



# Integrated Resource Plan

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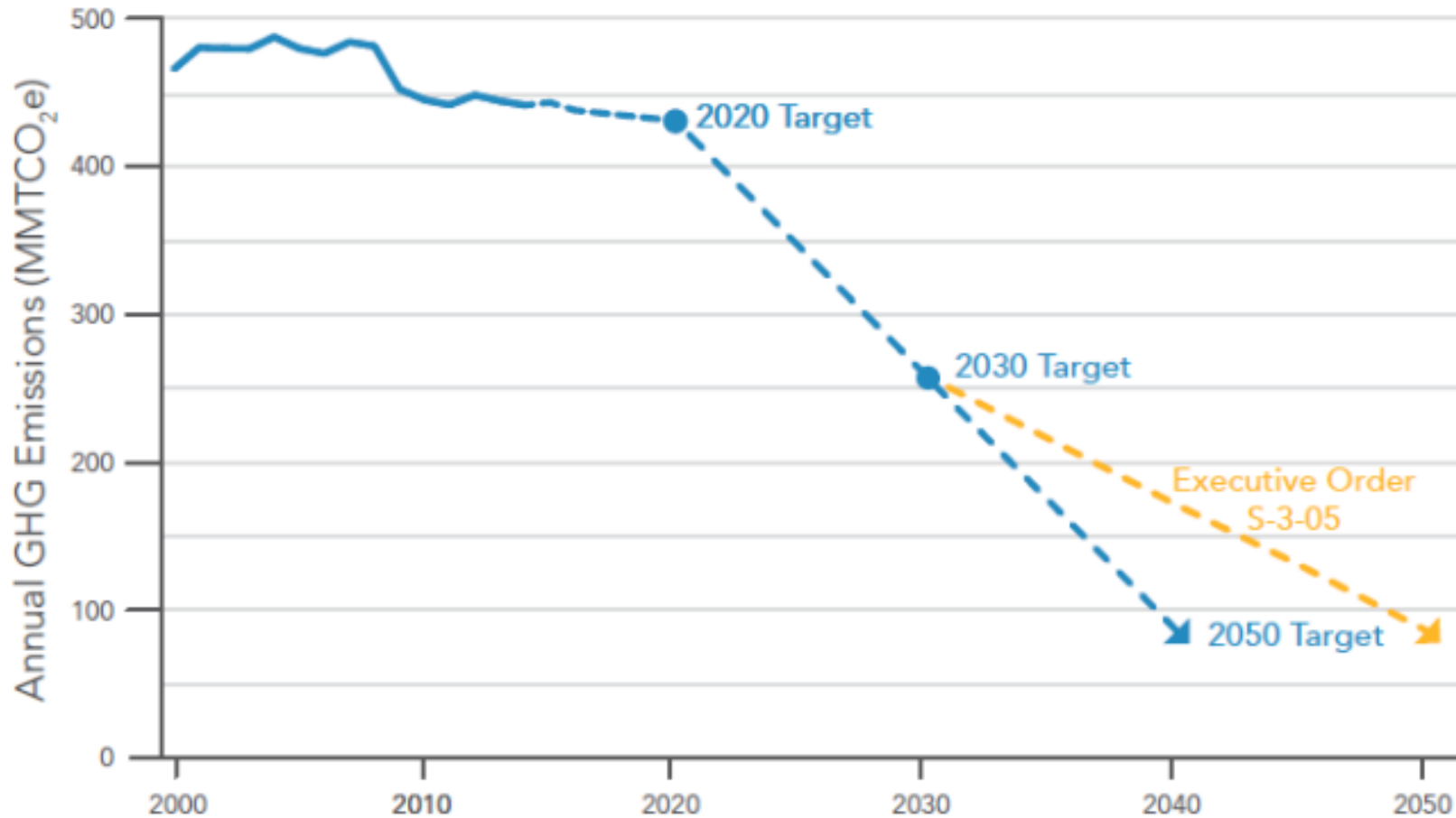
July 13, 2020

# BACKGROUND

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- The CPUC IRP was mandated by SB350, (de León, Chapter 547, 2015)
- Initial reporting year was 2018; report every other year
- 2020 IRP is due **September 1, 2020**
- Primary purpose:
  - To provide CPUC staff with the inputs from each LSE to forecast industry-wide procurement and
  - Determine whether load serving entities (LSEs) in CA are meeting GHG and reliability needs for 2030.

