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# Transmission Development in California: What's the slowdown?

June 2023



CLEAN AIR  
TASK FORCE

Ambitious climate and clean energy laws in California, decreasing costs of clean energy technology, and the development of new decarbonized resources will require a robust transmission network.

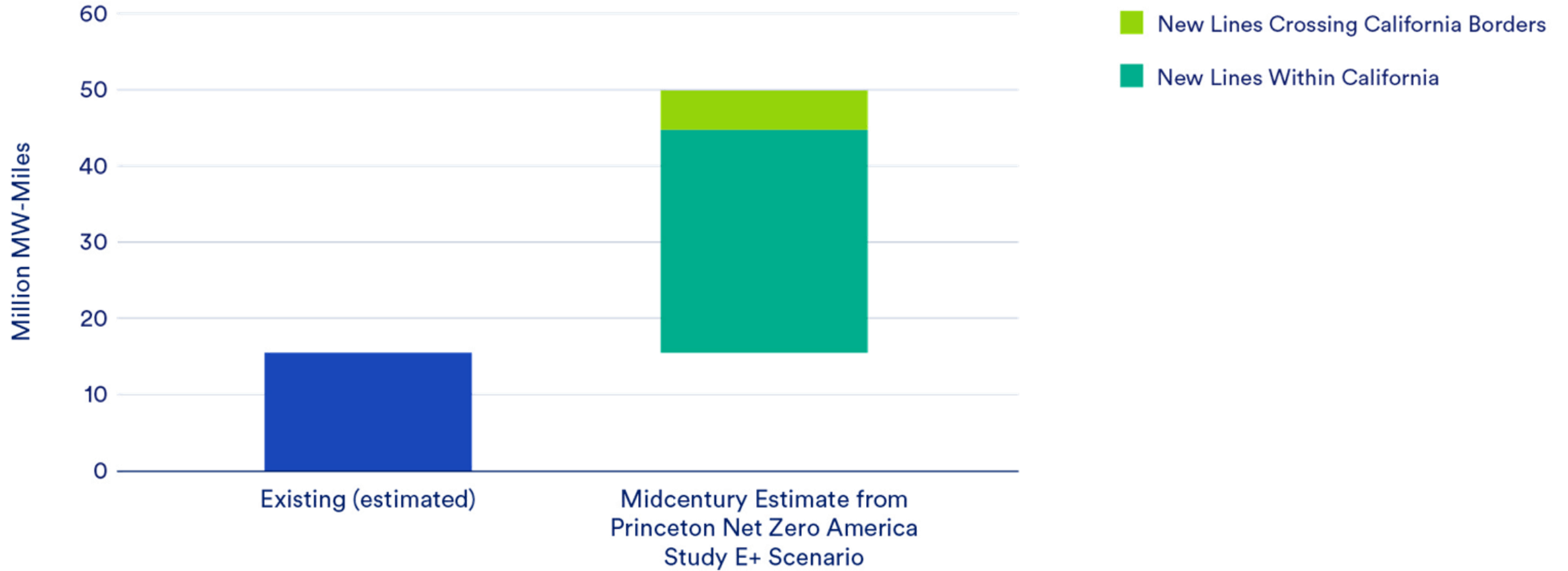
100%

of California's retail electricity needs to be supplied with renewable and zero-carbon resources by 2045

