



San Diego Regional Community Choice Energy Authority

# Energy Briefing

November 16, 2019  
9:00 am - 1:00 pm

***Call to Order***

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# *Public Comment*

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# *Welcome*

**CODY HOOVEN**

Chief Sustainability Officer, City of San Diego and Interim Executive Officer,  
San Diego Regional Community Choice Energy Authority

# Agenda

- 9:50**     **The Electric Industry: Basics and Trends**  
Scott Anders, Director, Energy Policy Initiatives Center (EPIC), USD School of Law
- 11:15**     **Community Choice Energy Overview**  
Beth Vaughan, Executive Director, CalCCA
- 11:45**     **Working Lunch**
- 12:00**     **Informational Exchange: Community Choice Energy – Here and Beyond**  
Moderator: Cody Hooven  
Matt Langer, Chief Operating Officer, Clean Power Alliance, Los Angeles  
Greg Wade, City Manager, City of Solana Beach  
Ty Tosdal, Attorney, Tosdal Law  
Beth Vaughn, Executive Director, CalCCA  
Scott Anders, Director, EPIC, USD School of Law
- 12:50**     **Closing Remarks**  
Cody Hooven, Chief Sustainability Officer, City of San Diego
- 1:00**     **Meeting Adjourns**

# *The Electric Industry*

## Basics and Trends

**SCOTT ANDERS**

Director, Energy Policy Initiatives Center (EPIC)  
at University of San Diego School of Law

# The Electric Industry: Basics and Trends

San Diego Regional Community Choice Energy Authority

Energy Briefing

November 16, 2019



# About EPIC

- **Research Center**
  - University of San Diego
  - Launched in 2005
- **Mission**
  - Conduct Research and Analysis
  - Educate Decision Makers and Students
- **Funding**
  - Endowment
  - Grants and Contracts





# Alphabet Soup

ISO CPUC RPS  
POLR GHG  
CEC **OMG!** FERC  
TOU MW  
RA NEM PCIA

# Presentation Overview

- **Section 1: Energy 101**
  - Electricity Basics
  - CA Regulatory Agencies
  - The Electric Power System
- **Section 2: Rates**
- **Section 3: General Trends**
- **Section 4: Regional Trends**

# Section 1: Energy 101

# Electricity Basics

# Electricity Units

Symbol	Name	Value	Example
K	Kilo	1,000	1 kW
M	Mega	1,000,000	1,000 kW
G	Giga	1,000,000,000	1,000,000 kW

# Electricity Terms

	kiloWatt (kW)	kiloWatt-hour (kWh)
<b>Generation</b>	capacity	production
<b>End-Use</b>	demand	consumption
<b>Analogy</b>	diameter of pipe	water flowing