# ELECTRICITY'S ROLE



2030: 40% Below 1990 Levels

2030 Statewide Goal: 260 million metric tons (MMT) of CO<sub>2</sub> equivalent

2030 Electricity Sector Portion: 46 MMT, 18% of allowable emissions

To meet SB100, electricity sector to target 38 MMT in 2030, 15% of allowable emissions

1. Figure courtesy of California's 2017 Climate Change Scoping Plan:  
[https://ww3.arb.ca.gov/cc/scopingplan/scoping\\_plan\\_2017.pdf](https://ww3.arb.ca.gov/cc/scopingplan/scoping_plan_2017.pdf)

# IRP: HOW WE GET THERE

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- Integrated Resource Planning (IRP): Ensure electricity sector is on track to meet its portion of California's 2030 GHG targets:
  - 46 MMT scenario to meet 40% reduction from 1990 GHG levels
  - 38 MMT scenario to meet SB100 targets

# MODELING REQUIREMENTS

LSE	2030 Load (GWh)	Share of Load in IOU Territory	2030 Emissions Benchmark – 46 MMT	2030 Emissions Benchmark – 38 MMT	
<i>PCE</i>	<b>3,560</b>	<b>4.68%</b>	<b>0.630</b>	<b>0.503</b>	
EBCE	6,910	9.08%	1.222	0.977	Other CCAs
SJCE	4,449	5.85%	0.787	0.629	
CPA	11,867	13.85%	1.785	1.417	
PG&E	26,777	35.2%	4.737	3.784	IOUs
SCE	54,393	63.5%	8.180	6.496	
SDG&E	5,366	29.5%	1.093	0.876	

