

# Sonora Crossing Project

## Transmission Summit West

September 13, 2018



TRANSCANYON

# Agenda

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1. TransCanyon Overview
2. Sonora Crossing Project Overview
3. North Gila to Orchard 230kV Project
4. Project Plan
5. Feasibility Analysis
6. Questions

# TransCanyon Overview

**TransCanyon is an independent developer of electric transmission infrastructure for WECC**

- 50/50 joint venture between subsidiaries of Pinnacle West Capital Corporation and Berkshire Hathaway Energy
- Independent and well positioned to drive creative solutions
- Leverage the combined energy expertise and financial strength of Berkshire Hathaway Energy and Pinnacle West Capital Corporation – U.S. \$107 Billion in assets
- Focused on all phases – development through ongoing operation
- Long-term stewards of the environment
- Value collaboration to achieve success



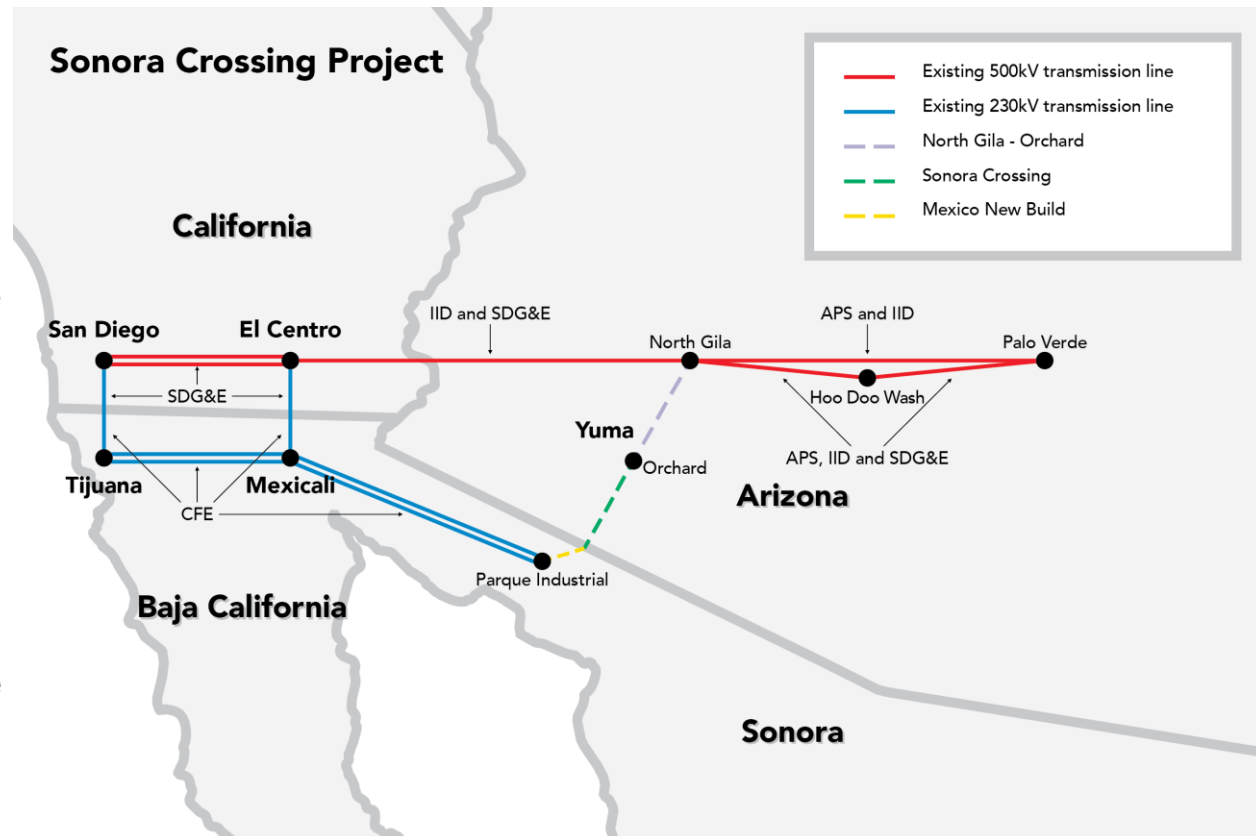
# Sonora Crossing Project Overview

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- New 230kV transmission line from APS system in Yuma to U.S.-Mexico border
- In service December 2021
- Preliminary estimate of 300MW bidirectional transfer capability between Southwest US and Mexico transmission system
- Cost estimate of \$50M including 50% of planned APS line
- Benefits to Southwest U.S. and Mexico
  - Reliability
  - Reduction in APS customer rate base
  - System resiliency
  - Production cost savings
  - Capacity cost savings
  - Renewable energy procurement cost savings
- May 2018 TC and CENACE executed an MOU to jointly perform feasibility analysis on project
  - Increasing Mexico-U.S. transmission capacity one of top 3 goals for CENACE