# Energy Production and Consumption

Generation



$1 \text{ kW} \times 1 \text{ hour} = 1 \text{ kWh produced}$

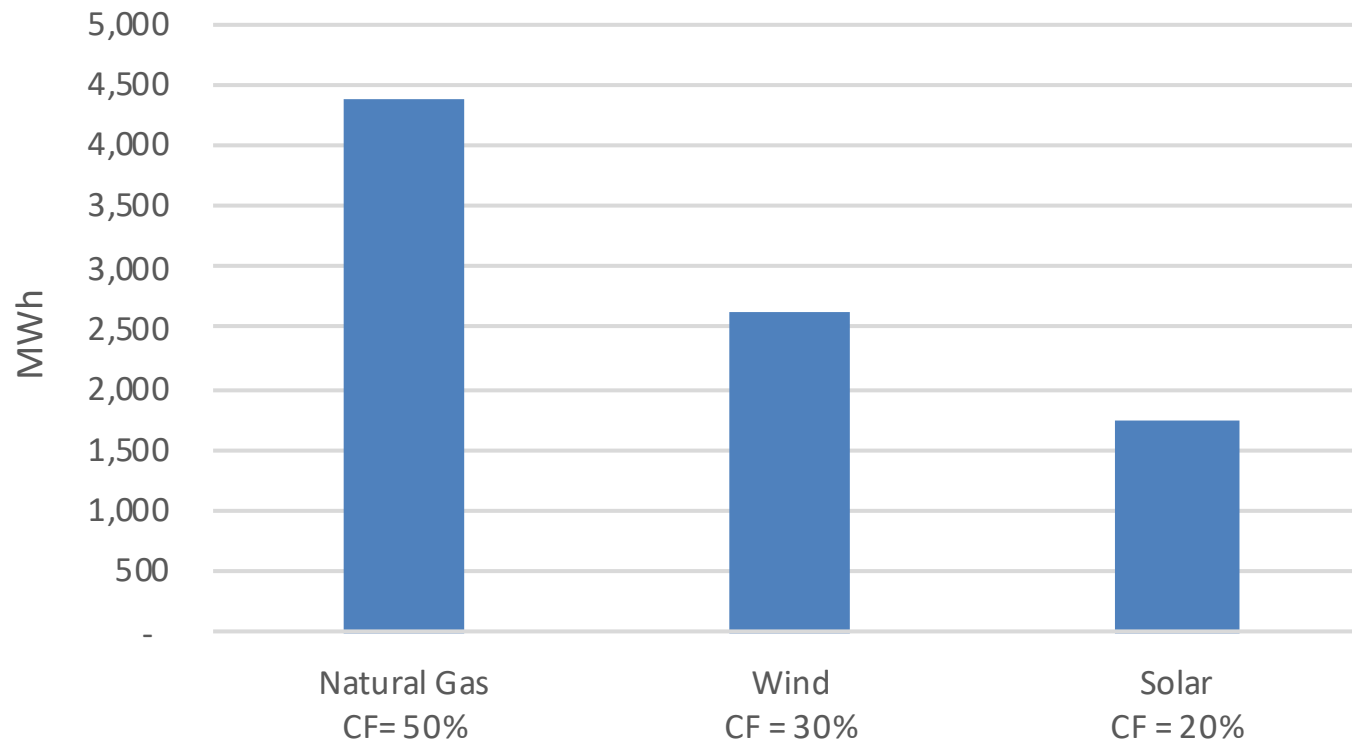
End-Use



$1 \text{ kW} \times 1 \text{ hour} = 1 \text{ kWh consumed}$

# Not all MW are Created Equal

Annual Electricity Production  
from 1 MW of Generation Capacity



CF = Capacity Factor



# California's Energy Agencies and Organizations

# California Public Utilities Commission (CPUC)

- **Areas of Regulation**
  - Energy
    - Electricity
    - Natural Gas
  - Water
  - Telecommunications
  - Transportation
- **Commissioners**
  - 5 Commissioners
  - Appointed by Governor
  - President Appointed by Governor
  - 5-year Staggered Terms



# CPUC Commissioners



Marybel Batjer, President  
Jul 2019



Liane Randolph  
Commissioner  
Jan 2015



Martha Guzman Aceves  
Commissioner  
Dec 2016



Clifford Rechtschaffen  
Commissioner  
Jan 2017



Genevieve Shiroma  
Commissioner  
Jan 2019



# California Public Utilities Commission (CPUC)

- **Main Regulatory Authority**
  - Transmission Siting
  - Rates
  - Procurement Plans and Contracts
  - Resource Adequacy
- **Other Functions**
  - Energy Storage
  - Energy Efficiency Programs
  - Distributed Generation Programs
    - California Solar Initiative
    - Self-Generation Incentive Program



# California Public Utilities Commission (CPUC)



## CCA Obligations Before the CPUC\*

- **Resource Adequacy (RA) requirements (PU Code Section 380)**
  - System, Local, and Flexible RA
    - Annual Filings
    - Monthly Filings
- **Renewables Portfolio Standard (RPS)**
  - CCAs are subject to the same RPS requirements as IOUs
  - CPUC “accepts” CCAs’ RPS plans
- **Integrated Resource Planning (IRP) (PU Code Section 452.52)**
  - CCAs must submit IRP proposal for CPUC certification
- **Energy Storage requirements (AB 2514)**
  - Storage projects to meet 1% of the peak load

\*This list is curated for the purposes of the En Banc discussion and is not exhaustive of all CCA obligations before the CPUC.



# California Energy Commission (CEC)

- **Main Regulatory Authority**
  - Licenses thermal Power Plants >50MW
  - Building Energy Standards Title 24
  - Appliance Standards Title 20
- **Other Activities**
  - Energy Planning
    - Integrated Energy Policy Report (IEPR)
    - Energy demand forecasting
  - Research and Development
    - Electric Power Investment Charge (EPIC)
  - Power Source Disclosure



# California Energy Commission (CEC)

- **Interaction with CCAs**
  - Collect Power Source Disclosure Information
  - Performs Long-term Forecasting
  - Collects Data
- **Commissioners**
  - 5 Commissioners
    - Law, Environment, Economic, Science/Engineering, Public at Large
  - Appointed by Governor
  - 5-year Staggered Terms