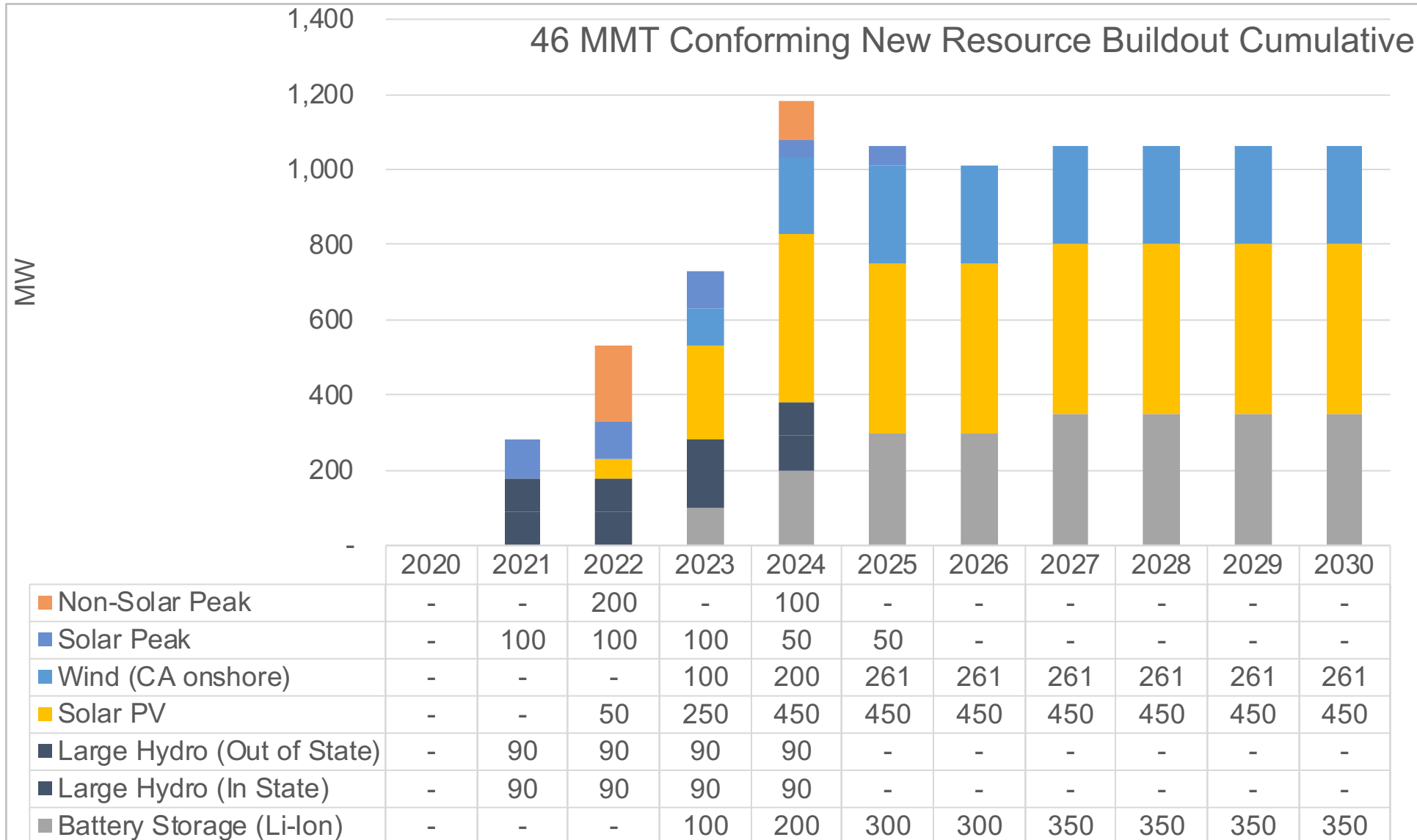
# PORTFOLIO'S MODELLED BY SIEMENS

	46 MMT Preferred Portfolio	46 MMT Compliant Portfolio	38 MMT Hourly	38 MMT Preferred Portfolio	38 MMT Compliant Portfolio
	Net open position is filled with contracts to meet 100% renewable on annual accounting	46 MMT Preferred Portfolio adjusted to meet 46 MMT GHG benchmark	Net open position is filled with contracts from to meet 100% renewable on 24/7 accounting	Net open position is filled with contracts to meet 100% renewable on annual accounting	38 MMT Preferred Portfolio adjusted to meet 38 MMT GHG benchmark
File with CPUC?	No	Yes	TBD	TBD	Yes
GHG Benchmark?	✘	✔	✘	✘	✔
100% RE Goal?	✔	✘	✔	✔	✘
100% RE Time Coincident?	✘	✘	✔	✘	✘

