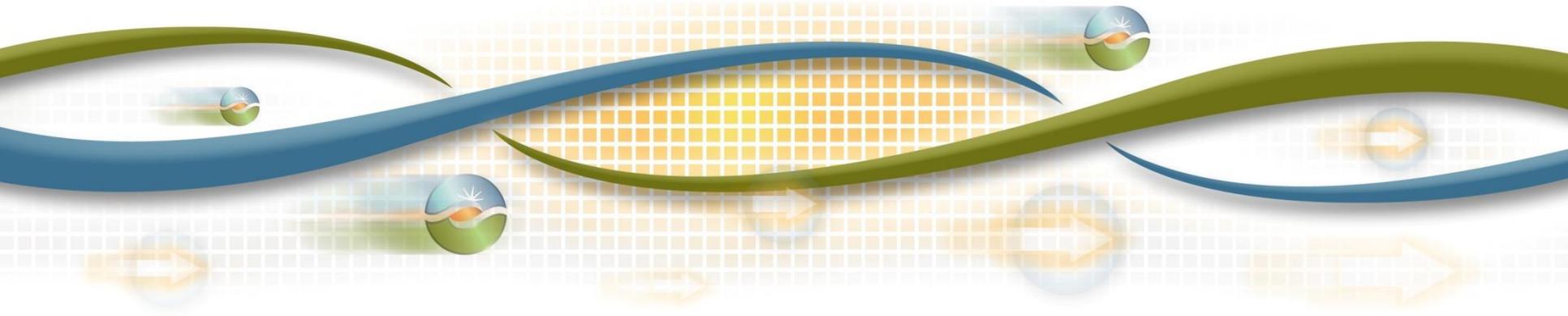




# Generator Interconnection Driven Network Upgrade Cost Recovery

## *Issue Discussion and Straw Proposal*

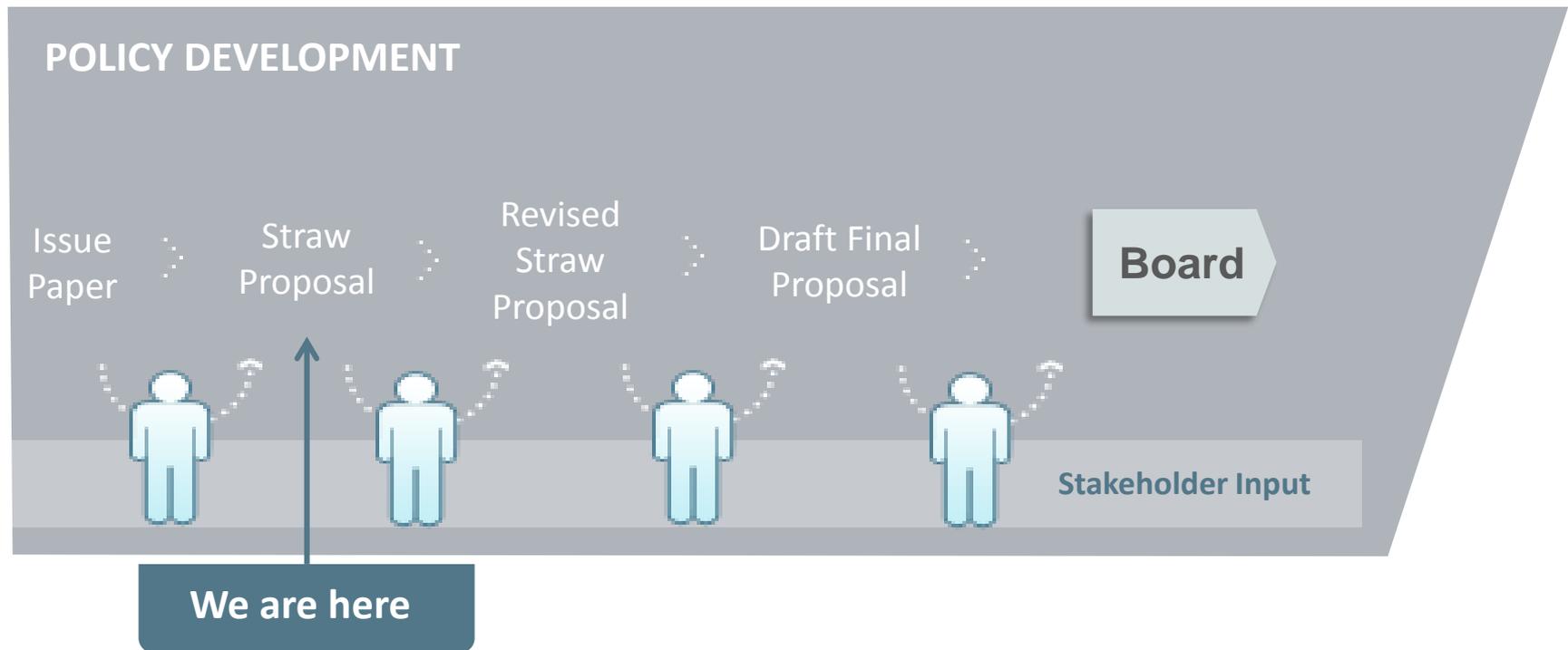
Stakeholder web conference  
August 8, 2016  
9:00 AM – 11:00 AM (Pacific Time)