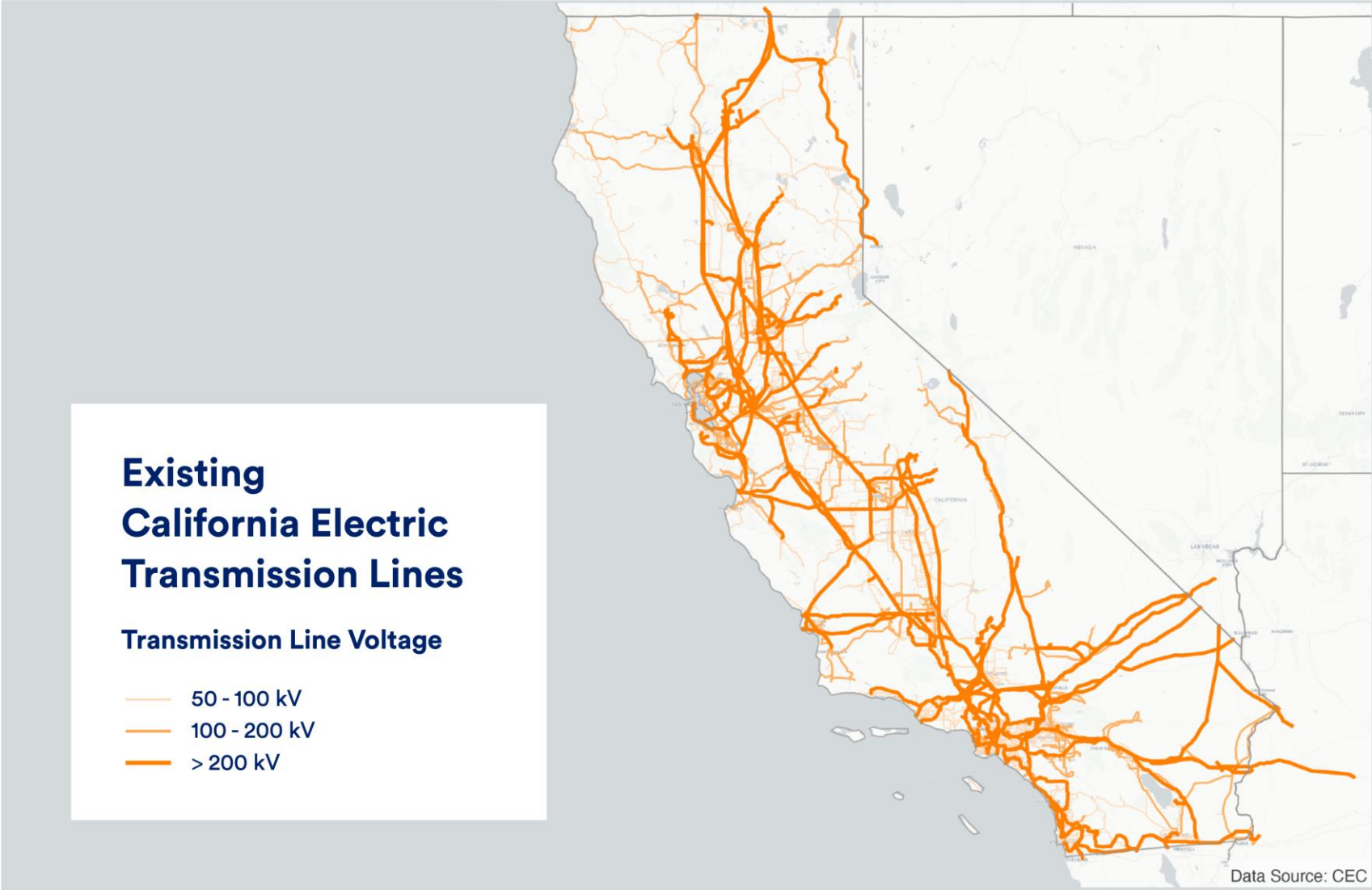
\$30B

In new transmission is needed over the next two decades to meet these targets

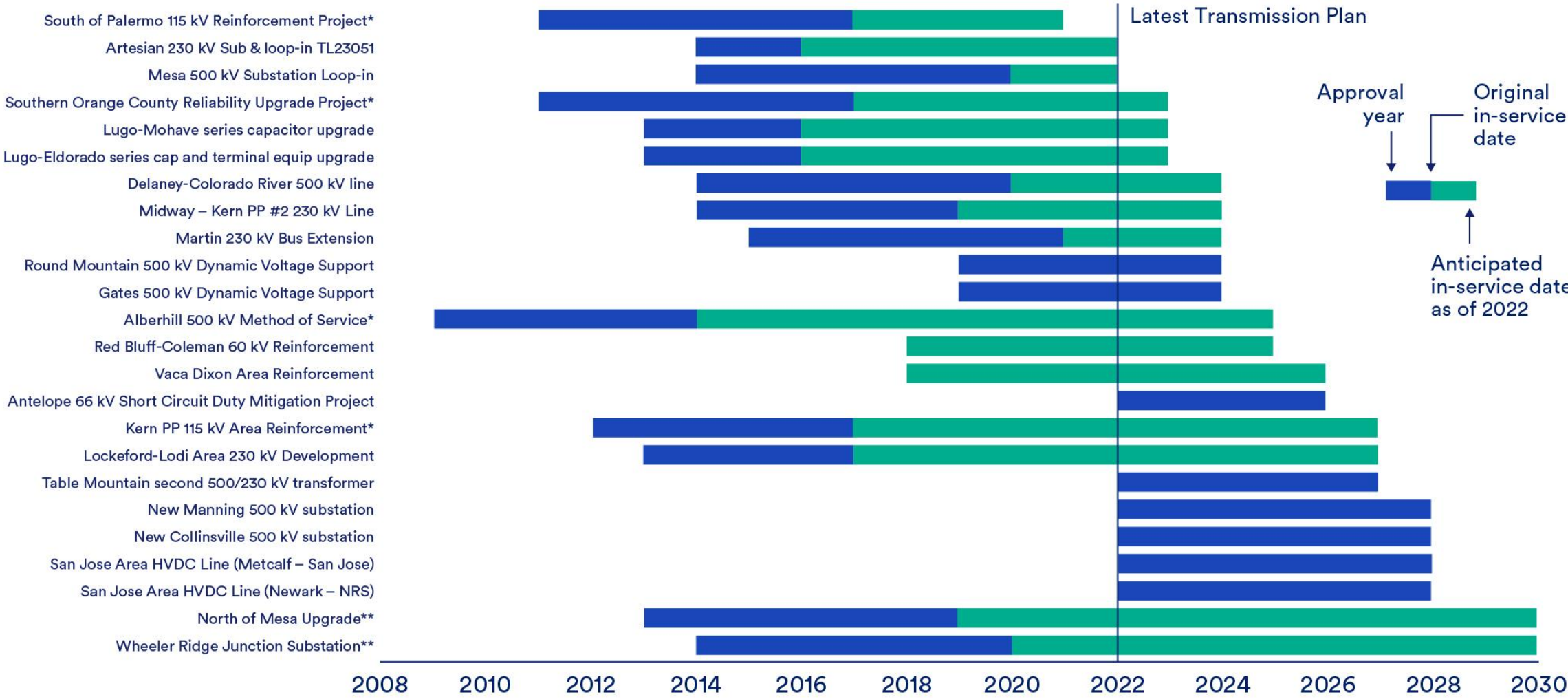
# Transmission capacity may need to triple



# California's Transmission System



# Transmission development often takes longer than anticipated



\* Approval years