# PORTFOLIOS MODELLED BY SIEMENS (2030)

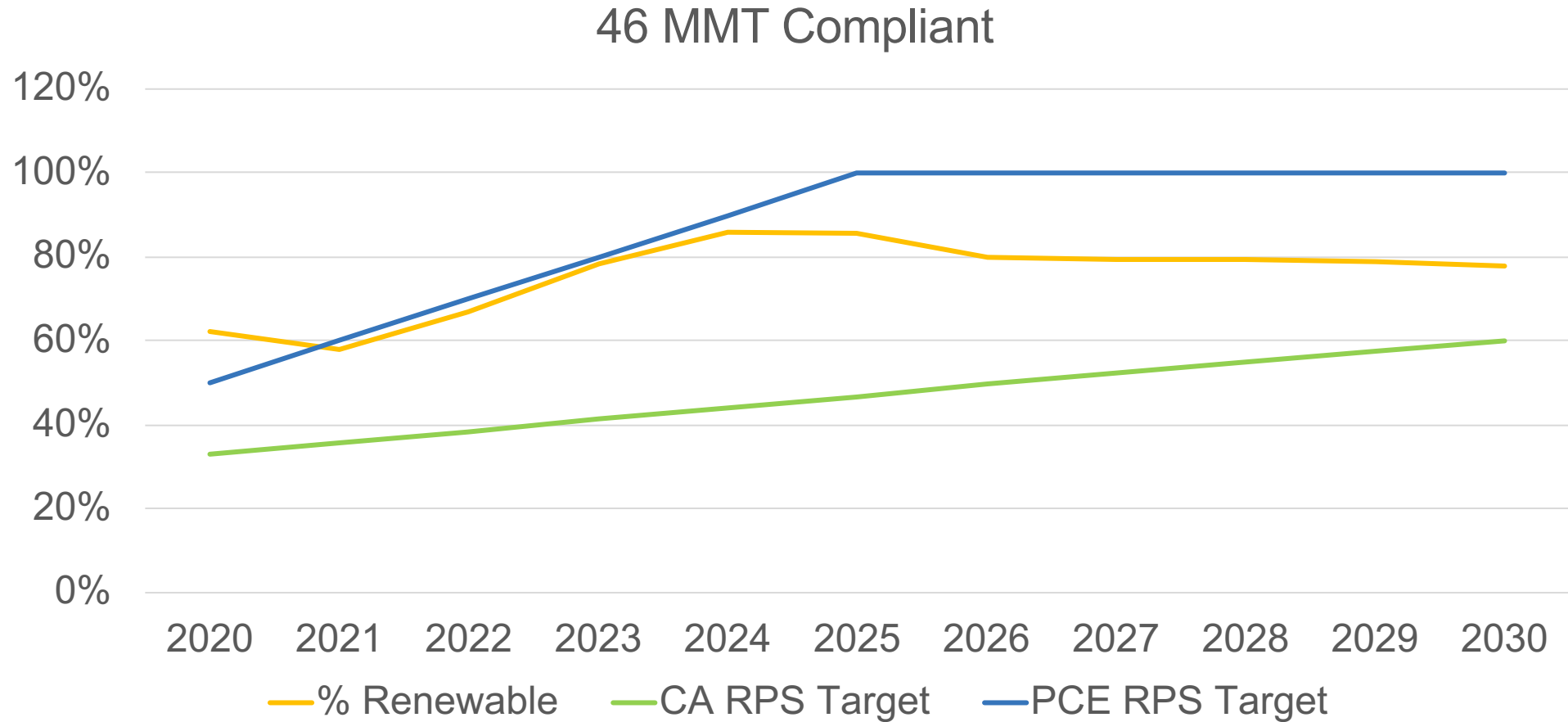
		46 MMT Preferred Portfolio	46 MMT Conforming Portfolio	38 MMT Preferred Portfolio	38 MMT Conforming Portfolio
Existing	Li-Ion	147	147	147	147
	Solar	400	400	400	400
	Wind	0	0	0	0
	Small Hydro	12.5	12.5	12.5	12.5
New	Li-Ion	350	350	350	350
	Solar	750	450	650	650
	Wind	300	261	300	285
	GHG (MMT)	0.410	0.629	0.484	0.499