# Agenda

<b>Time</b>	<b>Agenda Item</b>	<b>Speaker</b>
9:00-9:10	Introduction, Stakeholder Process	Tom Cuccia
9:10-10:50	Issue and Straw Proposal Discussion	Steve Ruddy Neil Millar
10:50-11:00	Next Steps	Tom Cuccia

# ISO Stakeholder Initiative Process



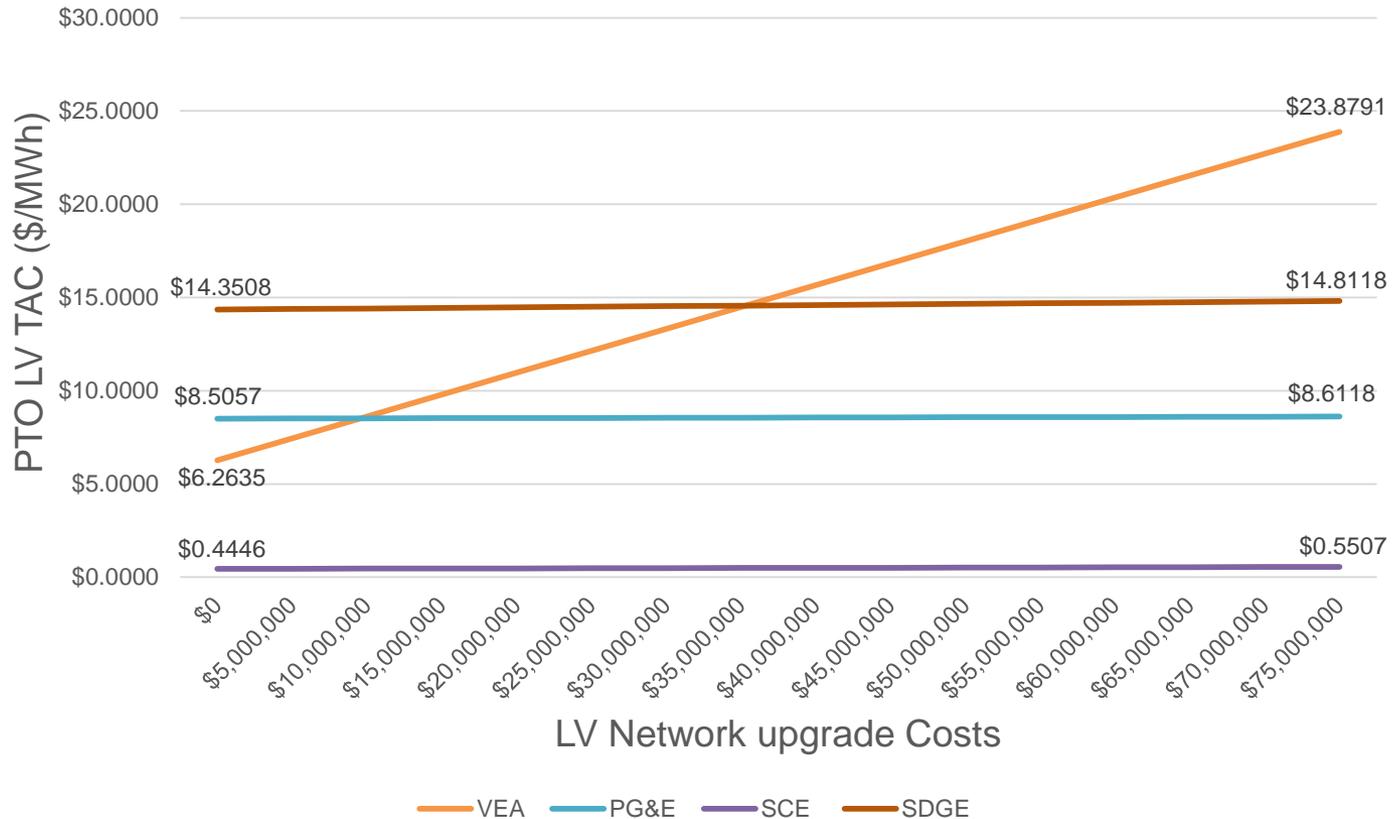
# Stakeholder process schedule

Step	Date	Event
Draft Issue Paper Straw Proposal	August 1	Post issue paper
	August 8	Stakeholder web conference
	August 19	Stakeholder comments due
Revised Straw Proposal	September 6	Post revised straw proposal
	September 13	Stakeholder web conference
	September 20	Stakeholder comments due
Draft Final Proposal	October 3	Post draft final proposal
	October 10	Stakeholder web conference
	October 17	Stakeholder comments due
Board Approval	December 14/15	Board of Governors meeting

## Issue - Generator interconnection triggered low-voltage network upgrade cost recovery

- ISO Tariff requires PTOs to reimburse interconnection customers (ICs) for reliability and local deliverability network upgrades (NUs)
- PTOs include these costs in their rate base as either local low-voltage (LV) below 200 kV or regional high-voltage (HV) 200 kV and above transmission access charges (TAC)
- LV TAC is local to that PTO only. HV TAC is spread and allocated evenly across the entire ISO
- Generators triggering significantly high cost LV NU to interconnect to a PTO with a relatively small rate base can result in rate shock to its ratepayers.

