

Right-of-Way Reclamation on Critical Transmission Corridors

The Dark Side of Vegetation Management

November 15, 2012



Background and Definitions

So what is Reclamation?

- According to IVM BMP: ‘requires non-selective techniques in areas dominated by incompatible vegetation’
- But... BMP also describes IVM as “a system of managing plant communities” using the “most appropriate control method”



Background and Definitions

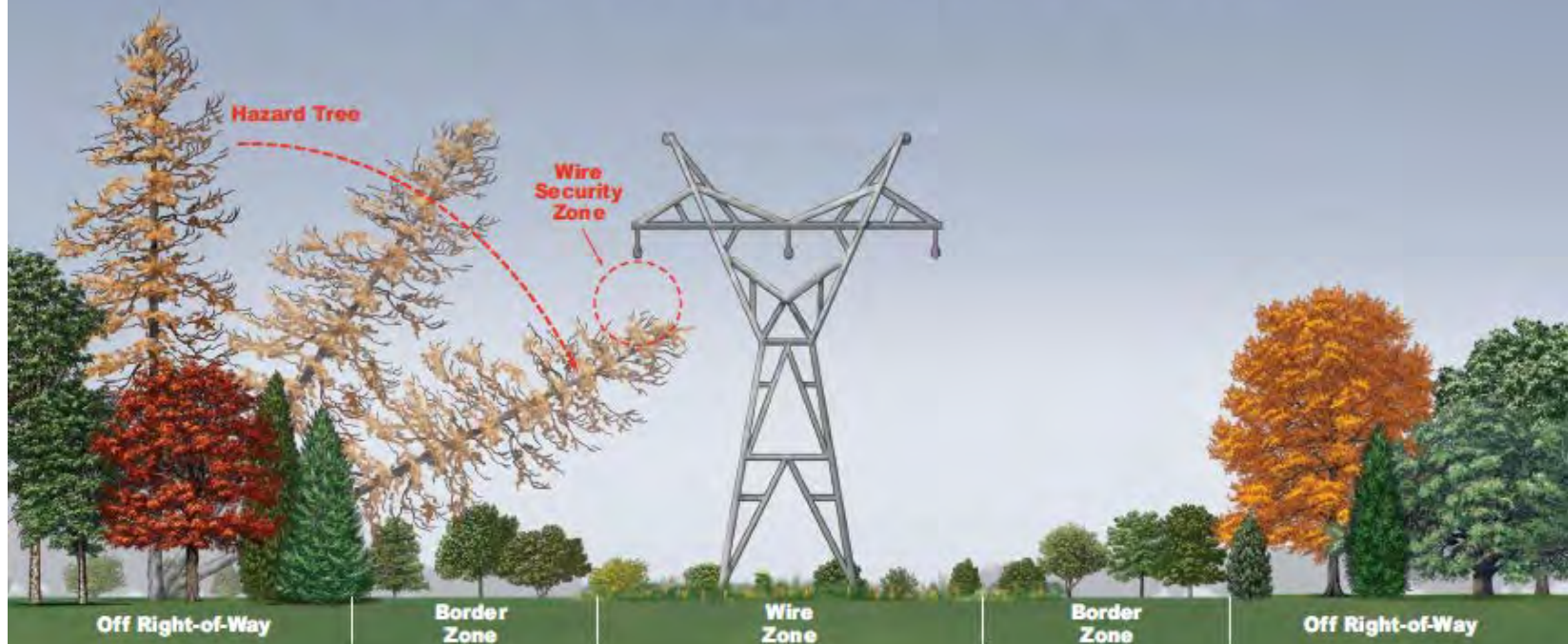
So what is Reclamation?

- For practical purposes, it is a necessary, sometimes awkward, first step –
- Common on critical utility corridors – especially on new construction and those that have been neglected
- Given the appropriate follow up (i.e. continued IVM) it is a Sustainable, Ecosystem approach, Backed by science and industry
- It looks like this



It also looks like this...

Wire Zone - Border Zone



Industry best practice developed in the 1980s, based on over 50 years of university research, and endorsed by NERC* and FERC** following the August 2003 blackout.