# 46 MMT COMPLIANT- DRAFT – TO BE FILED

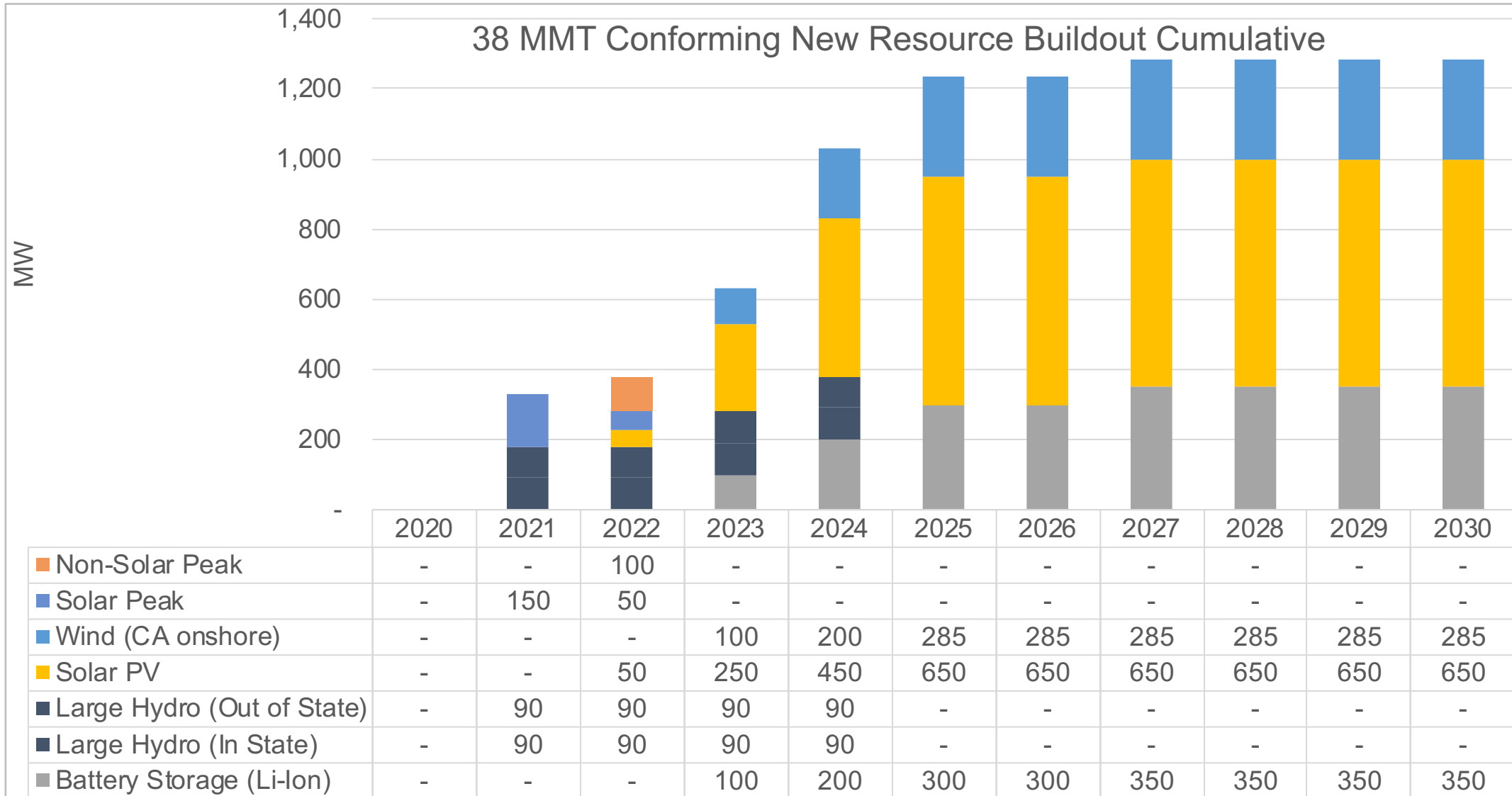




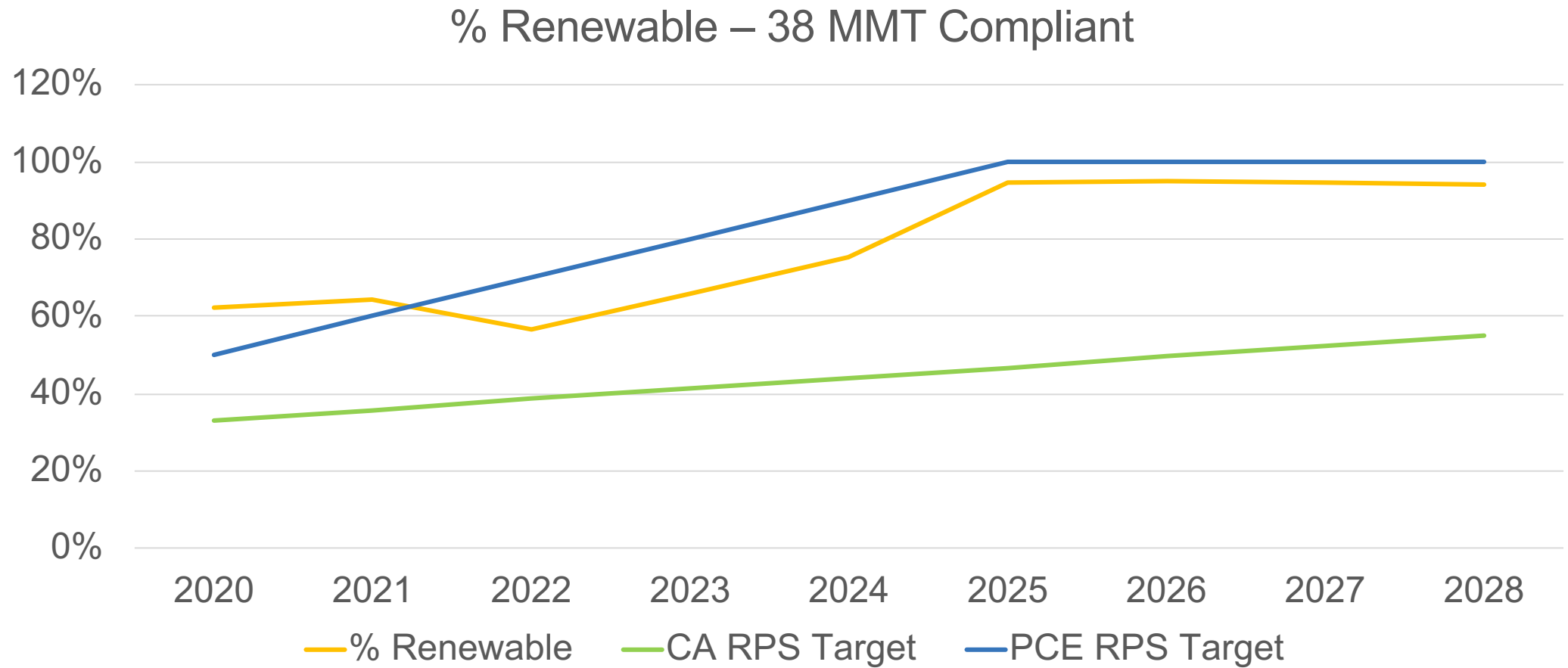