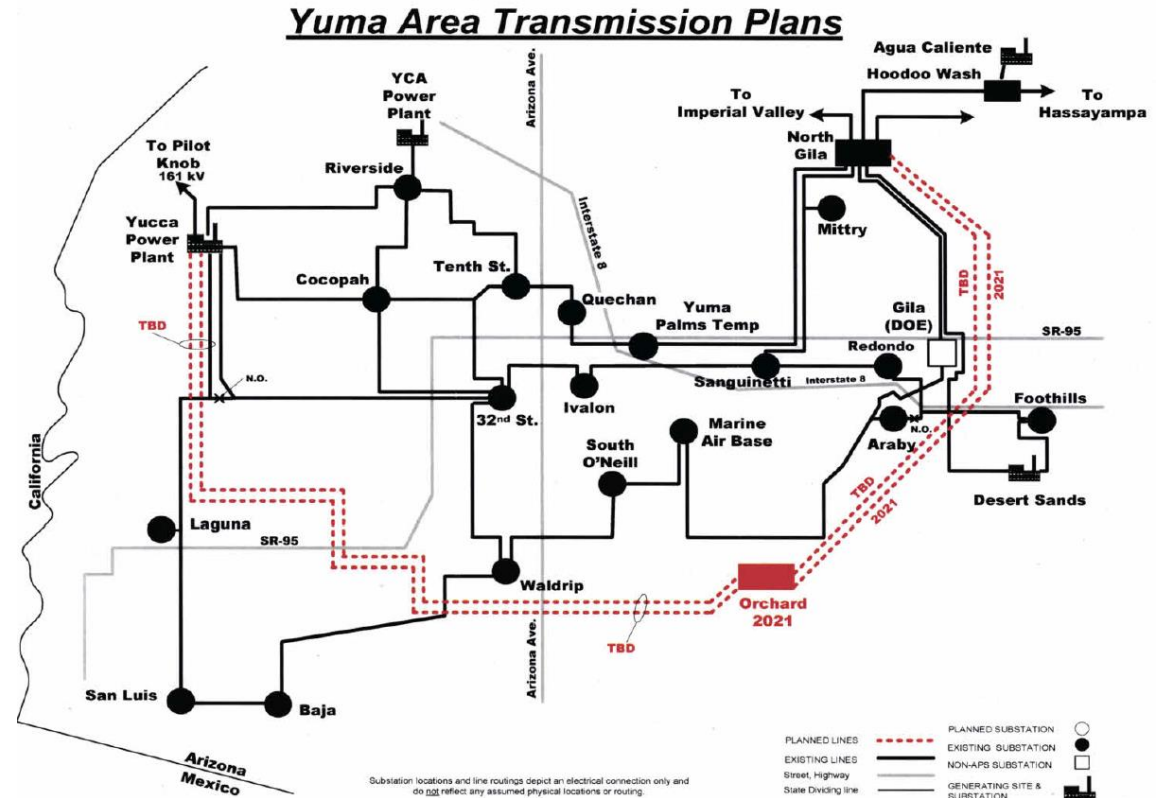
# Sonora Crossing Project Overview

- TransCanyon and APS jointly build and own 50/50 North Gila to Orchard 230 kV Project (AZ CEC permit obtained 2/2/2012)
- TransCanyon permits, builds and owns 17-mile 230 kV line from Orchard to U.S.-Mexico border
- CFE or other Mexican firm builds from border to existing Parque Industrial 230 kV substation
- TransCanyon offers attractive single transmission rate for 300 MW bidirectional service between CAISO/APS/IID at North Gila and Mexico



# North Gila to Orchard 230kV Project

- APS existing ten year transmission plan includes first circuit of the 230kV double circuit capable line from North Gila to Orchard
- Part of a double circuit 230 kV ring across Yuma from North Gila through Orchard and on to Yucca
- Project includes new 500/230 kV transformation at North Gila
- TransCanyon will be a 50% owner of North Gila to Orchard with APS
- APS will be operating agent of North Gila to Orchard and will perform O&M for TransCanyon on Sonora Crossing via ACC compliant service contract