NERC: North American Electric Reliability Corporation
FERC: Federal Energy Regulatory Commission



... and this





... and this



Historical Context

Why Now? What's Changed?

- Response to New Federal Regulations after the Massive 2003 Blackout
- ZERO Tolerance Standard
- BUT, as “Randy” says...

(T&D World Magazine
January 1, 2011)



DON'T BLAME THE FEDS!!!!

*Randy Miller, System Forester, PacifiCorp
Past President, UAA*



Historical Context for PG&E

PG&E Initiates ROW Reclamation Program in 2009 for NERC Lines

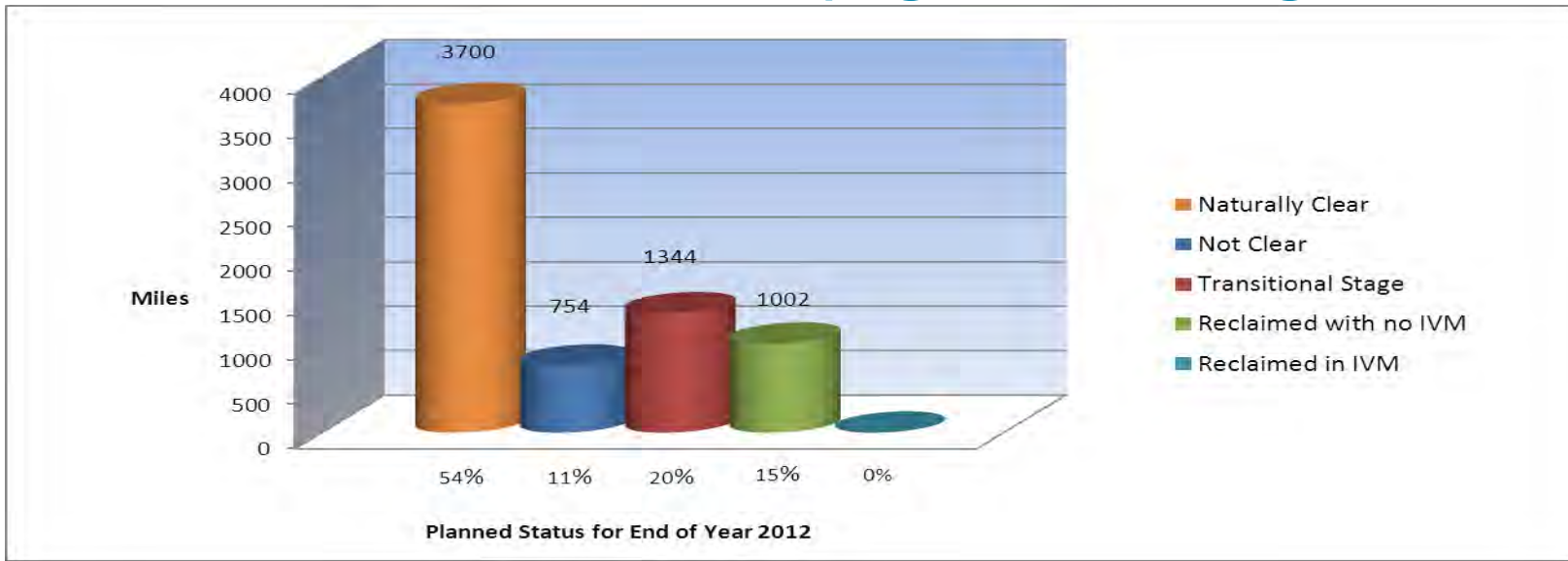
- **Response to New Federal Regulations**
 - Not “BLAMING”... Just sayin
- **Response to overgrown and neglected ROWs**
- **Response to 2004 and 2008 vegetation contacts**
- **Intended to be a 5 yr. program – Align with ANSI and BMPs... recently extended thru 2017**
- **Started in Sierras and Valley, i.e. less controversial / build on success**