and Original in-service date for projects approved prior to 2012 were taken from the 2011-2012 Transmission Plan, the oldest available on the California ISO's website.

\*\* As of the 2021-2022 Transmission Plan, these projects were listed as "on hold" with no definite completion date.







# Transmission development often takes longer than anticipated

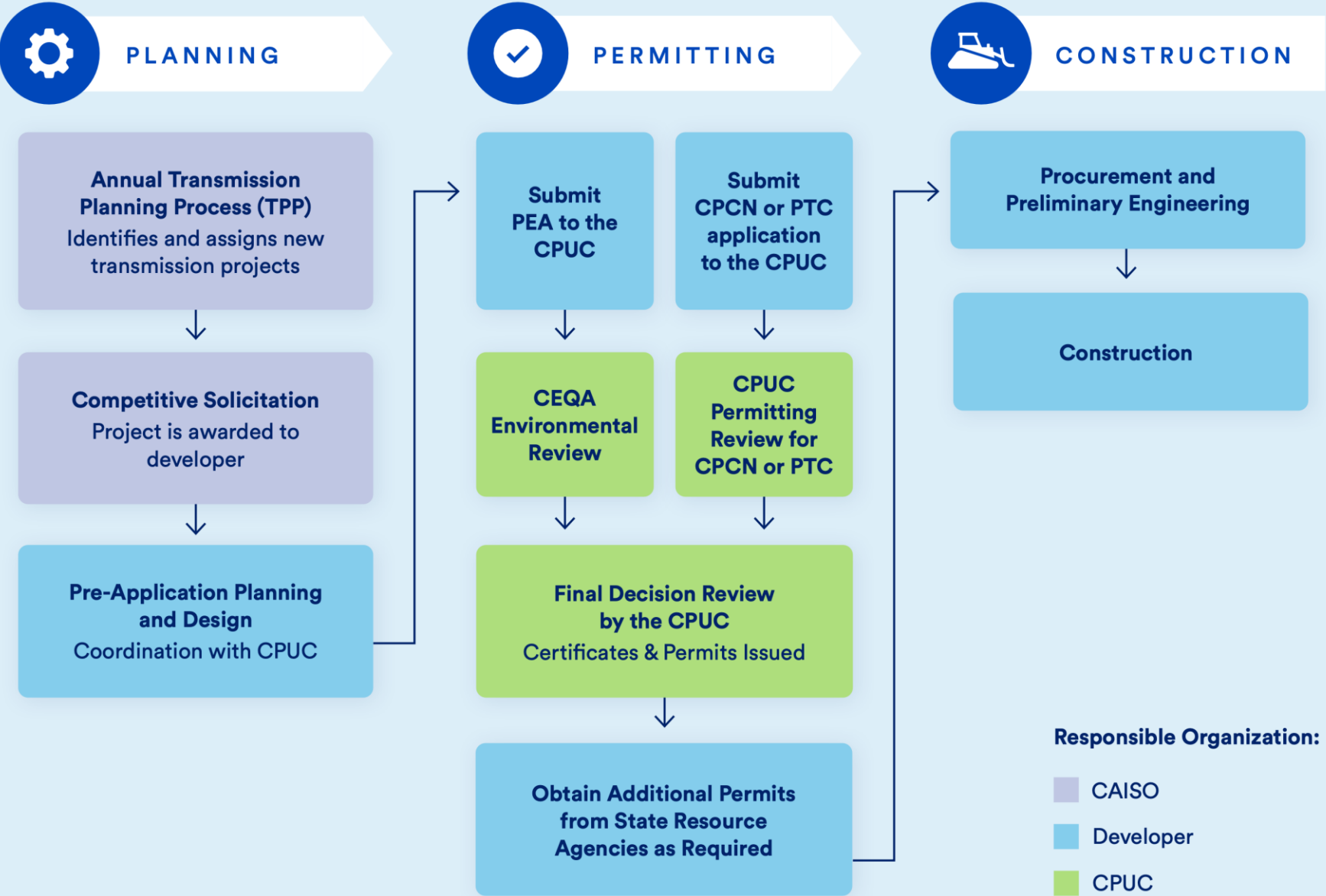
- Projects with costs exceeding \$50 million have accrued **an average delay of more than five years**
- Transmission projects frequently **require a decade or more** to plan, permit, and construct projects
- **Delays often double the original estimated project duration**