# 46 MMT COMPLIANT- DRAFT – TO BE FILED



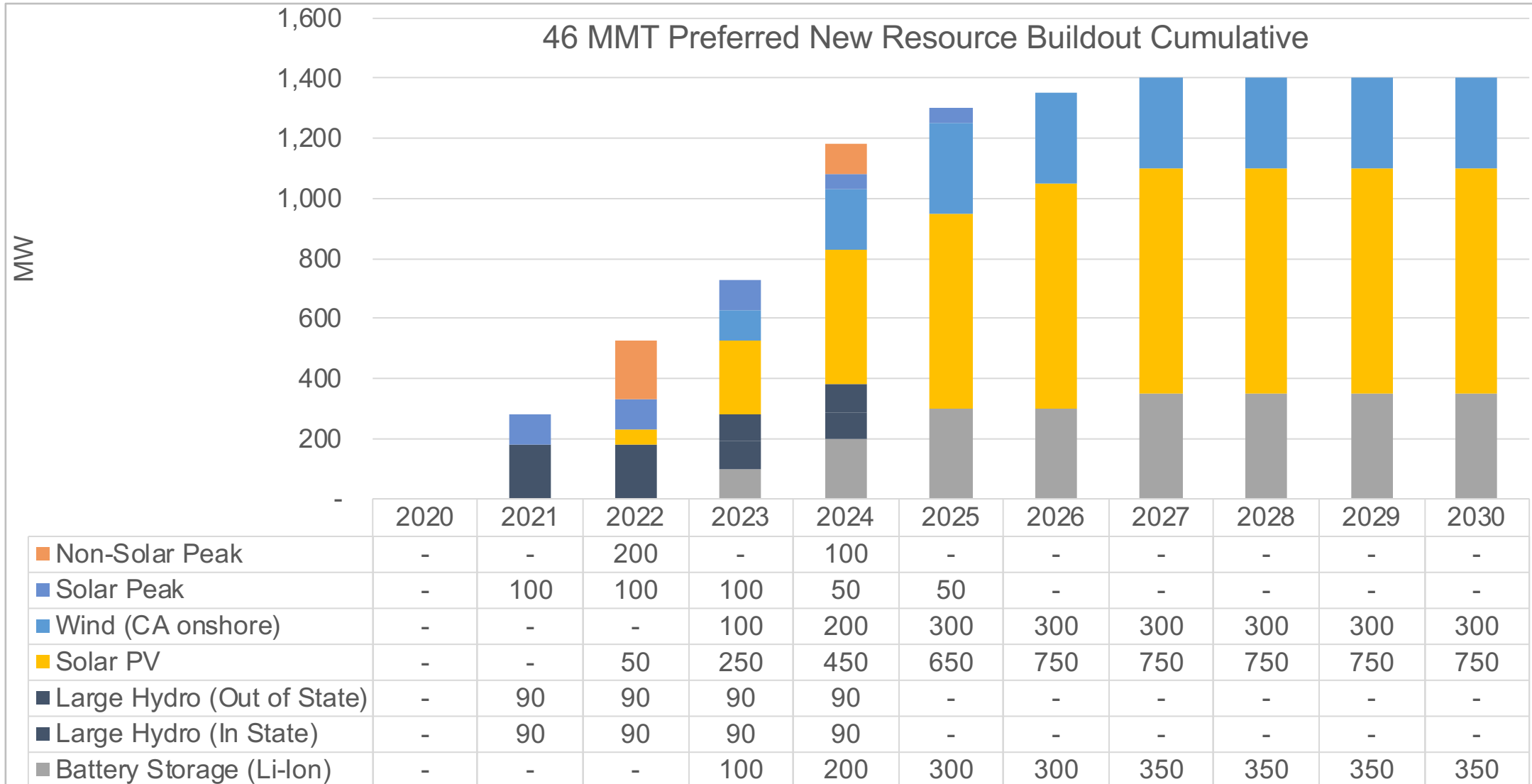
# 38 MMT COMPLIANT – DRAFT – TO BE FILED



