

2013-2014 Conceptual Statewide Transmission Plan Update CAISO 2014-2015 Regional Transmission Planning Process

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Prepared by

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# Introduction

The development of the Conceptual Statewide Transmission Plan (Plan) is pursuant to section 24.4.4 of the CAISO tariff and its purpose is to ensure that the CAISO's regional plan complements transmission plans of other CTPG members. The 2013-2014 Plan is an update to the 2012-2013 Plan and will be used as an input into the CAISO's 2014-2015 regional planning process which is currently under way. The information that is presented in this Plan draw largely from past efforts of the California Transmission Planning Group (CTPG) in which the CAISO participates as well as information provided in 2014 WestConnect Annual Ten-Year Transmission Plan<sup>1</sup>. The Plan takes a California statewide perspective rather than focusing only on the CAISO Planning Region. As such, it includes potential high level transmission solutions across the state that are needed address identified reliability needs and to meet California's 33 percent renewable energy goal by 2020.

Finally, this Plan tabulates proposed transmission facilities of the CTPG members as they are documented in the CAISO's 2013-2014 regional transmission plan and the 2014 WestConnect Annual Ten-Year Transmission Plan. Through the CTPG, its members have shared information regarding their planning efforts in the context of the collaborative activities of the CTPG. Over the last two years, CTPG activities have largely been minimal due to the Planning Regions work to address FERC Order 1000 regional and interregional requirements. Although the CAISO's Order 1000 regional filing has been accepted, WestConnect's filing has yet to be addressed by FERC. While CTPG has fulfilled a significant coordination role among its members since its inception, its future role will remain unclear until WestConnect's final Order 1000 regional order is received.

# **Development of the CAISO Conceptual Statewide Plan**

Importantly, the transmission projects proposed by all CTPG members will ultimately be approved through their own transmission planning processes. Accordingly, the CAISO is not seeking stakeholder comment regarding those CTPG entities who are members of the WestConnect Planning Region as they will coordinate comments through their own processes. However, consistent with the objective of the Plan, the CAISO has included projects from all CTPG members to provide clarity on how the CAISO's 2013-2014 regional plan recommendations fit into the overall statewide plan.

<sup>&</sup>lt;sup>1</sup> <u>http://www.westconnect.com/filestorage/2014\_final\_wc\_annual\_ten\_year\_transmission\_plan\_022014</u>

In addition to the information provided in this Plan, general documentation of the CAISO's regional vision regarding the solutions that have been identified and approved through the CAISO's own regional planning process are also included. These solutions are based on, among other things, the CAISO's base case assumptions, studies of several sensitivity scenarios, other studies and analyses that the CAISO has previously discussed with stakeholders in the 2013-2014 regional planning process, as well as input from the CTPG and other planning regions.

Finally, with the release of this Plan the CAISO is providing an opportunity for interested stakeholders to submit comments and recommend modifications to the Plan as it pertains to the information presented in this Plan. This may include information that is documented within the CAISO's 2013-2014 regional plan, including alternative transmission and non-transmission solutions, potential interstate transmission lines and proposals for access to resources located in areas not identified in the plan. This information will be considered in the CAISO's 2014-2015 regional planning process. Stakeholder comments and recommended modifications to the Plan that are associated with CTPG members other than the CAISO will be provided to WestConnect for consideration in their process.

# Projects Comprising the CAISO Conceptual Statewide Plan

All projects which comprise the Plan are listed in Table 1. When considered together, they provide a foundational plan for achieving all requirements that have been identified by the CAISO's regional planning process and those planning processes of the other CTCPG members. All CAISO projects listed in Table 1 have been considered and approved through the CAISO's 2013-2014 regional planning process. Projects listed for other CTPG members and documented in the 2014 WestConnect Annual Ten-Year Transmission Plan or other designated document locations are proposed through the individual CTPG member's transmission plans and only establish a determination of need. The actual status of these individual projects may be included in the individual transmission plans through which their need was determined.