# CEC Commissioners



David Hochschild, Chair  
2019 - Env



Janea Scott, Vice Chair  
2016 - Public



Karen Douglas  
Commissioner  
2018 - Law



J. Andrew McAllister  
Commissioner  
2017 – Econ



Patty Monahan  
Commissioner  
2019 – Sci/Eng





# California Independent System Operator (ISO)

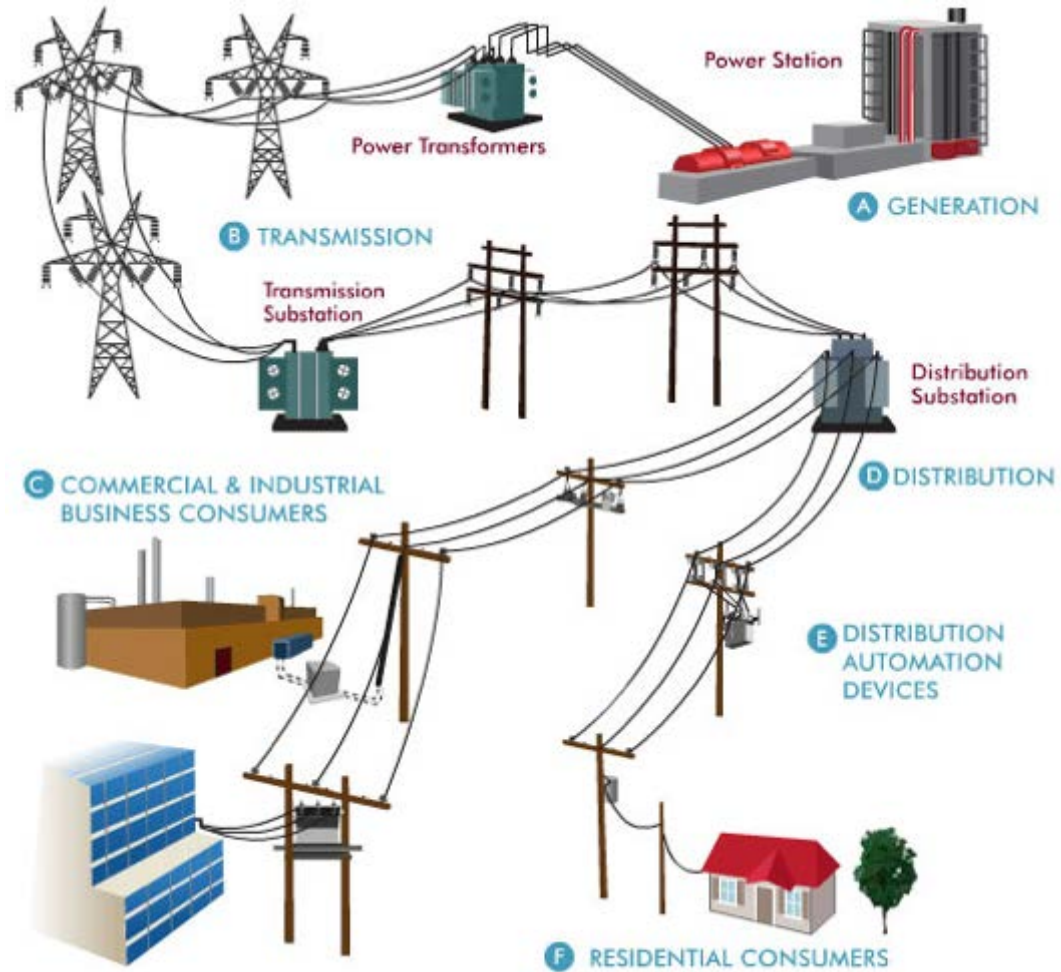
- Operates wholesale electric transmission system
- Interconnects generators to the transmission system
- Operates wholesale power markets
- Regulated by Federal Energy Regulatory Commission (FERC)
- “Conductor” of the transmission system



