



Decision on the 2015-2016 Transmission Plan

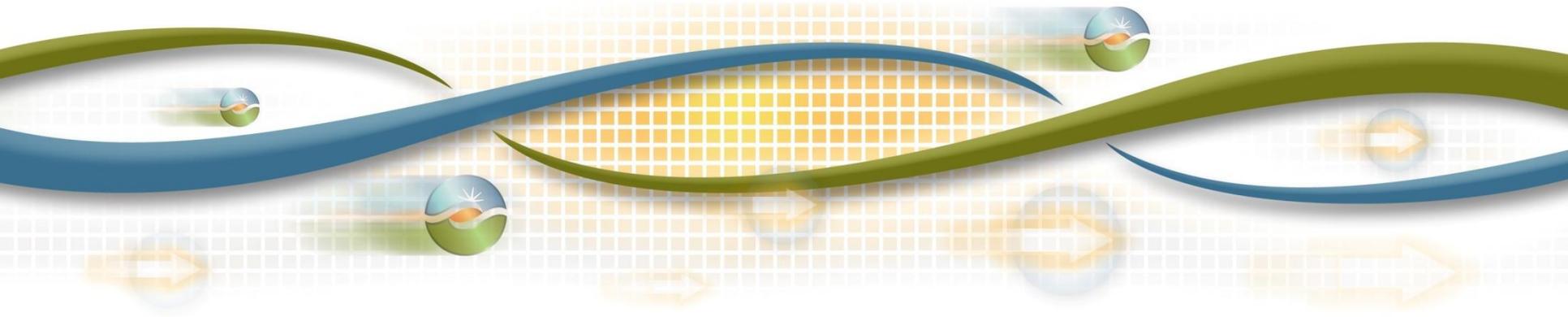
Neil Millar

Executive Director, Infrastructure Development

Board of Governors Meeting

General Session

March 25, 2016

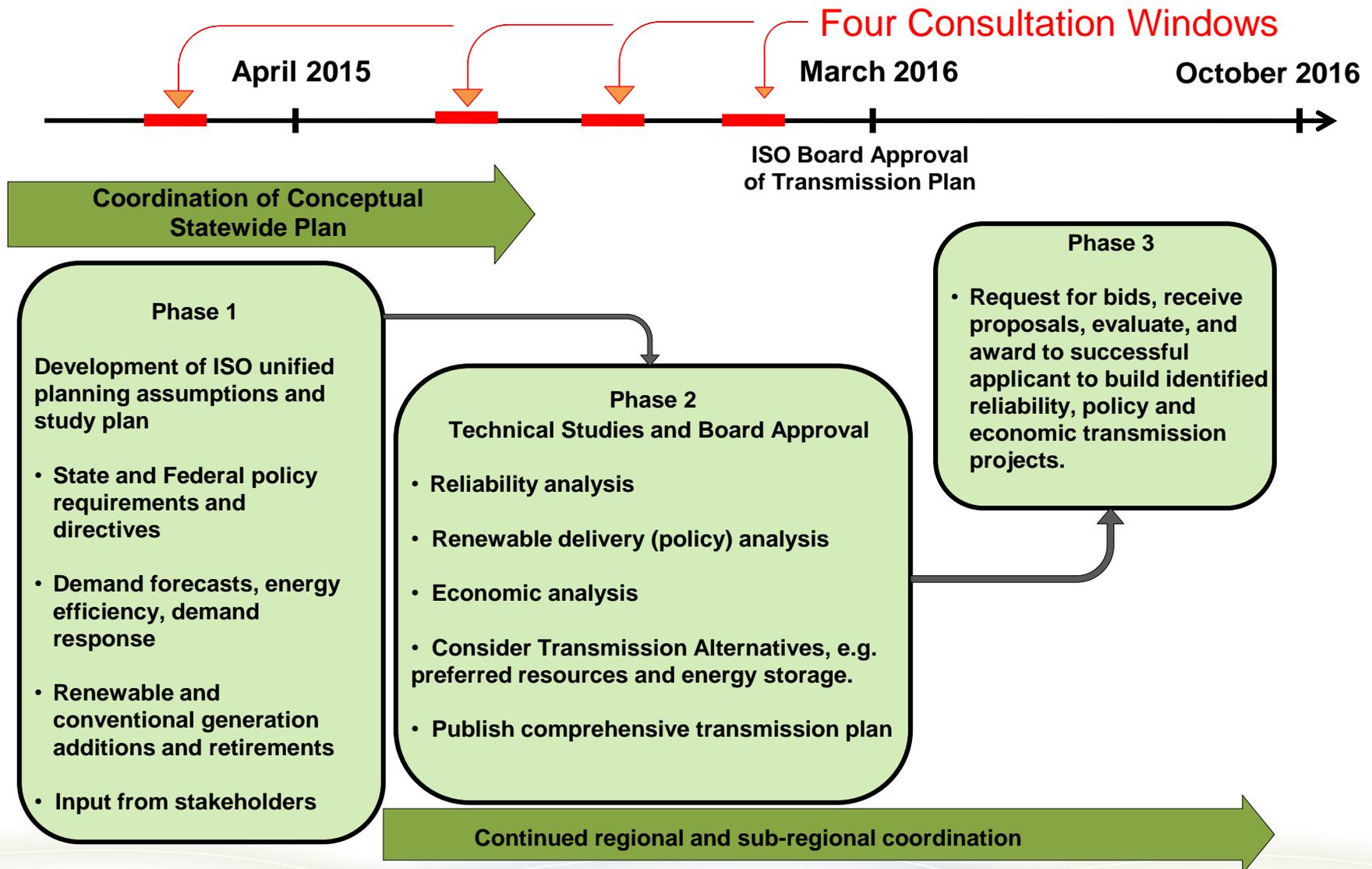


Approving the plan means approving determinations and recommendations contained in the plan.