Balancing	Area	Transmission	Included in	Reported in Current
Authority	Alea		2013-2014	Regional
Authority			Conceptual	Transmission Plan
			•	
			Statewide	
			Plan	
CAISO	SDG&E Area	Additional 450 MVAR of dynamic reactive	No	CAISO 2013-2014 Plan
		support at San Luis Rey (i.e., two 225 MVAR		- Table 7.2-1
		synchronous condensers)		
CAISO	SDG&E Area	Artesian 230 kV Sub & loop-in TL23051	No	CAISO 2013-2014 Plan
				- Table 7.2-1
CAISO	SDG&E Area	Imperial Valley Flow Controller (IV B2BDC	No	CAISO 2013-2014 Plan
		or Phase Shifter)		- Table 7.2-1
CAISO	SDG&E Area	Miguel 500 kV Voltage Support	No	CAISO 2013-2014 Plan
				- Table 7.2-1
CAISO	SDG&E Area	TL13834 Trabuco-Capistrano 138 kV Line	No	CAISO 2013-2014 Plan
		Upgrade		- Table 7.2-1
CAISO	SCE / Metro	Mesa Loop-in	No	CAISO 2013-2014 Plan
	Area			- Table 7.2-1
CAISO	SCE / North	Victor Loop-in	No	CAISO 2013-2014 Plan
	of Lugo Area			- Table 7.2-1
CAISO	VEA Area	CT Upgrade at Mead-Pahrump 230 kV	No	CAISO 2013-2014 Plan
		Terminal		- Table 7.2-1
CAISO	Central	Estrella Substation Project	No	CAISO 2013-2014 Plan
	Coast &Los			- Table 7.2-1
	Padres Area			
CAISO	North Valley	Glenn 230/60 kV Transformer No. 1	No	CAISO 2013-2014 Plan
		Replacement		- Table 7.2-1
CAISO	Fresno Area	McCall-Reedley #2 115 kV Line	No	CAISO 2013-2014 Plan
				- Table 7.2-1
CAISO	Kern Area	Midway-Kern PP #2 230 kV Line	No	CAISO 2013-2014 Plan
				- Table 7.2-1
CAISO	Kern Area	Wheeler Ridge Junction Station	No	CAISO 2013-2014 Plan
				- Table 7.2-1
CAISO	Central	Mosher Transmission Project	No	CAISO 2013-2014 Plan
	Valley			- Table 7.2-1
CAISO	Policy-	Suncrest 300 MVAR dynamic reactive	No	CAISO 2013-2014 Plan
	driven	device		- Table 7.2-1
	project			
CAISO	SCE / East of	Lugo-Mohave series capacitor upgrade	No	CAISO 2013-2014 Plan
	Lugo Area			- Table 7.2-2 / CAISO
				2013-2014 Plan -
				Table 2: Elements of
				2013-2014 CAISO
				Transmission Plan
				Supporting Renewable
CAIGO		Luce Eldenade ender 19 1		Energy Goals
CAISO	SCE / East of	Lugo-Eldorado series capacitor upgrade	Yes	CAISO 2013-2014 Plan
	Lugo Area			- Table 7.1-2 / CAISO