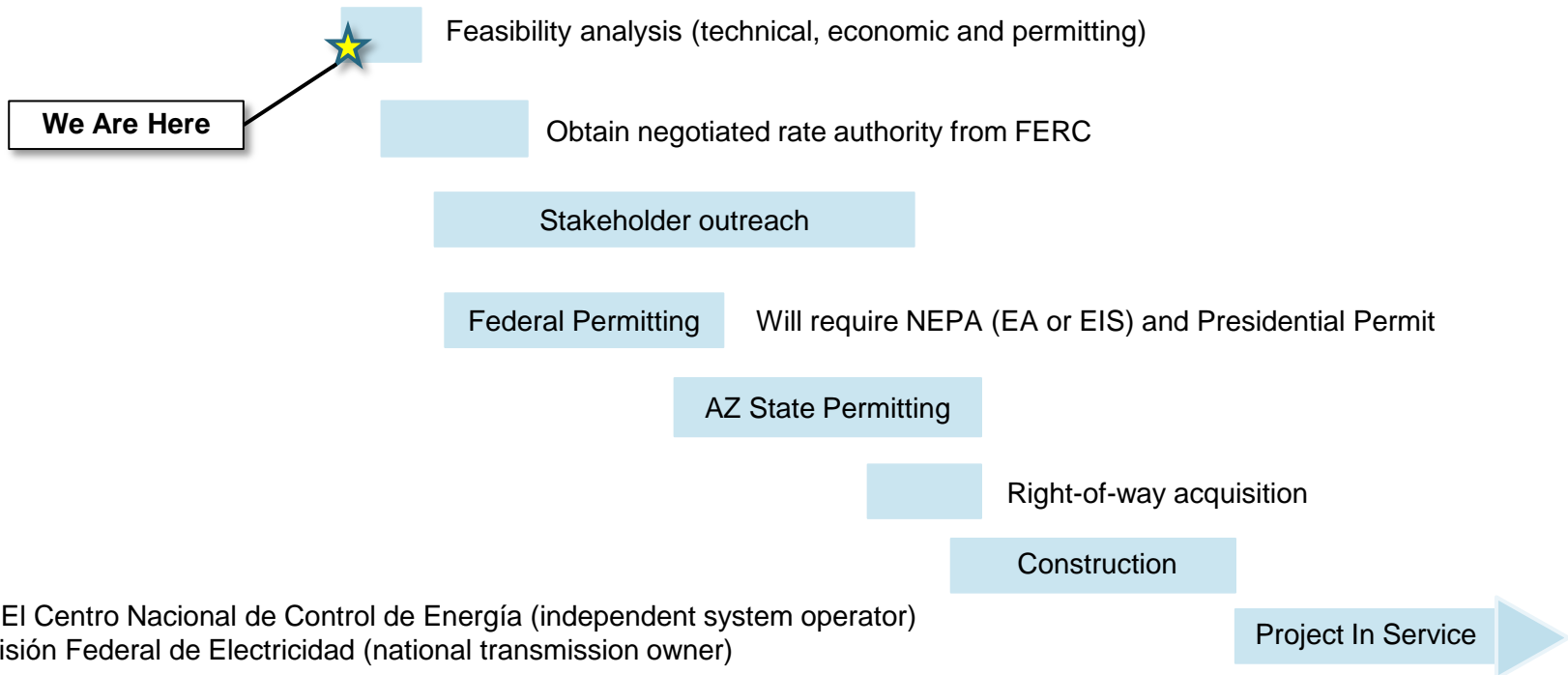


From 2018 APS 10 Year Transmission Plan

# Project Plan



- ✓ TransCanyon met with CENACE and CFE – all parties agreed that there is a need for increased cross-border transmission particularly in the San Luis area of Sonora
- ✓ MOU with TransCanyon, CENACE and APS to perform joint feasibility analysis executed May 24, 2018



# Feasibility Analysis - Technical

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- Joint analysis between TransCanyon and CENACE
- Wires to wires interconnection study for APS at Orchard substation
- Transfer capability determination
  - Preliminary estimate is 300 MW bidirectional
  - Second North Gila 500/230 kV transformer and second circuit on North Gila to Orchard 230 kV line with other upgrades at Parque Industrial could add up to 300 MW of additional capacity (preliminary estimate – not under study at this time)
- WECC Phase 1 rating study
  - Planned rating
  - Comprehensive Progress Report



# Feasibility Analysis - Economic

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- Joint analysis between TransCanyon and CENACE
- Improved integration of Mexico and U.S. power system should yield significant benefits
  - Economic
  - Reliability
  - Policy
- Quantifiable economic benefits
  - Energy cost savings
  - Capacity cost savings
  - Renewable procurement cost savings
- Preliminary high-level project cost (including 50% of North Gila to Orchard) is \$50 million

# Feasibility Analysis - Permitting

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- Feasibility studies and risk analysis
  - Goal is to identify feasible alternatives
- Preparation of plan for performing environmental studies
- Federal permitting - National Environmental Policy Act potential requirements
  - Environmental Impact Statement (most extensive study)
  - Environmental Assessment (less extensive study)
  - Categorical Exclusion (minimal or no environmental or social impact)
  - Anticipate Sonora Crossing will require Environmental Assessment
  - Sonora Crossing will require a Presidential Permit
- State permitting – Arizona Corporation Commission Certificate of Environmental Compatibility

# Questions?