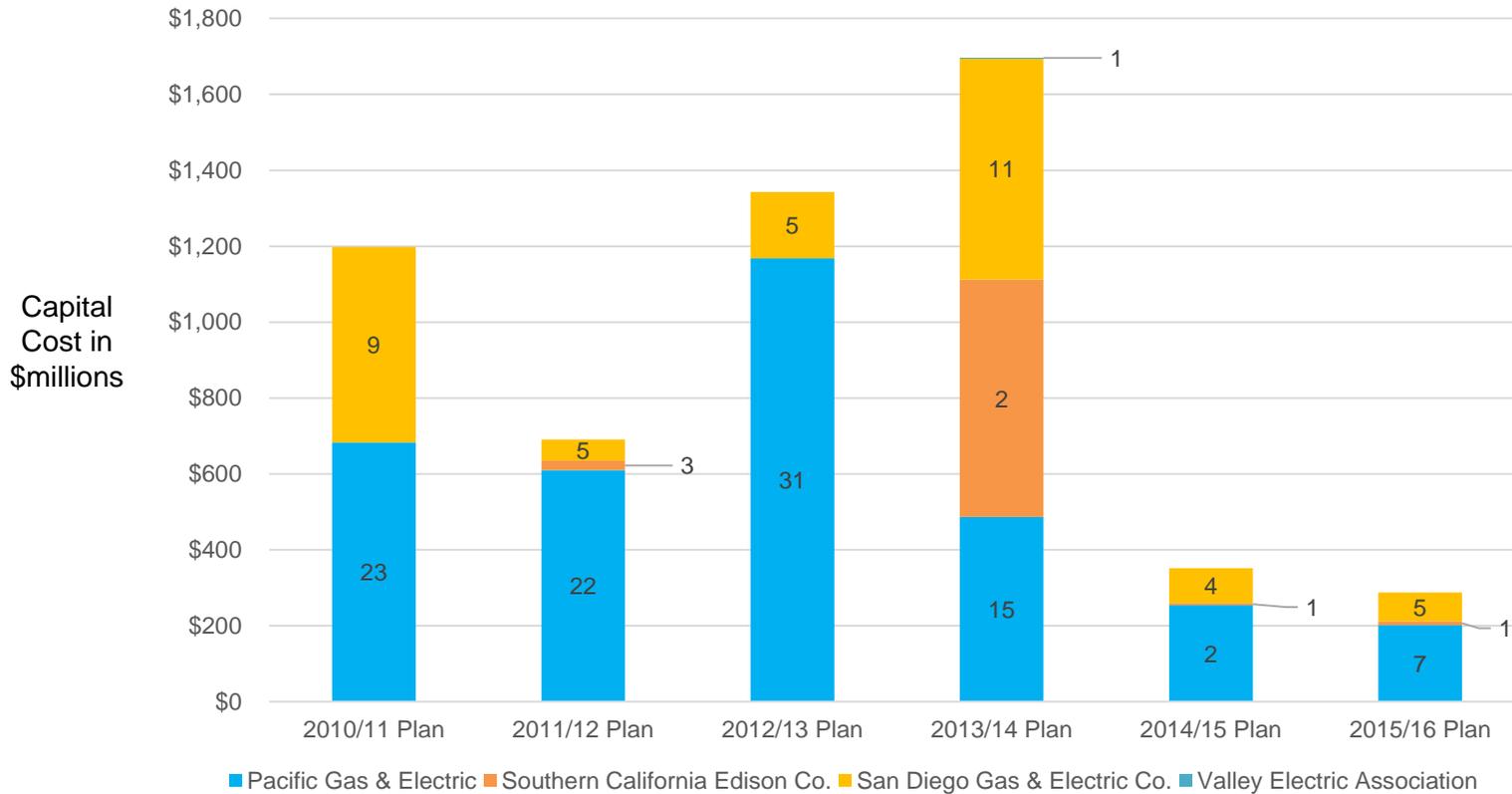
- Thirteen transmission projects:
 - All new reliability projects each of which is less than \$50 million
 - no policy driven projects
 - no economically driven projects
- Canceling 13 sub-transmission - primarily local – previously approved projects in PG&E's service area