### Table 1 – Projects Comprising the 2013-2014 Conceptual Statewide Plan

				2013-2014 Plan - Table 2: Elements of 2013-2014 CAISO Transmission Plan Supporting Renewable Energy Goals
CAISO	SCE / Eastern Bulk Area	West of Devers 230 kV reconductoring	Yes	CAISO 2013-2014 Plan - Table 2: Elements of 2013-2014 CAISO Transmission Plan Supporting Renewable Energy Goals
CAISO	SCE / Northern Area	Tehachapi Renewable Transmission Project (TRTP)	Yes	CAISO 2013-2014 Plan - Table 2: Elements of 2013-2014 CAISO Transmission Plan Supporting Renewable Energy Goals / CAISO 2013-2014 Plan - Table 7.2-2
CAISO	SCE / North of Lugo Area	Coolwater-Lugo Transmission Project	Yes	CAISO 2013-2014 Plan - Table 2: Elements of 2013-2014 CAISO Transmission Plan Supporting Renewable Energy Goals
LADWP <sup>2</sup>	Tehachapi area	Barren Ridge Renewable Transmission Project Barren Ridge-Haskell 230kV Lines and Barren Ridge-Rinaldi 230kV Line (upgrade)	Yes	Exhibit 6 2014 WestConnect Transmission Plan
LADWP	Tehachapi area	230 kV conversion of existing 115 kV line between Haskell Canyon and Sylmar substations and relocate transformers from Olive to Haskell Canyon.	Yes	Exhibit 6 2014 WestConnect Transmission Plan
IID <sup>3</sup>	Imperial County	Path 42 ( IID Portion) reconductoring project	Yes	Exhibit 6 2014 WestConnect Transmission Plan
IID	Imperial County	Ramon Substation, 230/92 kV, 300 MVA Transformer addition	Yes	Exhibit 6 2014 WestConnect Transmission Plan
IID	Imperial County	Highline to El Centro Switching Stations (ECSS): Upgrade existing 161-92 kV transmission lines to double circuit 230 kV.	Yes	Exhibit 6 – Planned 2014 WestConnect Transmission Plan
IID	Imperial County	El Centro Switching Station (ECSS)- Liebert Switching Station - Imperial Valley Substation new 230 kV line.	Yes	Exhibit 6 – Planned 2014 WestConnect Transmission Plan

<sup>&</sup>lt;sup>2</sup> Los Angeles Department of Water Power <sup>3</sup> Imperial Irrigation District

IID	Imperial	New of Imperial Valley (IV) Switching	Yes	Exhibit 6 – Planned
	County	Station to Dixieland Switching Station 230		2014 WestConnect
		kV line double circuit with a bundle of 2		Transmission Plan
		conductors per phase		
IID	Imperial	El Centro Switching Station (ECSS) -	Yes	Exhibit 6 – Planned
	County	Dixieland -		2014 WestConnect
		Bannister 230 kV Upgrade		Transmission Plan
IID	Imperial	North Gila to Highline 500 kV Transmission	Yes	Exhibit 6 – Planned
	County	Line.		2014 WestConnect
				Transmission Plan
IID	Imperial	Midway-Hoober-Bannister 230 kV	No	Exhibit 6 – Planned
	County	Transmission Line		2014 WestConnect
				Transmission Plan
IID	Imperial	Highline (IID) to CETYS (CFE) Switching	No	Exhibit 6 – Planned
	County	Stations 230 kV line		2014 WestConnect
				Transmission Plan
IID	Imperial	Hoober 500 kV AC Substation	No	Exhibit 6 – Planned
	County			2014 WestConnect
				Transmission Plan
IID	Imperial	Hoober 230 kV Switching Station	No	Exhibit 6 – Planned
	County			2014 WestConnect
				Transmission Plan
IID	Imperial	Upgrade existing Midway Switching Station	No	Exhibit 6 – Planned
	County	to Highline		2014 WestConnect
		Switching Station 230 kv transmission line		Transmission Plan
		to double		
		circuit 230 kV with two conductors per		
		phase.		
IID	Imperial	Phase I 500 kV DC Line from Hoober	No	Exhibit 6 – Planned
	County	Switching Station to		2014 WestConnect
		SONGS Switching Station		Transmission Plan
IID	Imperial	Imperial Valley-Hoober-500 kV AC	No	Exhibit 6 – Planned
	County	Transmission Line		2014 WestConnect
		"Eastern" Loop		Transmission Plan
IID	Imperial	Imperial Valley to Hoober 500 kV AC	No	Exhibit 6 – Planned
	County	Transmission Line		2014 WestConnect
		"Western" Loop		Transmission Plan
IID	Imperial	Hoober - Midway - Devers Switching	No	Exhibit 6 – Planned
	County	Stations 500 kV AC		2014 WestConnect
	lune ar stall	Line	N1 .	Transmission Plan
IID	Imperial	Second 500 kV DC Line C21Circuit (Phase 2)	No	Exhibit 6 – Planned
	County	from		2014 WestConnect
		Hoober Switching Station to SONGS Switching		Transmission Plan
<b>WASN</b> <sup>4</sup>	Northern	Tracy-Hurley #1 & #2 230kV	No	Exhibit 6 – Planned
WASI	California	Reconductoring	NO	2014 WestConnect
	Camornia	heconductoring		Transmission Plan
WASN	Northern	San Luis Transmission Project	No	WASN Website
	California		INU	
	California			1