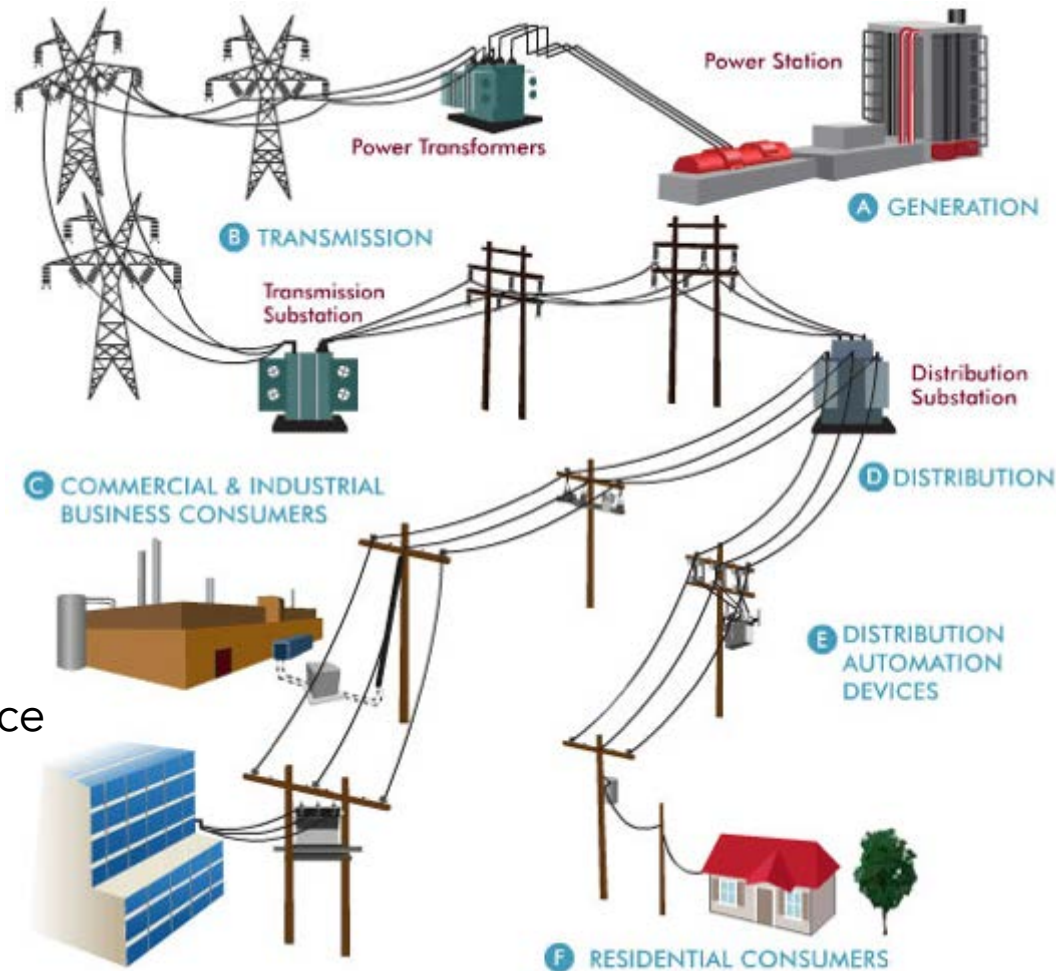
California ISO

# The Electric Power System

# The Electric Power System



# The Electric Power System – CCA Role



Procure Energy and Capacity

