style="list-style-type: none"> • 1200 Network transformers • 53,000 Distribution Transformers <p>167 Electric Feeders</p> <p>108,000 Poles</p> <p>84,000 Street Lights</p> <p>2400 miles of Distribution Line</p> <ul style="list-style-type: none"> • 500 mi UG • 160 mi UG Network 	<p>~ 400,000 customer meters</p> <p>71,500 in Suburban Cities (Shoreline, Lake Forest Park, Tukwila, Burien) and unincorporated King County</p>

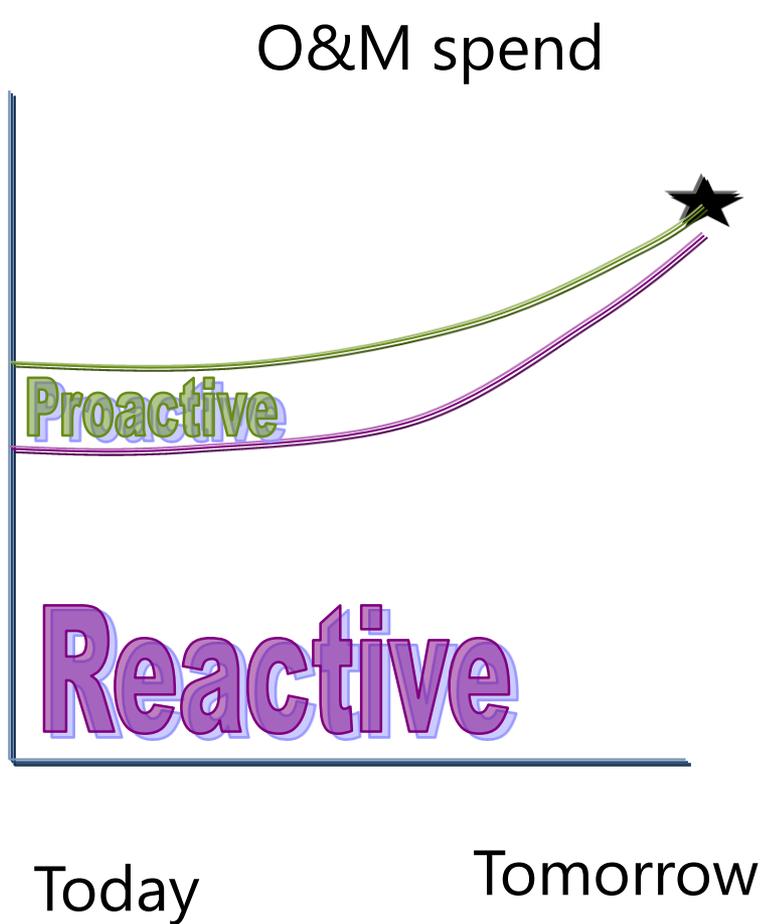
Infrastructure Maintenance & Renewal Lifecycle



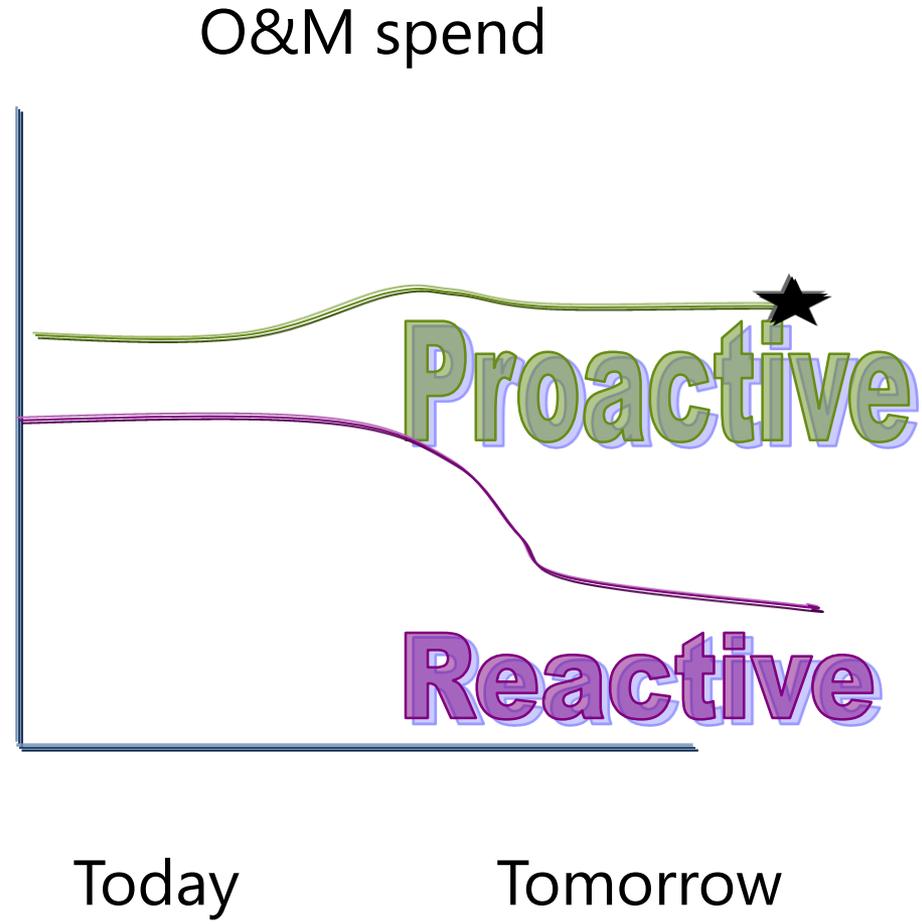
Asset Failure for an Asset Class



Strategy – Infrastructure Improvement Options



Result: Increased Rates
Decreased Reliability



Result: More Predictable Rates
Increased Reliability

Strategic Plan: Infrastructure Maintenance and Replacement Programs

T&D Assets	Program Description	A (current funding)	B (Proposed)	C (Slower pace)
Distribution – Wood Poles	Pole Replacement (88,000 wood distribution poles)	600 poles	2000 poles	1500 poles
Distribution – UG Cable	Cable Injection & Replacement (500 Mi UG)	30 Mi Inject 5 mi Replacement	30 Mi Inject 8.5 mi Replacement	Degradation of reliability for customers
Distribution – Network	Network Vault Rebuild (2400 Street Enclosures)	7 rebuilt annually	20 /yr	15 /yr
Transmission Steel Towers	Inspect and evaluate necessary corrective action (1200 steel lattice towers)	One yr Pilot 60 Towers	1140 towers over 2 years	1140 towers over 5 years
Transmission – Line	Transmission Assessment & Maintenance (650 Miles)	Vegetation patrol	Full Inspection over 2 years	Full Inspection over 5 years



Strategic Plan: Infrastructure Maintenance and Replacement Programs

Assets	Program Description	A (Existing budget)	B (Full)	C (Slower pace)
T&D Substation	Substation Transformer Replacement (67 Transformers)	1 per yr	2 per yr (2013-14)	N/A
Generation	Major and Minor Maintenance	Rescheduled maintenance plans	Restore previous funding	
Generation	Unit Automation	Rescheduled projects	Restore previous funding	
Generation	Unit Upgrades & Rehabilitation Strategy	Rescheduled projects	Restore previous funding	



The background consists of several overlapping, light-colored rectangular papers. Each paper has a large, bold, black question mark printed on it. The papers are slightly offset from each other, creating a sense of depth and repetition. The overall color palette is monochromatic, using shades of gray and black.

Q & A