<sup>&</sup>lt;sup>4</sup> Western Area Southern Nevada

WASN	Northern California	Keswick-Airport-Cottonwood 230kV reconductoring	No	WASN OASIS Website
WASN	Northern California	Olinda-Cottonwood #1 & #2 230 kV Reconductoring	No	WASN OASIS Website
WASN	Northern California	Olinda 230 kV Reactive Voltage Control	No	WASN OASIS Website

The CAISO Planning Region portion of this Plan, which is based on assumptions and analyses the CAISO has conducted through its regional process, consists of several major transmission projects that have been previously approved by the CAISO and are fully permitted by the CPUC for construction, plus several transmission projects that the CAISO's interconnection studies have shown are needed to serve the interconnection customers for which those studies were done, but are still progressing through the approval process. Approving additional major transmission now would increase the risk of stranded investment. However, to the extent the key assumptions behind this assessment change during the 2014-2015 regional planning effort and beyond, the CAISO will reevaluate and modify the plan accordingly.

The next section of this report provides an overview of the CAISO Planning Region and includes more information on the renewable transmission upgrades that have been identified in the CAISO 2013-2014 transmission plan. Background and details on the transmission plans of other CTPG members can be found in the 2014 WestConnect Annual Ten Year Transmission Plan.

# **Details of the CAISO Conceptual Statewide Plan**

Since the 2012-2013 Plan was prepared, the CAISO and WestConnect Planning Regions have performed and documented, respectively, the results of their regional planning assessments to address reliability and RPS needs, among others, across the next ten years. This portion of the report provides an overview of the CAISO's 2013-2014 planning effort which covers a broad range of needs throughout the CAISO's Planning Region. A detailed discussion of the CAISO's planning assessment is documented in the CAISO's 2013-2014 Transmission Plan<sup>5</sup>. Likewise, other CTPG members participate in and have documented their transmission assessments through the WestConnect Planning Region's planning process. As such, details on their transmission plans are documented in the 2014 WestConnect Annual Ten Year Transmission Plan.

<sup>&</sup>lt;sup>5</sup> <u>http://www.caiso.com/Documents/Board-Approved2013-2014TransmissionPlan\_July162014.pdf</u>

## California CAISO Balancing Authority Area

The California CAISO Balancing Authority Area (BAA) is the largest of its kind in California and serves over 80 percent of the electricity demand in California. In general, the area identified as the CAISO BAA also represents the CAISO's Planning Region whose approximate geographic area is illustrated in shown Figure 1.



Figure 1 – California Balancing Authorities

The CAISO 2013-2014 Transmission Plan provides a comprehensive, regional evaluation of the CAISO's Planning Region to identify solutions needed to successfully meet California's policy goals, in addition to examining conventional grid reliability requirements and projects that can bring economic benefits to consumers. In particular, the identification of the roles non-transmission alternatives such as preferred resources and storage where more than solely transmission reinforcement was considered. In this regard, the CAISO's regional planning efforts focus on not only meeting the state's policy objectives in advancing policy-driven transmission, but also to help transform the electric grid in an environmentally responsible way. The focus on a cleaner lower emission future governs not only policy-driven transmission, but our path on meeting other electric system needs as well.