Monitor Costs

Set Rates

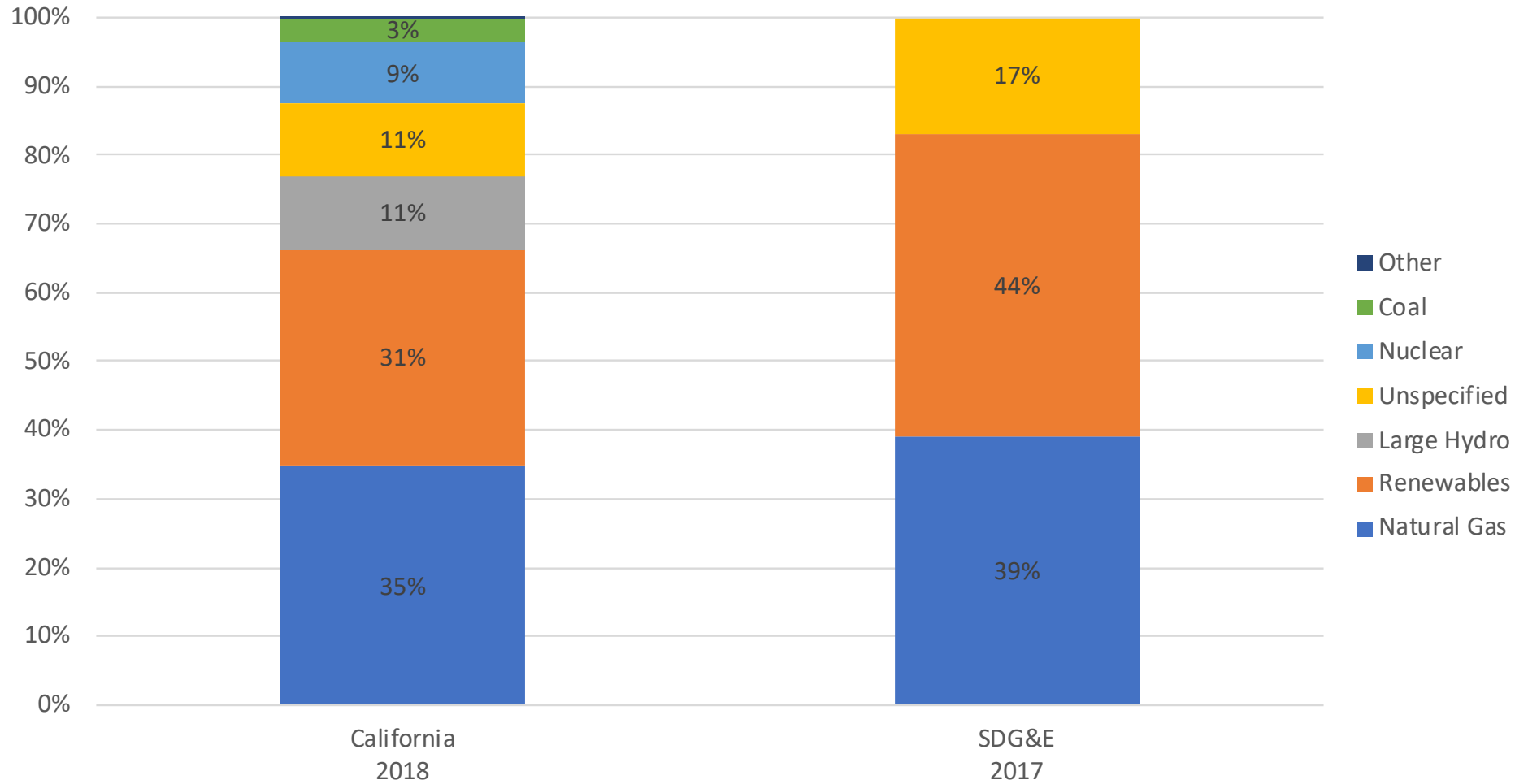
Collect Payments

Provide Customer Service

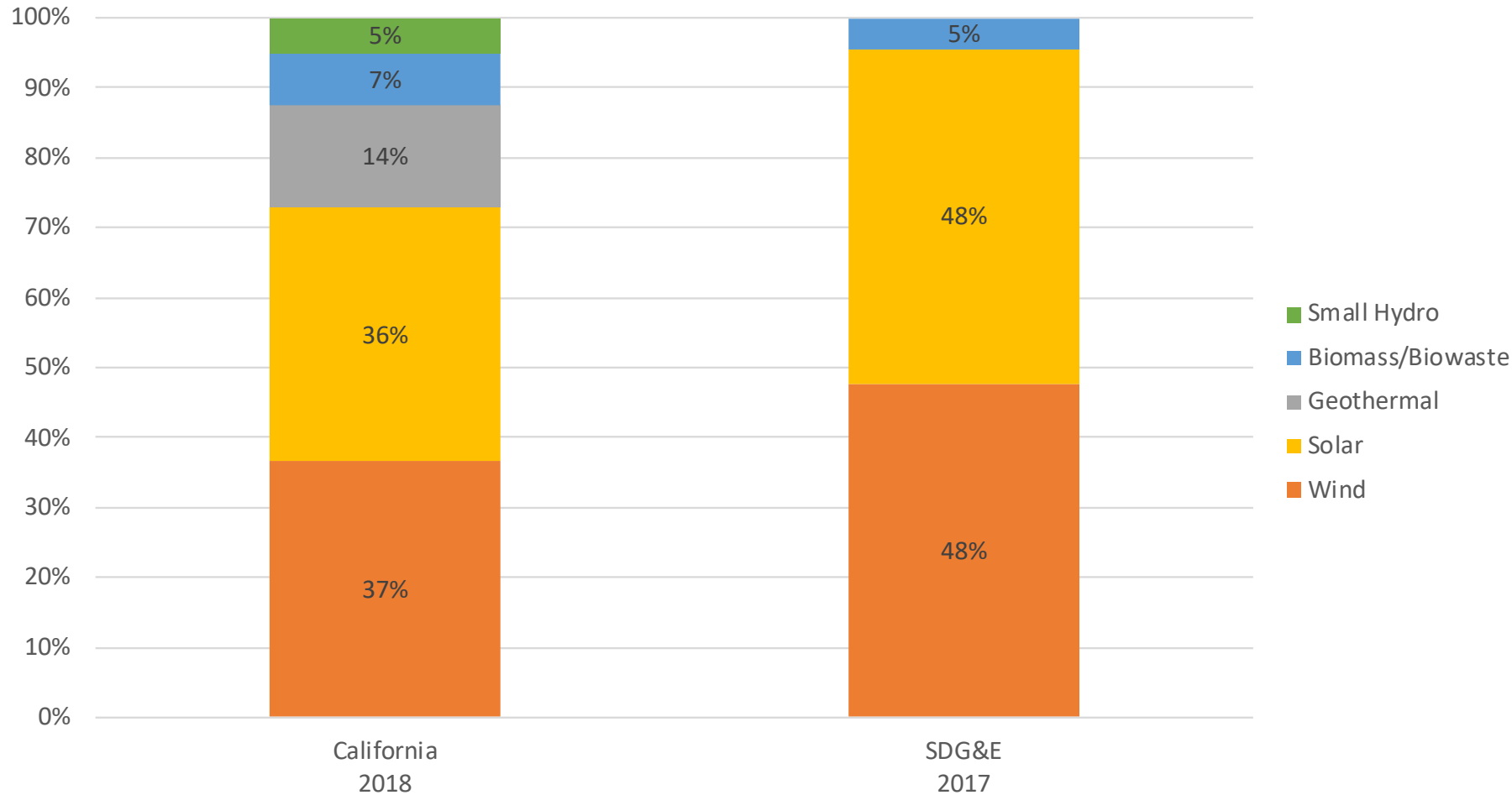