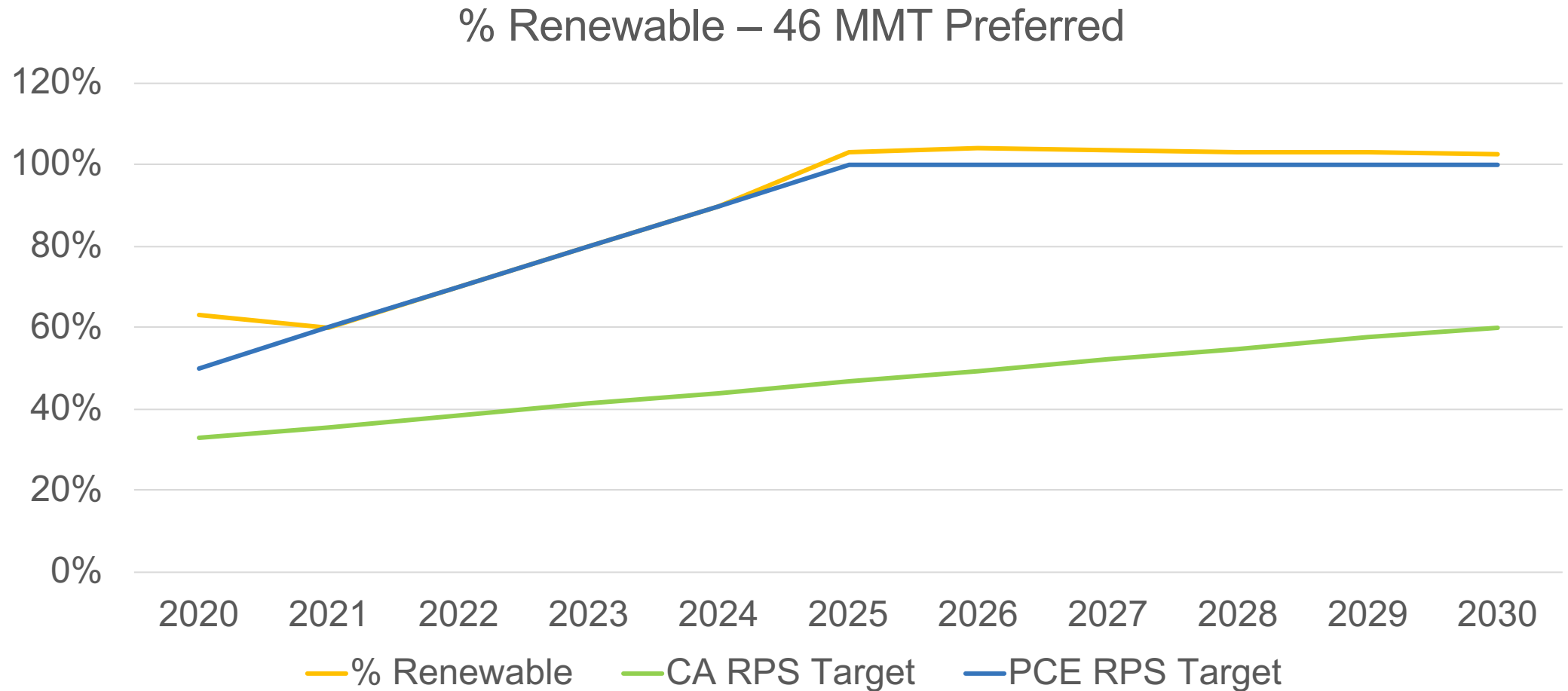
# 38 MMT COMPLIANT – DRAFT – TO BE FILED