The state's goal, to have renewable resources provide 33 percent of California's retail electricity consumption by 2020, has become the principal driver of substantial investment in new renewable generation capacity both inside and outside of California. As well, the early retirement of the San Onofre Nuclear Generating Station coupled with the impacts of potential retirement of gas-fired generation in the San Diego and LA Basin areas – largely to eliminate coastal water use in "once-through cooling" have created both opportunities for development of preferred resources as well as challenges in ensuring continued reliable service in these areas.

Those solutions that were identified by the 2013-2014 regional planning process to meet California's policy goals are listed in Table 2.

Transmission Facility	Online		
Transmission Facilities Approved, Permitted and Under Construction			
Sunrise Powerlink (completed)	2012		
Tehachapi Transmission Project	2015		
Colorado River - Valley 500 kV line (completed)	2013		
Eldorado – Ivanpah 230 kV line (completed)	2013		

### Table 2: Elements of CAISO 2013-2014 Regional Plan Supporting Renewable Energy Goals

Carrizo Midway Reconductoring (completed)	2013			
Additional Network Transmission Identified as Needed in CAISO Interconnection Agreements but not Permitted				
Borden Gregg Reconductoring	2015			
South of Contra Costa Reconductoring	2015			
West of Devers Reconductoring	2019			
Coolwater - Lugo 230 kV line	2018			
Policy-Driven Transmission Elements Approved but not Permitted				
Mirage-Devers 230 kV reconductoring (Path 42)	2014			
Imperial Valley Area Collector Station	2015			
Sycamore – Penasquitos 230kV Line	2017			
Lugo – Eldorado 500 kV Line Re-route	2015			
Lugo – Eldorado series cap and terminal equipment upgrade	2016			
Warnerville-Bellota 230 kV line reconductoring	2017			
Wilson-Le Grand 115 kV line reconductoring	2020			
Additional Policy-Driven Transmission Elements Recommend for Approval in the 2014- 2015 Transmission Plan				
Suncrest 300 Mvar SVC	2017			
Lugo-Mohave series capacitors	2016			

### **Collaborative Planning Efforts**

State agency coordination in planning has taken significant steps forward in 2013 building further improvements that have impacted the CAISO's regional plan as well as

setting a stage for enhancements in future transmission planning cycles. Among these are:

### <u>Preliminary Reliability Plan for LA Basin and San Diego<sup>6</sup></u>

In response to the announced closure of the San Onofre Nuclear Generating Station on June 7, 2013, the staff of the California Public Utilities Commission (CPUC), the California Energy Commission (CEC) and CAISO developed a Preliminary Reliability Plan for the LA Basin and San Diego area. The draft, released on August 30, 2013, was developed in consultation with State Water Resources Control Board (SWRCB), SCE, SDG&E and South Coast Air Quality Management District (SCAQMD) and describes the coordinated actions the CPUC, CEC, and CAISO staff are pursuing in the near term (4 years) and the long-term (7 years). These actions collectively comprised a preliminary plan to address the closure of San Onofre, the expected closure of 5,068 MW of gas-fired generation that uses once-through cooling technology, and the normal patterns of load-growth. The Preliminary Reliability Plan highlights the importance of beginning planning now to make sure regulatory actions are made in time to meet future electricity needs in the region.

The Preliminary Reliability Plan also identified challenging goals that will need to be fully vetted in the public decision making processes of the appropriate agency, with a focus on ensuring reliability, finding the most environmentally clean grid solutions, and urgently pursuing the variety of decisions that must ultimately be made and approved by key state agencies. The Preliminary Reliability Plan also contains the recommendations of CPUC, CEC and CAISO. However, implementing the specific mitigation options presented in the document itself will require decisions to be determined through CPUC or CEC proceedings, through the CAISO planning process or both.