No regional transmission solutions found to be needed are eligible for competitive solicitation.

The 2015-2016 Transmission Planning Process



New reliability needs reduced from prior cycles, both in number of projects and capital cost:



13 reliability-driven projects are found to be needed

- 5 projects (red text) were initially identified in the planning process and approved by management.
- The remaining 8 projects were subsequently identified and require Board of Governor approval.

No.	Project Name	Service Area	Expected In-Service Date	Project Cost
1	Panoche – Ora Loma 115 kV Line Reconductoring	PG&E	May-21	\$20 M
2	Bellota 230 kV Substation Shunt Reactor	PG&E	Dec 2020	\$13-19 M
3	Cottonwood 115 kV Substation Shunt Reactor	PG&E	Dec 2019	\$15-19 M
4	Delevan 230 kV Substation Shunt Reactor	PG&E	Dec 2020	\$19-28 M
5	Ignacio 230 kV Reactor	PG&E	Dec 2020	\$23.4-35.1 M
6	Los Esteros 230 kV Substation Shunt Reactor	PG&E	Dec 2020	\$24-36 M
7	Wilson 115 kV SVC	PG&E	Dec 2020	\$35-45 M
8	15 MVAR Capacitor at Basilone Substation	SDG&E	Jun-16	\$1.5-2 M
9	30 MVAR Capacitor at Pendleton Substation	SDG&E	Jun-17	\$2-3 M
10	Reconductor TL 605 Silvergate – Urban	SDG&E	Jun-18	\$5-6 M
11	Second Miguel – Bay Boulevard 230 kV Transmission Circuit	SDG&E	Jun-19	\$20-45 M
12	TL600: “Mesa Heights Loop-in + Reconductor	SDG&E	Jun-18	\$15-20 M
13	Eagle Mountain Shunt Reactors	SCE	Dec-18	\$10 M

13 previously approved local PG&E projects are being cancelled, primarily due to lower load projections

- The projects each were estimated to cost less than \$50 million each, and total \$192 million.
- 11 projects were initially identified and cancelled by management.
- 2 projects were subsequently identified and require Board of Governor approval.
 - Monta Vista - Wolfe 115 kV Substation Equipment Upgrade (Greater Bay Area) - \$1 million
 - Newark - Applied Materials 115 kV Substation Equipment Upgrade (Greater Bay Area) – \$1 million

The ISO's policy-driven analysis focused on the 33% Renewables Portfolio Standard:

- No policy-driven requirements were identified to achieve the 33% renewables portfolio standard by 2020
- Transmission needs to meet the 50% renewables portfolio standard by 2030 will be explored in future planning cycles.