# Estimated LV Network Upgrade cost impact on certain PTO's Local LV Transmission Access Charge

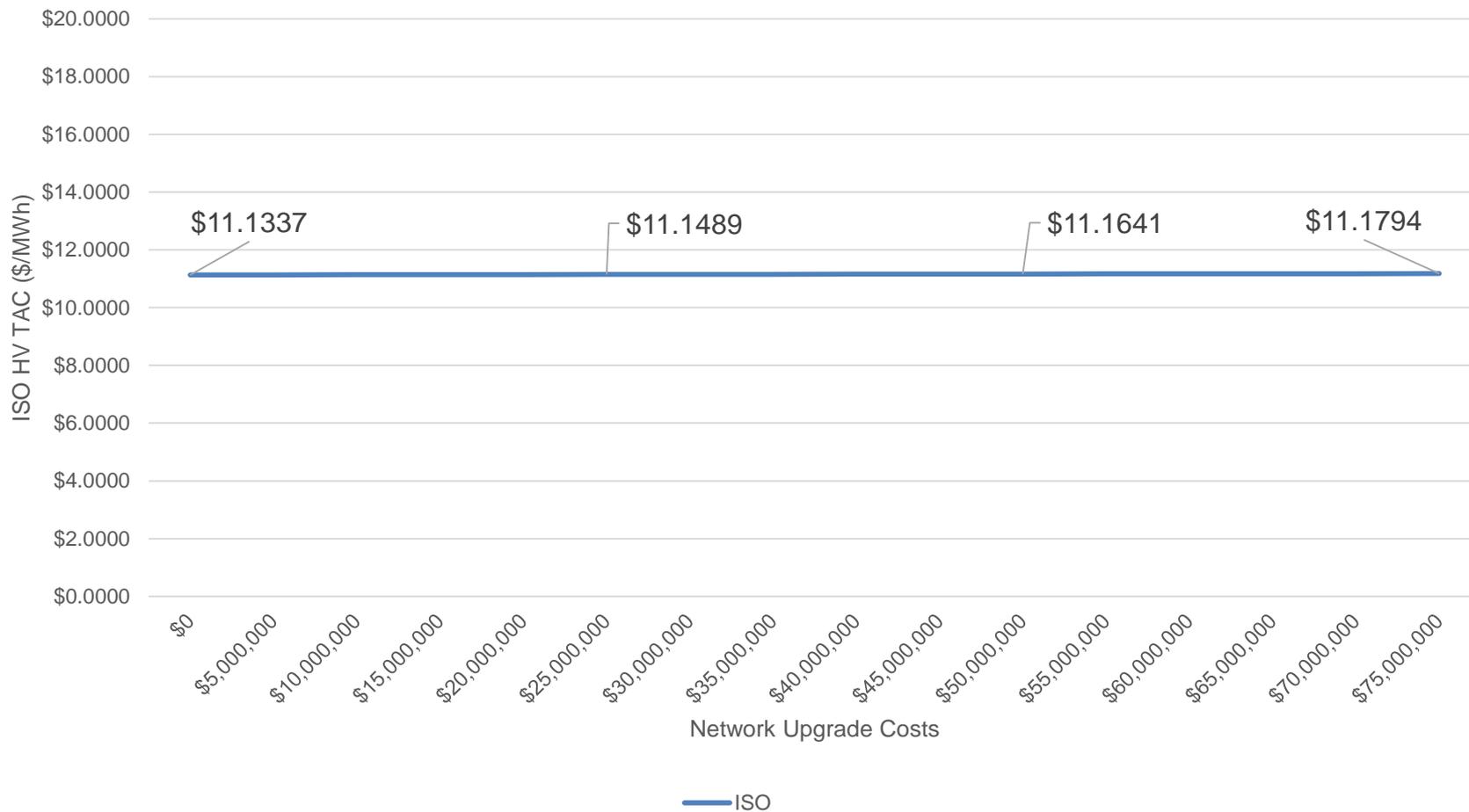


Note – Based on the ISO model used to estimate the impact of transmission capital expenditures on TAC employed in the 2015-2016 TPP model. The issue Paper/Straw proposal documents the underlying assumed data.

## Option 1 – Include costs of generator triggered low-voltage network upgrades in ISO regional high-voltage TAC

- Generators provide energy to the ISO markets for the entire region, and generally support public policy goals
- Once interconnected to the ISO controlled grid (whether above or below 200kV) it is connected to the ISO market and benefits all ISO ratepayers, not just those in the local area
- This option would apply to all PTOs

# Estimated LV Network Upgrade costs impact if applied to the ISO HV TAC



## Option 2 – Split the cost recovery for low-voltage network upgrades between the low- and high-voltage TAC

- a) Place a cap on the share of LV NUs in each PTO as a percentage of the PTO's low voltage rate base
- b) Limit the incremental revenue requirement increase due to LV NUs as a percentage of the PTO's LV annual transmission revenue requirement
