



California ISO

# Deliverability Assessment Dispatch Methodology Update for Solar and Wind


Stakeholder Meeting

June 26, 2024

# Reminders

- Stakeholder calls and meetings related to Transmission Planning are not recorded.
  - Given the expectation that documentation from these calls will be referred to in subsequent regulatory proceedings, we address written questions through written comments, and enable more informal dialogue at the call itself.
  - Minutes are not generated from these calls, however, written responses are provided to all submitted comments.
- Calls are structured to stimulate an honest dialogue and engage different perspectives.
- Please keep comments professional and respectful.

## Instructions for raising your hand to ask a question

- If you are connected to audio through your computer or used the “call me” option, select the raise hand icon  located on the right, at the bottom of the participant panel.

**Note:** If you dialed into the phone-only line,  
press \*3 to raise your hand

- Please remember to state your name and affiliation before making your comment

# Deliverability Assessment Dispatch Methodology update for Solar and Wind – Agenda

Topic	Presenters
Agenda	Yelena Kopylov-Alford
Introduction / Overview	Robert Sparks
Results and Methodology	Andrew Rivera
Wrap-up	Yelena Kopylov-Alford

# Background and Introduction

- The ISO performs deliverability assessments to ensure that the transmission system can reasonably deliver resources providing Resource Adequacy (RA) capacity to serve load during stressed system conditions
- The posted “On-Peak Deliverability Assessment Methodology” paper and the “Deliverability Assessment Methodology Revisions Final Proposal” paper describe the modeling of wind and solar resource outputs in the deliverability study
  - <https://www.caiso.com/documents/on-peak-deliverability-assessment-methodology.pdf>
  - <https://stakeholdercenter.caiso.com/InitiativeDocuments/Final-Proposal-Generation-Deliverability-Methodology-Review-Jan-04-2024.pdf>
- Both papers state that the ISO will periodically review the latest available data to update the wind and solar modeling assumptions as needed

# The On-Shore Wind and Solar Output Assumptions Were Established in 2020 and Need to be Updated

- The existing on-shore wind and solar assumptions are based on stochastic analysis output data
- For off-shore wind, stochastic analysis output data tended to produce erratic results, so a new methodology was developed
- This new methodology was then used to update the on-shore wind and solar output assumptions because it is based on more readily available data and produces more stable results



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## Results and Calculation Method

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# Maximum Resource Output Assumptions

## 2020 Solar and In-State Wind Dispatch Values

Area	HSN				SSN			
	PG&E	SCE	SDGE	VEA	PG&E	SCE	SDGE	VEA
<b>Solar</b>	10%	10.6%	3%	-	55.6%	42.7%	40.2%	-
<b>In-State Wind</b>	66.5%	55.7%	33.7%	-	16.3%	20.8%	11.2%	-

## Updated Solar and In-State Wind Dispatch Values

Area	HSN				SSN			
	PG&E	SCE	SDGE	VEA	PG&E	SCE	SDGE	VEA
<b>Solar</b>	15%	13%	6%	8%	71%	80%	71%	66%
<b>In-State Wind</b>	50%	48%	35%	48%	19%	17%	10%	17%