Manage Programs

# Electricity Generation

# Electric Supply Sources – Total

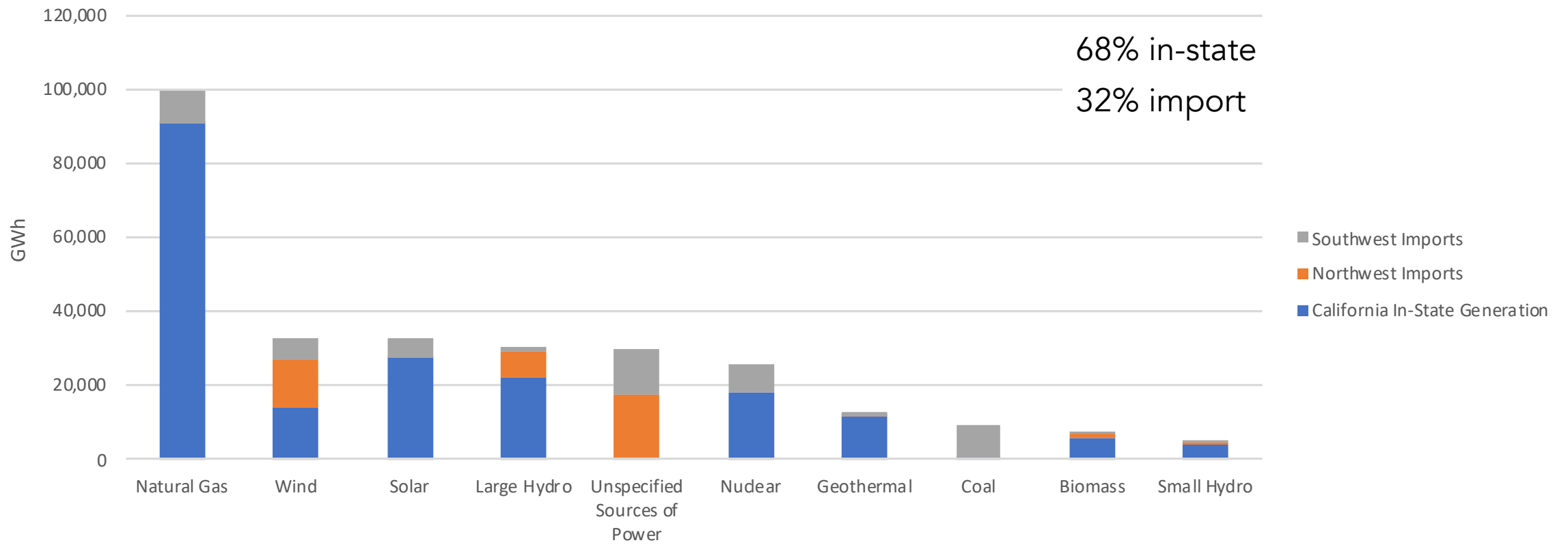


# Electric Supply Sources – Renewables Only



