

Monitoring Implementation of the California Renewable Portfolio Standard

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Outline

- California RPS Overview
- Renewable Generation Certification
- Generation Tracking
- Verification of Utility Compliance

California Renewable Portfolio Standard

- 2011 legislation established most aggressive renewable energy target in the United States
 - 33% of electricity consumption in 2020
 - 20% in 2011, 25% by 2016
- Target set as a percentage of retail sales for each electric utility
 - Renewable energy generation and purchases tracked via Renewable Energy Certificates (RECs)
- Eligible Generation types:
 - photovoltaic, wind, geothermal, solar thermal, biomass, digester gas, landfill gas, small and 'conduit' hydroelectric, ocean thermal, ocean wave, tidal current, fuel cells using renewable fuels, and municipal solid waste conversion.

RPS Procurement Categories

- RPS program distinguished among 3 types of renewable purchases:
 - Renewable generation that is physically delivered to California in real-time
 - ↳ Renewable power + RECs
 - Renewable generation that is backed by other generation within calendar year
 - ↳ Conventional power + RECs
 - Renewable generation without actual power delivery
 - ↳ RECs Only

RPS Monitoring Roles

- California Energy Commission
 - Lead Agency for state energy policy and planning
 - Certifies renewable resource eligibility
 - Verifies compliance of municipal utilities
- Western Renewable Energy Information System (WREGIS)
 - Multi-state tracking system administered by Western Governors' Association
 - Verifies generation of renewable electricity
 - Tracks renewable energy credits
- California Public Utilities Commission
 - Agency responsible for regulating privately-owned utilities for public good
 - Verifies compliance of private utilities

Certification of Eligible Renewable Resources

- California Energy Commission verifies renewable generators meet requirements of the RPS
 - Facility Technology and capacity
 - Registration in WREGIS tracking system
 - Connection to grid (California or external)
- Paper review of permits and other documentation
 - Random facility audit
- Facility must be certified before generation can count toward utility RPS procurement

Measurement of renewable generation

- Facility output measured at revenue meter
 - Meter output verified and uploaded to WREGIS by accredited third party 'qualified reporting entities'
 - WREGIS performs data validity check
- RECs issued monthly for each MWh generated
 - Serial # identifies generator, location and month of generation
 - Additional voluntary data may be included

REC Tracking

- Upon issuance, RECs deposited in generator account
- Transfer of RECs to other account holders tracked within WREGIS
 - Generator ID identifies RECs from eligible resources
 - System allows RECs to be matched with delivery of renewable or conventional power
- Utilities retire RECs for compliance with RPS targets
 - Utility compliance reports available for CEC & CPUC

Verifying Utility Compliance

- Each Utility's RPS procurement is verified by the CPUC or the CEC
- Proposed procurement compared ex-ante against
 - Utility's overall procurement plan
 - RPS program requirements: Content category requirements, renewable contract terms, certified resource
- Actual procurement (RECs retired) against
 - Actual retail sales and procurement categories

Public Information

■ CEC

- List of Eligible resources
- Public utility compliance reports
- Database of renewable procurement contracts

■ WREGIS

- Active account holders
- Active generating units
- REC volumes by technology/fuel, renewable program and unit capacity

■ CPUC

- Information on private utility renewable contracts
- Utility compliance reports

THANK YOU