Without revisions to current planning and permitting processes, it will be **tremendously difficult** for California to connect new generation to the grid in time **to meet its clean energy and climate goals.**

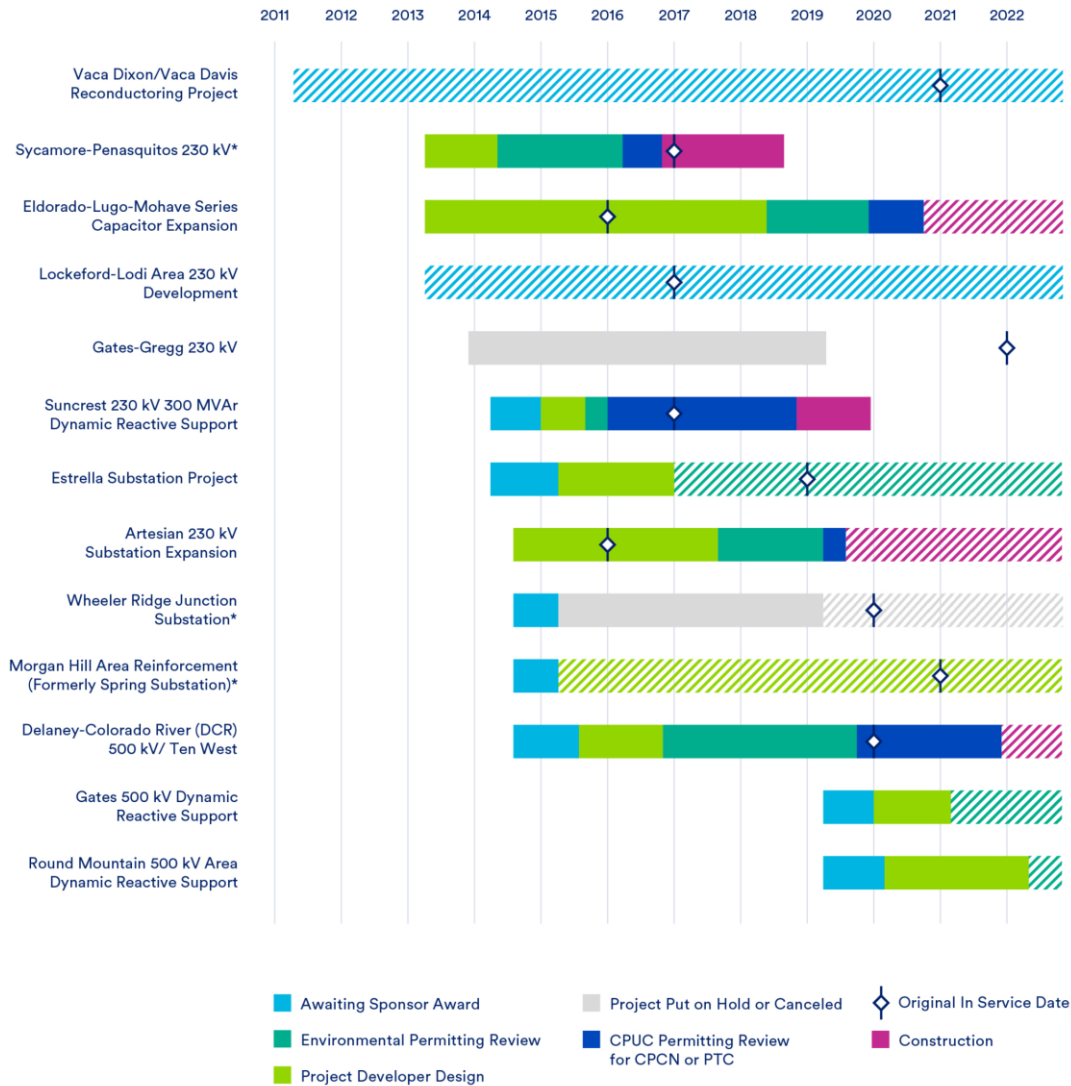


# From Concept to Completion – How Transmission is Built in California

# California's Transmission Development Process



## CAISO Approved Transmission Project Timelines



Timelines begin upon CAISO approval in the TPP. Bars represent time until each process was completed. Hashed bars represent ongoing process to date.  
 \* Indicates a utility run project.

# Trends From Past and Ongoing Projects

- Projects frequently stretch beyond completion dates
- Competitive solicitation process is the only phase regularly completed in consistent time
- Delays are most acute during
  1. The time it takes to submit a project application to the CPUC
  2. The environmental review
- Multistate projects take longer to complete

# — Costs, Ratepayers, and Competitive Solicitation

## **Increasing Project Costs:**

- Costs are 33% higher on average than original costs submitted to the CPUC <sup>1</sup>

## **Increasing Revenue Requirements:**

- Transmission revenue requirements increased 38% between 2016 and 2021 <sup>2</sup>

## **Increasing Ratepayer Costs:**

- Electricity rates are forecasted to be 10% to 20% higher in real terms by 2030 <sup>2</sup>
- The Department of Energy recently recommended that transmission access to lower-cost generation is urgently needed to lower electricity prices in San Diego, Los Angeles, and the Mendocino areas <sup>3</sup>

## **Savings Through Competitive Solicitation:**

- Competitive solicitation of CAISO projects has resulted in an estimated 29% cost savings compared to the anticipated cost of the incumbent utility<sup>1</sup>

1. The Brattle Group, "[Cost Savings Offered by Competition in Electric Transmission](#)", April 2019, pg. 55.

2. California Public Utilities Commission (CPUC), "[Utility Cost and Affordability of the Grid of the Future Report](#)", May 2021, pg. 38. Forecasted electric rate range varies depending on the utility.

3. U.S. Department of Energy (DOE), "[National Transmission Needs Study](#)," Draft for Public Comment, February 2023, pg. vi-vii.

# Policy Challenges

## 1 Slow Transmission Permitting Process

- Delays are most acute during:
  - Submission of a project application to the CPUC
  - The CPUC-led environmental review

## 2 Rising Costs and Ratepayer Impacts

- Costs increase over the life of the project, especially for projects by incumbent utilities
- Rates in California are already high and face multiple sources of increase
- Cost data is extremely sparse

## 3 Transmission Planning Lag

- Policy goals can only be met through significant expansion of transmission infrastructure
- Transmission planning process fails to anticipate future system needs early enough



# Policy Options

## 1 Accelerate the Transmission Permitting Process

- CPUC should reconsider CPCN and PTC qualifications in anticipated General Order 131-D rewrite
- Consolidate needs assessment to one review between CAISO and CPUC
- Consider expanding opportunities for competitive solicitation
- Consider whether the AB205 model could be expanded to transmission

## 2 Manage Ratepayer Impacts of Transmission Buildout

- CPUC could require cost reporting for major transmission projects that is made publicly available
- Consider providing state financing of transmission projects required to meet policy objectives

## 3 Proactively Plan and Develop Transmission

- Identify and develop critical transmission projects so that they are available when and where new clean energy is built

# Thank you

Questions?

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CATF is working to identify and advance **paradigm-shifting policy, political, and business solutions** to overcome the barriers to infrastructure deployment that are preventing the pace, scale, and diversity of new projects needed to achieve climate goals.