# In-state vs. Import

## California Electricity Supply by Technology





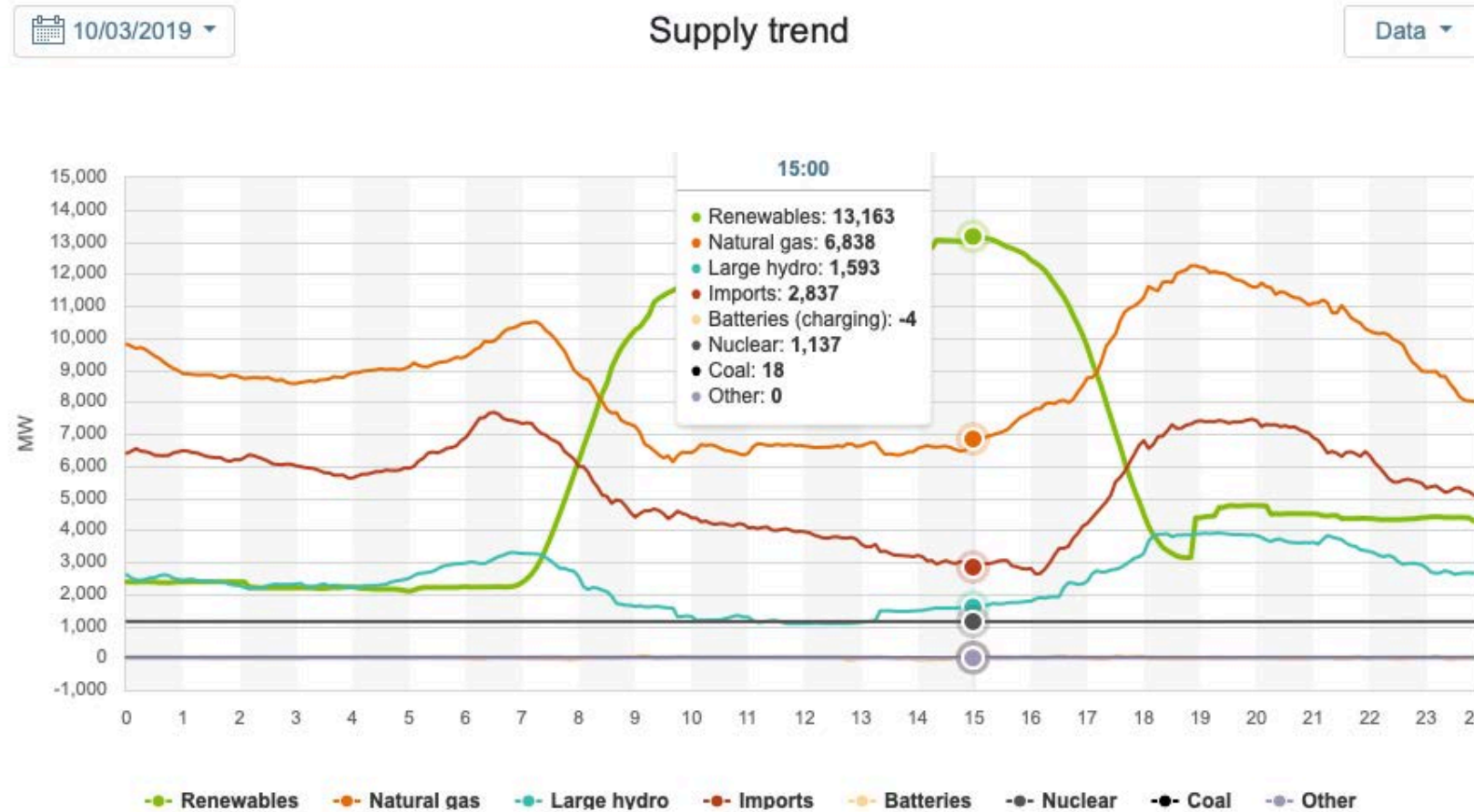
# Characteristics of Electricity Generation Technologies