### Process and Planning Assumptions Alignment – and Single Set of Forecast Assumptions

Throughout 2013 the CAISO collaboratively worked with the CPUC and the CEC to align the processes of future CPUC Long Term Procurement Planning processes, CAISO regional planning processes, and CEC Integrated Energy Policy Report proceedings. In essence, these agencies worked together to develop a "single managed forecast" to be

<sup>&</sup>lt;sup>6</sup> <u>http://www.energy.ca.gov/2013</u> energypolicy/documents/2013-09-09 workshop/2013-08-30\_prelim\_plan.pdf

used for the future local and system studies performed for both the CAISO regional planning process and the LTPP process.

In addition to the single forecast, the CPUC, CEC and CAISO also collaborated to develop common planning assumptions and scenarios which the CAISO utilized in its regional planning effort and the LTPP process. These assumptions exemplified a single managed forecast as the basis for the demand side assumptions with the development of common supply side assumptions that considered weather normalization for the different studies (local area, bulk, renewable portfolio and economic studies) and locational uncertainty for the Additional Achievable Energy Efficiency within the local area studies. Similarly, for the supply side, the assumptions were consistent with and considered the locational uncertainty of potential resources (i.e. demand response and storage) within the local area studies.

The CAISO considers this collaborative engagement with the CEC and CPUC a successful endeavor that brought key concerns and assumptions together in a way that was commensurate with the objectives of the CAISO's regional planning process. As such, the CAISO anticipates similarly situated collaboration with the CEC and CPUC in conducting future transmission planning process studies, ten-year Local Capacity Requirement studies, and system resource studies.

### Inter-regional Planning Requirements of FERC Order 1000

In July 2011, FERC issued Order No. 1000 on "Transmission Planning and Cost Allocation by Transmission Owning and Operating Public Utilities." The order required the CAISO to make a filing demonstrating that the CAISO is a qualified regional planning entity under the definition of the order, and modifying the CAISO tariff as needed to meet the regional planning provisions of the order as noted earlier. It also required the CAISO to develop and file common tariff provisions with each of its neighboring planning regions to define a process whereby each pair of adjacent regions can identify and jointly evaluate potential inter-regional transmission projects that meet their transmission needs more cost-effectively or efficiently than projects in their regional plans, and to specify how the costs of such a project would be assigned to the relevant regions that have selected the inter-regional project in their regional transmission plans.

The four planning regions reached agreement on a "Proposed Interregional Coordination Approach," which was firmly grounded in Order 1000 principles and

provided the framework for development of the tariff language that was ultimately proposed for inclusion placed in each transmission utility provider's tariff. On May 10, 2013 the CAISO, along with transmission utility providers belonging to the NTTG, and WestConnect planning regions jointly submitted their Order 1000 interregional compliance filings. The ColumbiaGrid transmission utility providers submitted the joint tariff language in June 2013 as part of the ColumbiaGrid interregional. The CAISO considers these filings to be a significant achievement by all four planning regions and a reflection of their commitment to work towards a successful and robust interregional planning process under Order 1000. FERC orders on these initial filings have not been received and the provisions are therefore not yet in effect. The CAISO and its neighbors are nonetheless undertaking coordination activities to the extent possible.

#### Southern California Reliability Assessment (LA Basin and San Diego)

In light of the actions of retirement of the SONGS generation coupled with the impacts of potential retirement of gas-fired generation in the San Diego and LA Basin areas, a key component of the CAISO's 2013-2014 regional planning effort was to assess and address reliability needs related to these actions. Commensurate with the collaborative work with the CEC and CPUC, the CAISO's regional planning effort moved decisively on "least regrets" transmission solutions that were considered to play a significant role in addressing the resultant local area challenges presented in the LA Basin and San Diego. The CAISO's regional plan provides analysis of a number of preferred resource scenarios as well as a broad range of potential transmission solutions to address the reliability impacts associated with SONGS and gas-fired retirements.

The potential transmission solutions have been organized into three categories: 1) those optimizing existing transmission lines to address local area needs, 2) major new transmission that further reinforce the area and address reliability needs, and 3) major new transmission that would increase the import capability to the area and could potentially be coupled with other potential state policy objectives such as promoting renewable energy development in certain areas of the state. The CAISO has recommended and received CAISO Board approval to move forward with the first category of transmission solutions at this time. Notwithstanding this decision, the CAISO recognizes there is remaining residual need for preferred resources and potentially other solutions. These needs will be further considered within the CAISO's 2014-2015 regional planning effort.