- c) Limit the incremental revenue requirement increase due to LV NUs as a percentage of the high voltage TAC revenue recovered from the PTO's customer base

This option would also apply to all PTOs

# Comparison of a 5% Limit for Option 2b versus 2c (Option 2a would have a similar results to 2b)

				Impact of 5% Limit			
				Based on Local LV TRR (Option 2-b)		Based on Regional HV TAC revenue (Option 2-c)	
PTO	Local Low-Voltage Revenue Requirement (1)	Regional High-Voltage TAC revenue collected (2)		Limit on incremental Annual LV TRR impact (3)	Limit on LV upgrade capital costs assigned to the PTO * (4)	Limit on incremental Annual LV TRR Impact (5)	Limit on LV upgrade capital costs assigned to the PTO * (6)
PG&E	\$769,307,250	\$1,006,995,411		\$38,465,363	\$300,510,645	\$50,349,771	\$393,357,582
SCE	\$40,241,005	\$1,007,728,318		\$2,012,050	\$15,719,143	\$50,386,416	\$393,643,874
VEA	\$3,413,410	\$6,067,517		\$170,671	\$1,333,363	\$303,376	\$2,370,124
* assuming annual TRR is approximately 12.8% of the capital investment							

# Next Steps

Request stakeholder comments by COB August 19

Be sure to use comments template provided

Submit to comments mailbox:  
[initiativecomments@caiso.com](mailto:initiativecomments@caiso.com)

Thank you!