Reclamation and IVM by the Numbers

Identify Work Scope

- Inventories in 2008 and 2009
- For 6800 miles of Critical Corridor:
 - Approximately 350,000 to 450,000 tree and brush units
 - Approximately 3100 line miles affected
 - All land types impacted: Urban, Rural, Public, Private, Agricultural...
- Program reevaluation in 2012, follow-up inventory scheduled for 2012-2013 (Significant Progress to date)

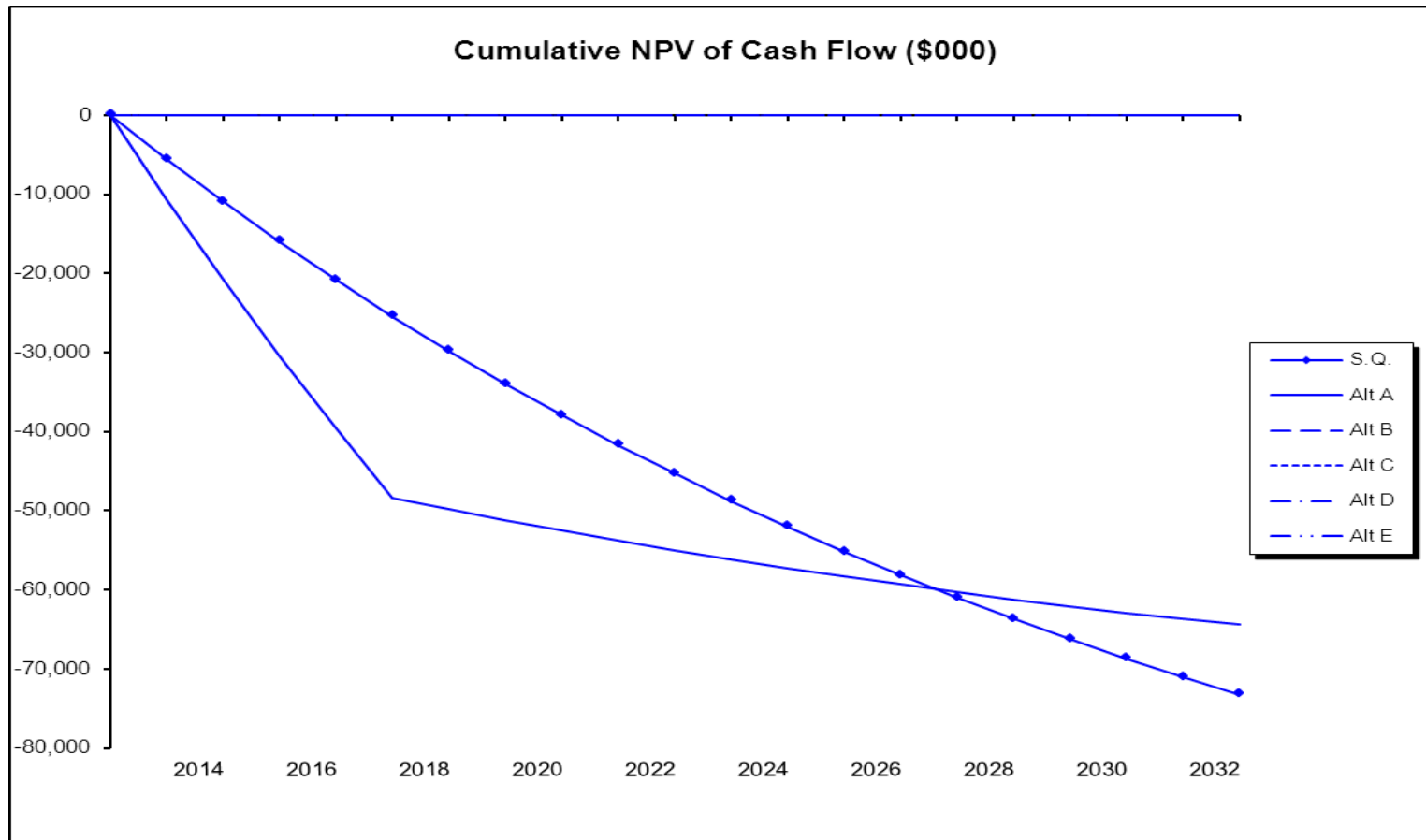




Reclamation and IVM by the Numbers

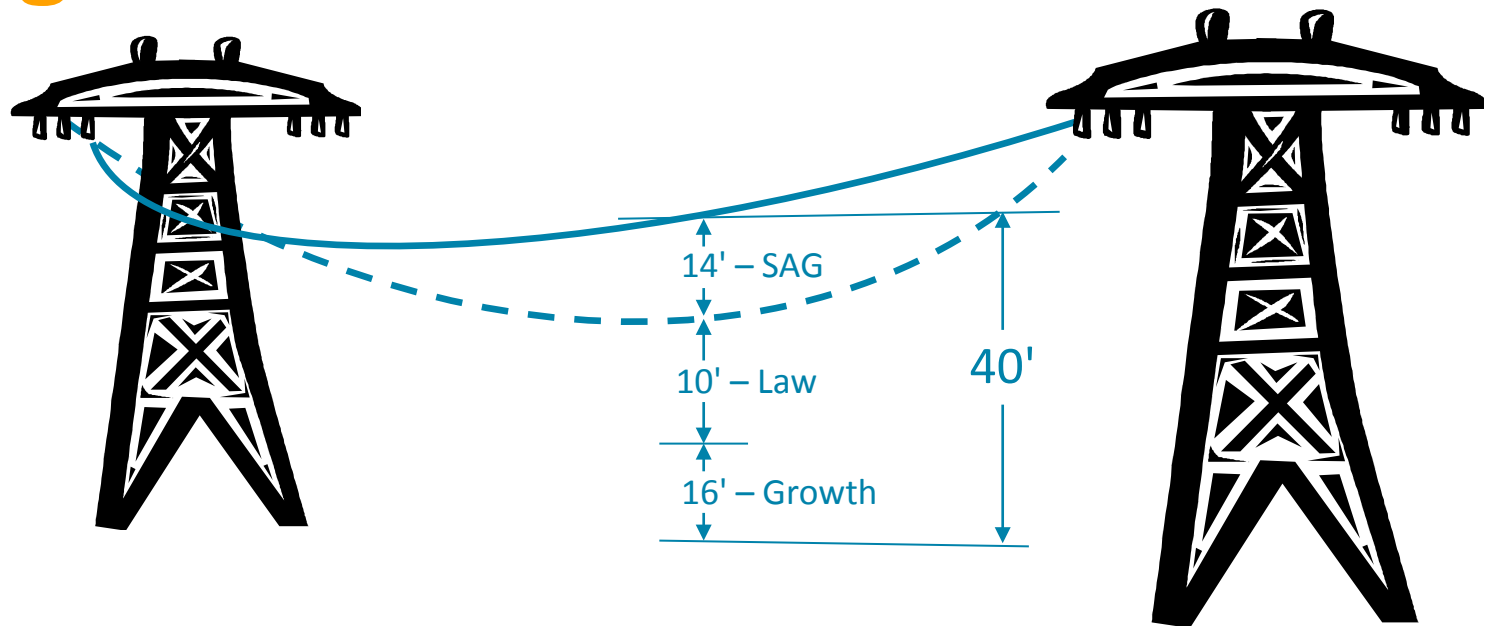
Perform Financial Analysis

- IVM is cost justified over a 20yr evaluation period
- NPV \$9MM advantage; 15 year payback



Setting Operational Thresholds

Sag + Law + Growth = 40 feet



Note: CPUC rules allow 230 kV lines to sag as close as 27 feet from the ground.