#### **Advancing Preferred Resources**

In 2013, the CAISO made material strides in facilitating use of preferred resources to meet local transmission system needs. This effort was augmented through the development of a methodology for examining the operational characteristics those non-conventional resources (e.g., demand response, storage) played in addressing local transmission system needs. As such, much of the effort focused on coordinating analysis of local area requirements with the utilities, and testing the specific preferred scenarios being developed by the utilities for the LA Basin and San Diego needs.

### 33 Percent RPS Generation Portfolios and Transmission Assessment

The transition to greater reliance on renewable generation has created significant transmission challenges because renewable resource areas tend to be located in places distant from population centers. The CAISO's regional planning process has balanced the need for certainty by generation developers as to where this transmission will be developed with the planning uncertainty of where resources are likely to develop by creating a structure for considering a range of plausible generation development scenarios and identifying transmission elements needed to meet the state's 2020 RPS. Commonly known as a least regrets methodology, the portfolio approach allows the CAISO to consider resource areas (both in-state and out-of-state) where generation build-out is most likely to occur, evaluate the need for transmission to deliver energy to the grid from these areas, and identify any additional transmission upgrades that are needed under one or more portfolios.

In consultation with interested parties, CPUC staff developed three renewable generation scenarios for meeting the 33 percent RPS goal in 2020. Given the transmission solutions already approved or progressing through the California Public Utilities Commission approval process, the CAISO assessment of these renewable generation scenarios did not identify a need for additional transmission solutions to support California's achievement of its 33 percent renewables portfolio standard. However, the deliverability of future renewable generation from the Imperial Valley area has been significantly reduced primarily due to changes in flow patterns resulting from the retirement of the San Onofre Nuclear Generating Station (SONGS).

Despite the impact of SONGS retirement being heavily offset by other transmission solutions already proposed in the CAISO's 2013-2014 regional transmission plan, only

1000 MW of the 1715 MW of Imperial zone renewable generation portfolio amounts can be made deliverable. The change impacts the ability to maintain deliverability of import capability from the Imperial Irrigation District at the intended level of 1400 MW. Given this significant change in circumstance, the CAISO will conduct further study in the 2014-2015 transmission planning cycle to develop the most effective solution to achieve previously established target import capability levels.

## **Conclusions and Next Steps**

The projects that comprise the CAISO Conceptual Statewide Plan provide a foundation for achieving a 33% RPS and can accommodate a wide range of different resource portfolios that vary with regard to the amounts of distributed generation, out-of-state renewable energy, and large-scale in-state renewable resources. Given this and the fact there remains substantial uncertainty over renewable energy resource development throughout the state and broader western region, the CAISO believes the projects and needs identified in Table 1 for the CAISO BAA represent an adequate conceptual plan for now. These projects have either been approved or are currently in some stage of the approval process. Approving more major transmission now would increase the risk of stranded investment. However, to the extent the key assumptions behind this assessment change as the 2014-2015 regional plan is being developed and as the CTPG completes future study plans or other regional planning studies are updated, the CAISO will reevaluate and modify the conceptual plan accordingly for future CAISO regional planning efforts.

Finally, with the release of this Plan the CAISO is providing an opportunity for interested stakeholders to submit comments and recommend modifications to the Plan as it pertains to the information presented in this Plan. This may include information that is documented within the CAISO's 2013-2014 regional plan, including alternative transmission and non-transmission solutions, potential interstate transmission lines and proposals for access to resources located in areas not identified in the plan. This information will be considered in the CAISO's 2014-2015 regional planning process. Stakeholder comments and recommended modifications to the Plan that are associated with CTPG members other than the CAISO will be provided to WestConnect for consideration in their process.