## DOCKETED

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<td>Planning for and Maximizing the Use of Existing Rights of Way</td>
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<td>Presentation by Carl Zichella with Natural Resources Defense Council</td>
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<td><strong>Filer:</strong></td>
<td>Stephanie Bailey</td>
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PLANNING FOR AND MAXIMIZING THE USE OF EXISTING RIGHTS OF WAY

CARL ZICHELLA
DIRECTOR OF WESTERN TRANSMISSION
NRDC
What is NRDC?

NRDC uses law, science and the support of 1.3 million members and online activists to protect the planet's wildlife and wild places and to ensure a safe and healthy environment for all living things.
Agenda

- Rights of Way considerations
- Transmission design consideration
- Planning Considerations for new ROWs
- Options for extending the life of existing ROWs
  - Short term technologies, fixes
  - Longer term options
    - Reconductoring
    - Reconstruction
    - Parallel routing
Planning: Rights of Way are Precious

- Extremely difficult to site
- ROWs should be intended to meet present and future needs
- Could take more than a decade to site
- Mitigation costs can be high
- ATC from western interconnection power plant retirements needs to be factored in
- Transmission should be designed to be scalable/upgradable
- Transmission should be designed to meet longer term goals
ROW planning should consider grid needs

• Does the location serve renewable energy resource areas the state prioritizes?
  • Low environmental conflicts
  • Supports economic development
  • Reduces community impacts
  • Access to high quality renewable resources
  • Facilitates access to available storage
Planning, ctd.

- Does the location enhance grid modernization and expansion goals
  - Will it serve to future system upgrade/expansion needs?
    - Increase flows and allow for \( \uparrow \) RE transfers to neighboring balancing areas
    - Reduce congestion in existing lines
    - Logically improve system topology
Planning CTD.

• Is it designed to be expandable?
  • Towers that can accommodate higher voltage rating conductors
  • Towers that allow for adding a circuit
Extending ROW life

New technologies and enhanced electronics can help

- Flow controllers reduce congestion
- PMUs (synchrophasors) and automation
- High capacity conductors
  - Where towers cannot easily or cost effectively be replaced
  - Defer or altogether avoid reconstruction
  - Increase transfer capacity with same or similar voltage ratings
Questions?
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