



Transmission Program Impact on High Voltage TAC *Estimating Model – 2017-2018 Version*

Stakeholder Overview
November 5, 2018

Background

- Forecasting tool developed for the 2012-2013 Transmission Plan in response to concerns over increasing upward pressure on transmission costs.
 - Replacing aging infrastructure
 - Complying with NERC planning standards
 - Meeting California energy policy goals
- Goal is to estimate future high voltage transmission access costs in an objective and transparent manner.
 - Strike a balance of top down estimates with bottom up details
 - Provides transparency to costs related to reliability, policy, and economic driven projects
 - Establish a baseline and allows the flexibility to customize each future project individually
 - Is not a precise forecast of any individual PTO's revenue requirement or any individual project's revenue requirement

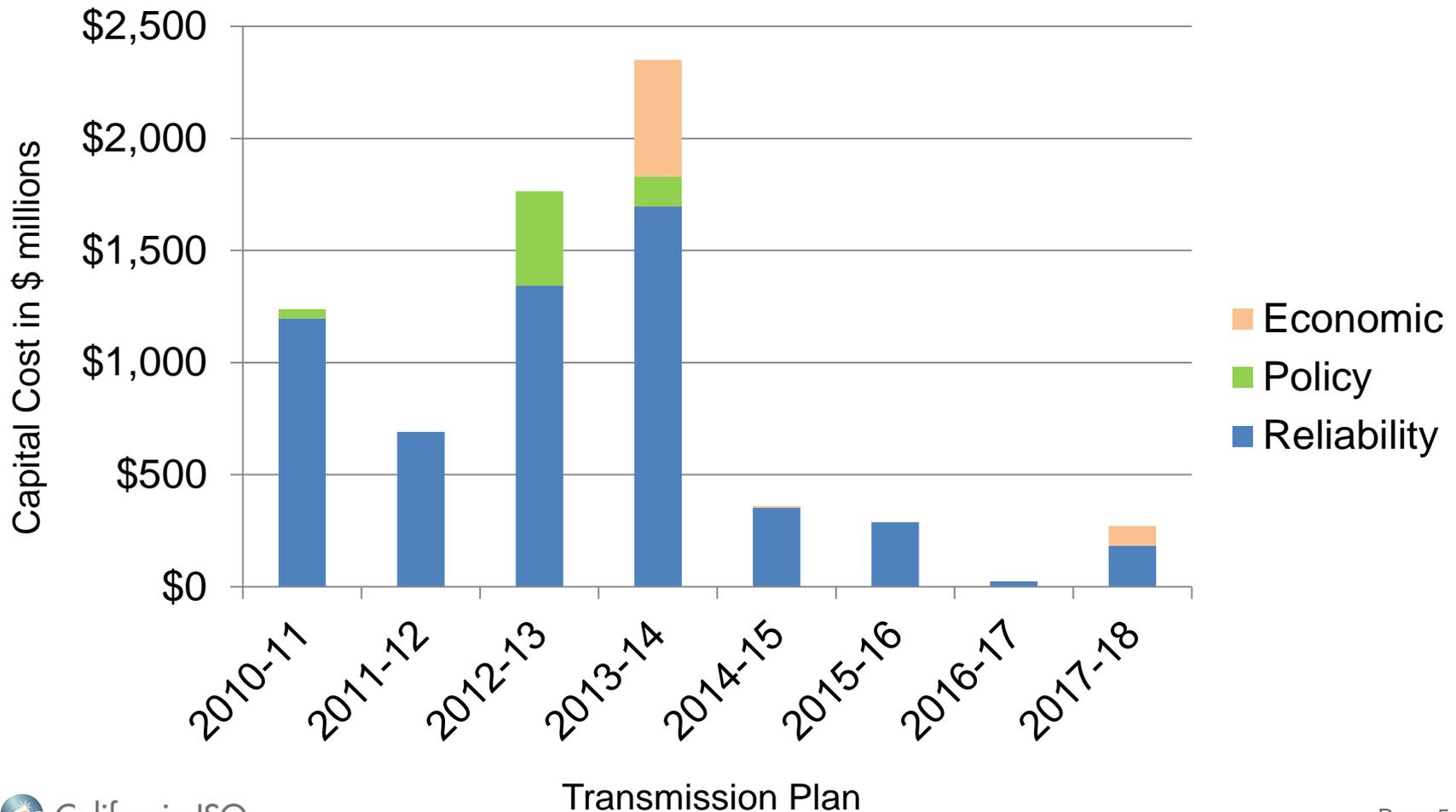
The Forecasting Tool has been updated by:

1. Reviewing comments received on last year's model
2. Establishing a Solid Foundation – January 1, 2017
 - The model reflects current gross plant data
 - Uses reasonable assumptions for costs associated with non-ISO capital and O&M
 - Includes other important factors such as depreciation, taxes, and capital costs
3. Adding the Costs of Forecast Capital Additions
 - Costs of Capital
 - Treatment of Construction Work in Progress
 - Financing and Tax Structure
 - Estimated Incremental O&M