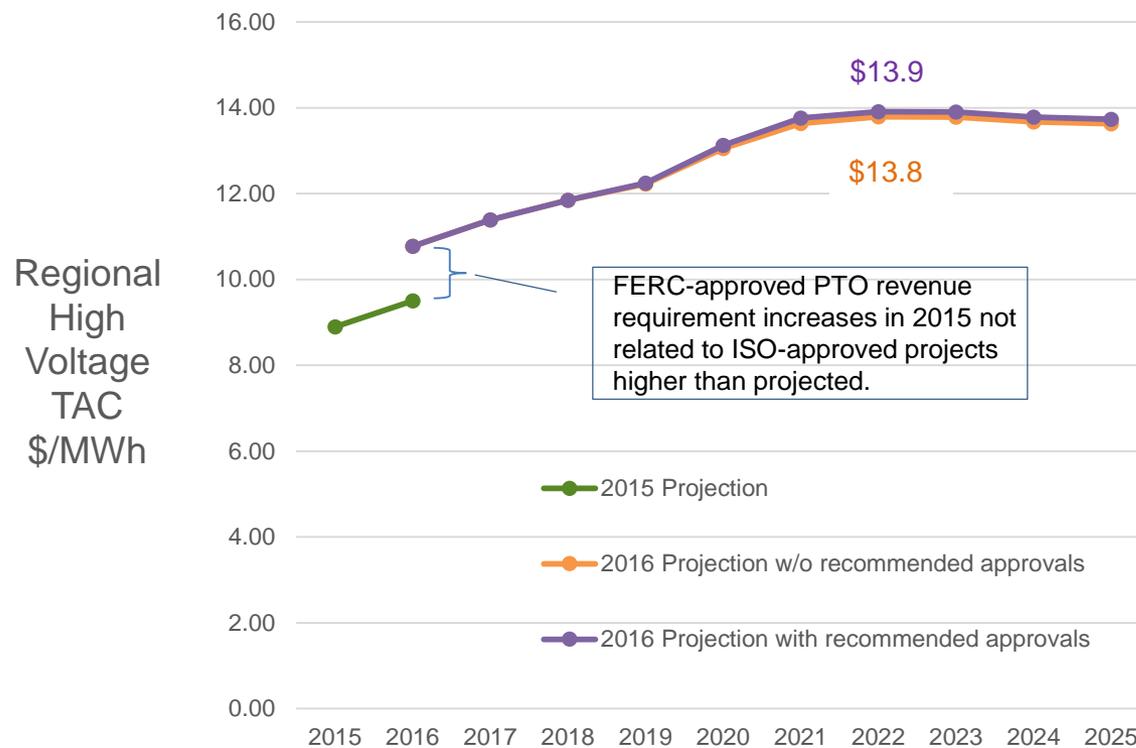
Economic driven solutions were also explored in the planning process focusing on areas of congestion.

- Consistent with past findings, congestion was not sufficient to warrant capital upgrades

Other considerations:

- No regional transmission solutions recommended for approval are eligible for competitive solicitation
- The Lugo-Victorville 500 kV upgrade was found to be needed and a recommendation will be brought to the Board after coordination with LADWP has taken place in the 2016-2017 planning cycle
- The LA Basin/San Diego findings continue to demonstrate meeting future overall area needs – a 230 kV loading issue has been identified that will be addressed in the 2016-2017 planning cycle

Regional high voltage transmission access charge projection:



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

Special studies looked at emerging issues preparing for grid transitioning to low carbon future:

- 50 percent “energy only” study
- Frequency response study
- Gas/electric coordination preliminary study

Efforts in these areas will continue in future planning cycles.

Stakeholder feedback provided a wide range of views:

- Concerns about specific projects, and the ISO's basis for moving forward
 - Projects driven by high voltage concerns
 - Previously approved projects
 - Projects not recommended for approval
- Deliverability of CPUC-provided 33% renewable generation portfolios for policy-driven transmission
- Support for continuation of special studies

Management recommends the Board approve the 2015-2016 ISO Transmission Plan.

- Continues to pursue low emissions strategies in addressing reliability needs of the ISO controlled grid
- Enables the state's 33% RPS goals and sets a foundation for higher renewable energy goals
- Provides for prudent and economic development of the transmission system