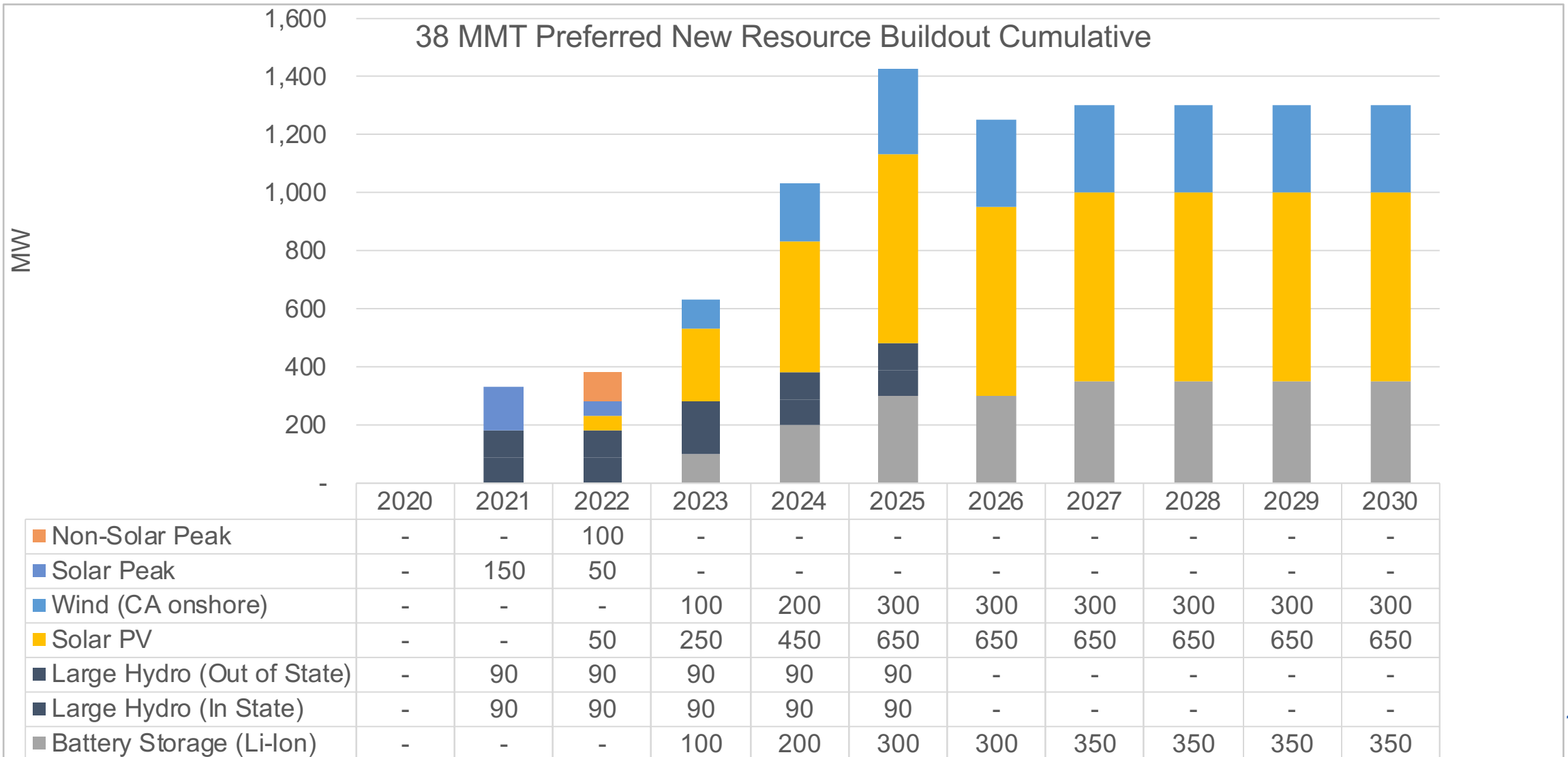
# 46 MMT PREFERRED - DRAFT



# 46 MMT PREFERRED - DRAFT



# 38 MMT PREFERRED - DRAFT



# NEXT STEPS

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- Receive results from Siemens on time-coincident analysis
- Receive sensitivity analysis results from Siemens
- Board Approval
- IRP Submission due 9/1/2020