Setting Operational Thresholds

Pruning vs. Removal – The Electrical Perspective

- **PG&E prunes the vast majority (80% to 90%) of trees that encroach on its electrical system**
- **As voltages increase, risk increases, clearance requirements increase, equipment tolerances decrease, and regulations become more stringent. Therefore: as voltages increase, tree removal rates increase.**
- **Distribution Lines: 12,000 volts to 21,000 volts (State Regs)**
 - 113,000 miles of line
 - Approximately 8% to 10% removal rates
- **Transmission Lines: 60kV to 115kV (State Regs)**
 - 12,200 miles of line
 - Approximately 50% removal rates
- **Higher-voltage Transmission Lines: 230kV and 500kV (Fed ZERO Tolerance)**
 - 6,800 miles of line
 - 90% to 100% removal rates



Setting Operational Thresholds

Pruning vs. Removal – The Environmental Perspective

- **PG&E follows industry standards and best practices for tree pruning (ANSI A-300 Part 1) and Integrated Vegetation Management (IVM) (ANSI A-300 Part 7)**
 - **Tree removal is the recommended industry practice when severe tree pruning would otherwise be required to achieve necessary line clearance**
 - **International Society of Arboriculture (ISA), National Arbor Day Foundation (NADF), and Utility Arborists Association (UAA) do not support “topping” of trees *at any time***
 - **Pruning that removes more than 1/3 of the crown of a tree is strongly discouraged, as it has high potential to kill the tree**
 - **IVM on electric utility corridors is proven to promote healthy, diverse, low-growing plant communities.**
 - **IVM results in the establishment of early successional forest habitat which is critical for a wide range of plants and wildlife (including endangered species).**



Communications and Relations

Internal Stakeholders: Know the players and their concerns

- **Government Relations**
 - Political Capital
- **Media / News Dept. / External Communications**
 - Brand Image
- **Customer Sales & Service / Marketing**
 - Customer Relationship
- **Law Dept.**
 - Risk Management and Legal Compliance
- **Vegetation Management**
 - Safety and Reliability



Communications and Relations

Customers and External Stakeholders

PG&E Initiates Work

- A series of letters are sent to affected property owners.
- Easement boundaries and incompatible trees are marked in the field.
- Consultants perform customer outreach.





Communications and Relations

Customers and External Stakeholders

For the community in affected areas:

- Community meetings and extensive one-on-one conversations with property owners
- Mail follow-up letters to affected property owners to provide information and invite discussion about our work
- Outreach to Home Owners Associations (HOAs)

For Opposition leadership:

- Direct engagement to foster dialog, share information and enhance mutual understanding
- Host field meeting to review examples of completed work sites
- Prompt response to written requests and document review
- Change and compromise **BUT NO COMPROMISE ON SAFETY**



Communications and Relations

Customers and External Stakeholders

For elected officials:

- Face to face meetings with elected officials ranging from city to county to state to federal
- Host in-field meetings
- Participated in meetings with CPUC representatives
- Held multiple conference calls with California Department of Fish and Game, and US Fish and Wildlife Service

For the media:

- Participate in editorial board meetings
- Provide regular updates to local media and prompt response to inquiries
- Participate in Radio and TV interviews

Steps and Missteps of Community Engagement

Community Response



PG&E to hold meeting on big Sonoma County tree-cutting plan.

Press Democrat, March 27, 2012

Stop PG&E from Clear Cutting Our Trees

Press Democrat, March 25, 2012

Santa Rosa: Residents angry about PG&E plans to cut trees near power lines in Sonoma County

KTVU News

Anger over PG&E Tree-Removal Plan
Press Democrat, March 30, 2012

PG&E clear cutting policies hit buzz saw of opposition

Kenwood Press, March 1 2012

Thousands of Wine Country Trees to Face the Axe

NBC Bay Area, February 28 2012

PG&E To Cut Thousands of Trees in Sonoma County

Press Democrat, February 28 2102

PG&E Moving Forward with Expanded Tree Cutting

Kenwood Press, January 15, 2012

Oakmonters Challenge PG&E Clearcutting Policy

Kenwood Press, December 01 2011



Going Forward

- **PG&E has engaged Customers and Communities in good faith and will continue to do so**
- **Remarkable success with individual property owners (99.6% success overall; 98% success in highly sensitive reclamation areas)**
- **PG&E remains committed to Environmental Stewardship, Regulatory Compliance, Fiscal Accountability, Operational Excellence and Most Importantly SAFETY**

