

## DOCKETED

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CALIFORNIA ENERGY COMMISSION

# Tables and Instructions for POU Integrated Resource Plan Filings

## **Staff Webinar on Tables and Instructions**

May 31, 2017

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## Background/Authority

- SB350
  - PUC code section 9621 and 9622
- Standardized tables will help staff evaluate the IRP Filing
- Some information requested in tables is voluntary, more on this later..



## Overview

- CRAT: Capacity Resource Accounting Table
- EBT: Energy Balance Table
- GEAT: Greenhouse Gas Emissions Accounting Table
- RPT: RPS Procurement Table



## CRAT: Capacity Resource Accounting Table

- Annual peak capacity needs
- How POU meets those needs
- Resources include:
  - Existing and planned utility-owned generation and storage
  - Existing contracts
  - Generic additions



# Peak Load Calculations

1:- Forecasted peak hour 1 – in – 2 demand

2:- Customer-side Solar: nameplate capacity

2a:- Customer-side solar: peak hour output

3:- peak load reduction from thermal energy storage, if any/measured

4:- LD PEV consumption in peak hour

5:- AAEE savings in peak hour

6:- Demand Response / Interruptible programs in peak hour

8:- Planning Reserve Margin

9:- Firm sales obligations, in peak hour



# Capacity Supply Resources

## Existing resources

- 11a: Utility Owned Generation (not RPS-eligible)
- 11h: Long-term Contracts (not RPS-eligible)
- 12a: Utility-owned RPS-eligible generation
- 12o: Long-term contracts (RPS-eligible)

## Generic Additions

- 14a: Generic Non-RPS-eligible resources
- 15a: Generic RPS-eligible resources

## 21: Short-term and spot market purchases



## EBT: Energy Balance Table

- Annual retail sales and net energy for load
  - With and without AAEE
- Energy supplied from each existing resource
- Projected energy from additions indicated by integrated resource planning



## Net energy for load calculations

1: Retail sales to end-use customers

2: Other loads

3: Unmanaged net energy for load

4: Managed retail sales

5: Managed net energy for load

6: Firm Sales Obligations

**7: Total net energy for load (5+6)**



## Other Demand Data

8: [Customer-side solar generation]

9: [Light duty PEV electricity consumption/procurement need]

10: [Other transportation electrification consumption / procurement need]

11: [Other electrification / fuel substitution ; consumption / procurement need]



# Energy Supply Resources

## Existing resources

**12a: Utility Owned Generation (not RPS-eligible)**

**12h: Long-term Contracts (not RPS-eligible)**

**13a: Utility-owned RPS-eligible generation**

**13i: Long-term contracts (RPS-eligible)**

## Generic Additions

Generic Non-RPS-eligible resources

Generic RPS-eligible resources

## Short-term and spot market purchases



## GEAT:GHG Emissions Accounting Table

- Forecasted annual GHG emissions ( MmT CO<sub>2</sub>e) by resource
- Includes only emissions from generation that serves utility load.
- Firm sales obligations and spot market sales excluded
- Emissions intensities (mt CO<sub>2</sub>e/MWh) for some resources provided; in other cases POUs use their own estimates



# GHG Emissions From Supply Resources

## Existing resources

12a: Utility Owned Generation (not RPS-eligible)

12h: Long-term Contracts (not RPS-eligible)

13a: Utility-owned RPS-eligible generation

13i: Long-term contracts (RPS-eligible)

## Generic Additions

Generic Non-RPS-eligible resources

Generic RPS-eligible resources

## Short-term and spot market purchases



## GEAT: Voluntary Information

9:- GHG emissions reduction due to gasoline vehicle displacement by LD PEVs

10:- GHG emissions increase due to LD PEV electricity loads

11:- GHG emissions reduction due to fuel displacement – other transportation electrification

12:- GHG emissions increase due to increased electricity loads – other transportation electrification



## RPT: RPS Procurement Table

- Renewable Energy
- Renewable Energy Credits (RECS)
- Procurement and retirement
  - For each compliance period over planning horizon
- Hydro procurement / green power programs
  - To reduce retail sales
- Historic carryover and surplus of RECs



## RPS Energy Requirement Calculations

<b><u>RPS ENERGY REQUIREMENT CALCULATIONS</u></b>	<b>2017</b>	<b>2018</b>	<b>2019</b>	<b>2020</b>
Annual retail sales	340,000	344,000	347,000	346,000
Green pricing program exclusion			35,000	47,000
Soft target (%)	27.00%	29.00%	31.00%	33.00%
Required procurement for compliance period	386,950			



# RPS Energy Requirement Calculations (RECs)

<u>Category 0, 1 and 2 RECs</u>	Beginning balance at start of 2017	2017	2018	2019	2020	
Excess balance/historic carryover at beginning/end of compliance period	50,000					47,000
Generation/net purchases		92,000	107,000	107,000	117,000	
Applied/retired		95,000	107,000	107,000	117,000	



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Questions ?