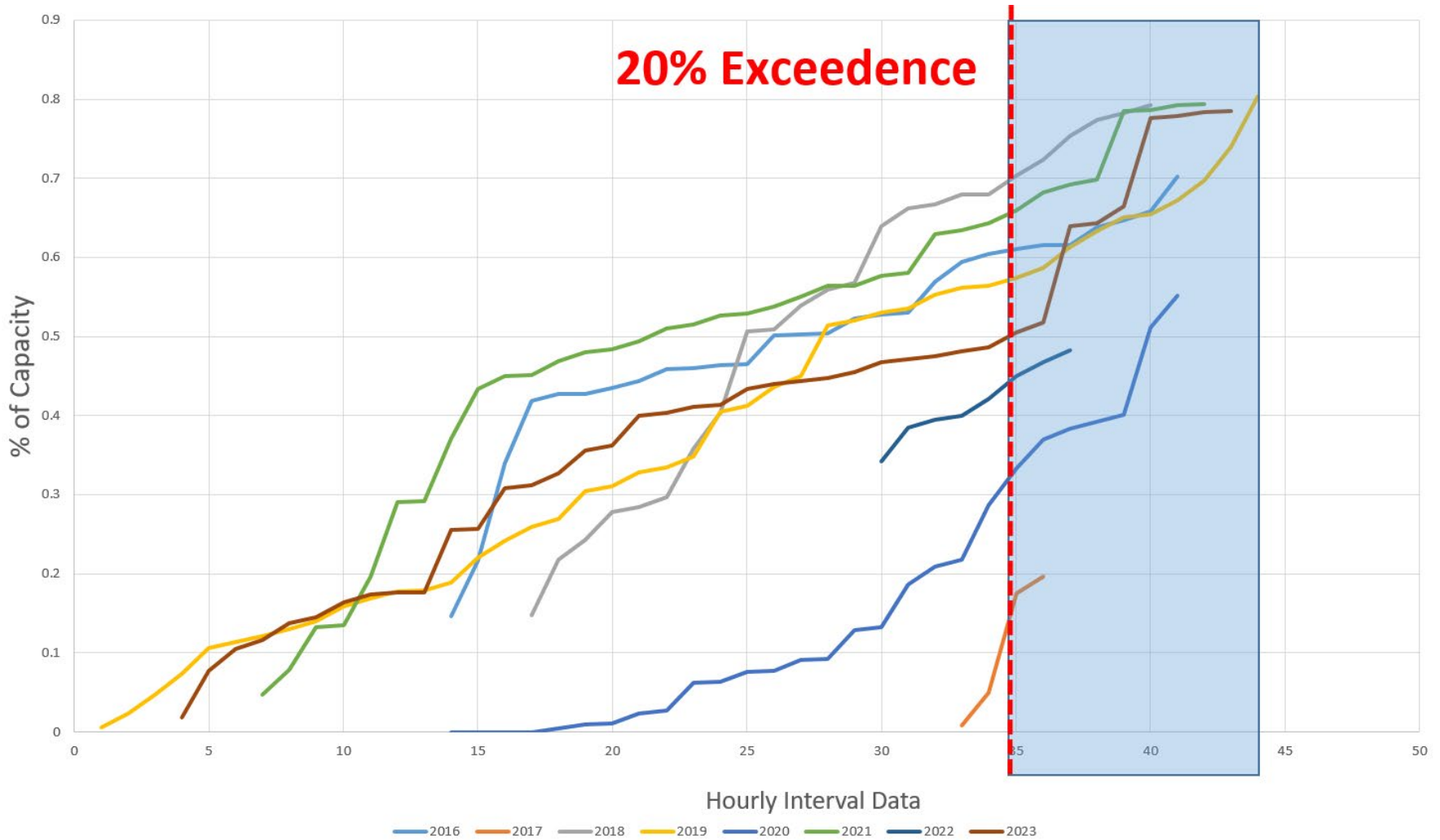
# Calculation Method Overview

- For each year included identify the days when the total system load goes above 95% of the peak annual load.
- Collect hourly interval data at the generator level.
- Calculate the percent of capacity of each generator type and separate by PTO area.
- With both the HSN and SSN hours data order by % of capacity and identify the 20% and 50% exceedance values respectively.
- Average across years included.

# Parameters and Data Sources

<b>Percentage of Peak Load Included</b>	95%+
<b>HSN Hour End</b>	19, 20, 21, 22
<b>HSN Exceedance</b>	20%
<b>SSN Hour End</b>	15, 16, 17, 18
<b>SSN Exceedance</b>	50%
<b>Months included</b>	June – September
<b><u>Years</u></b>	
<b>In-State Wind</b>	2016 – 2023
<b>Solar</b>	2016 – 2023 (VEA: 2019 – 2023)
<b><u>Data Sources</u></b>	
<b>ISO System and Generator Load</b>	CAISO Historical Data
<b>Generator Information</b>	CAISO Masterfile

# Visual Example of Method – PG&E Wind





*Wrap-up*

# Deliverability Assessment Dispatch Methodology update for Solar and Wind

*Yelena Kopylov-Alford*

*Stakeholder Engagement and Policy Specialist*

*June 26, 2024*

# Wrap-Up

- Comments
  - Due by end of day July 3, 2024
  - Submit comments via email to the Regional Transmission mailbox  
[regionaltransmission@caiso.com](mailto:regionaltransmission@caiso.com)