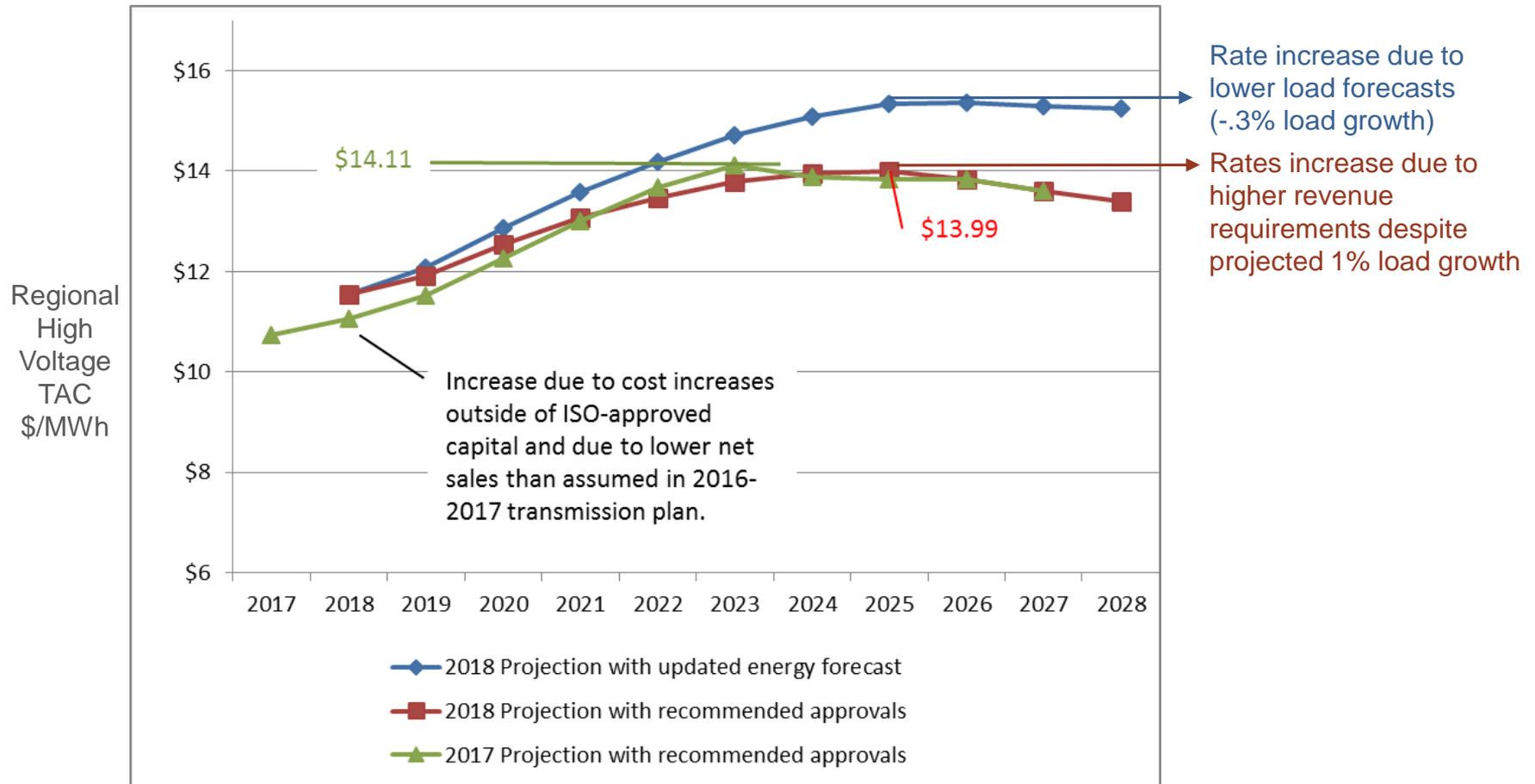
Model and modeling assumptions essentially unchanged from previous years:

- O&M costs escalated at 2% per year.
- Non-ISO capital estimated at 2% of gross plant per year.
- Reliability projects assumed to not drop below \$250 million per year once exceeding that level.
- Only major GIP-driven network projects have been identified.
- No adjustment made (yet) for other GIP-driven network upgrades or future ADNUs.
- “Typical” return, tax and depreciation rates applied.

Relatively modest amounts of new capital were approved in the 2017-2018 transmission plan:



Regional high voltage transmission access charge projection trended from January 1, 2018 values:



* Existing returns are maintained for existing PTO rate base, and 11% return on equity is assumed for new transmission capital.

Compared to the 2016-2017 model, the results themselves denoted:

- No material change in modeling practices
- With relatively modest new capital approvals, the impacts of cancelled and re-scoped projects were largely offset by forecast cost increases in previously approved projects and costs not subject to ISO approval.
- Lower forecast net sales will also put upward pressure on High Voltage TAC

The posted capital additions spreadsheet and TAC model spreadsheet reflect two corrections:

- Since the inclusion of the model's results in the 2017-2018 Transmission Plan, two errors have been identified and have been corrected in the posted material:
 - The costs for the Suncrest SVC were omitted
 - Project costs for policy and economic projects were inadvertently transcribed from the capital project cost spreadsheet into the TAC calculation spreadsheet offset one year later than forecast
- The cumulative impact of these changes on the Regional (high voltage) TAC was less than one cent per MWh

Next Steps

- Continue to refine assumptions and costs based on comments received for use in the 2018-2019 transmission plan
- Provide annual updates as part of the annual transmission planning process
- Stakeholder comments on the model are due November 19, 2018 to regionaltransmission@caiso.com