	GHG Performance		Operating Characteristics	
	Eligible Renewable	Carbon Free	Dispatchable	Non-Dispatchable
Natural Gas			x	
Coal			x	
Large Hydro		x		x
Nuclear		x	x	
Biomass	x	x	x	
Geothermal	x	x	x	
Small Hydro	x	x		x
Solar	x	x		x
Wind	x	x		x

## Other Considerations

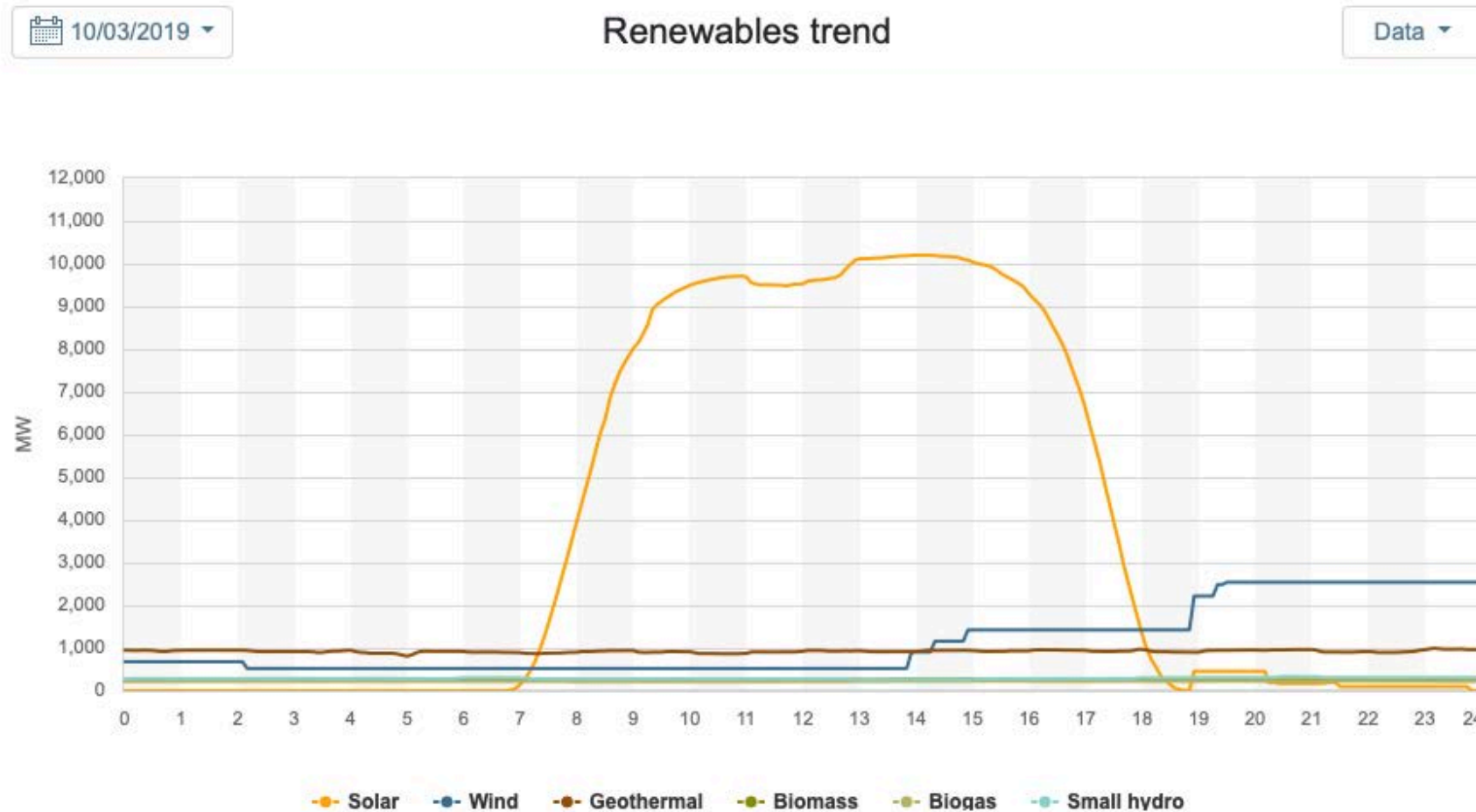
- Cost to build
- Cost to operate and maintain
- Time to permit and construct
- Area required
- Generation Capacity
- Other Emissions

# Characteristics of Electricity Generation Technologies



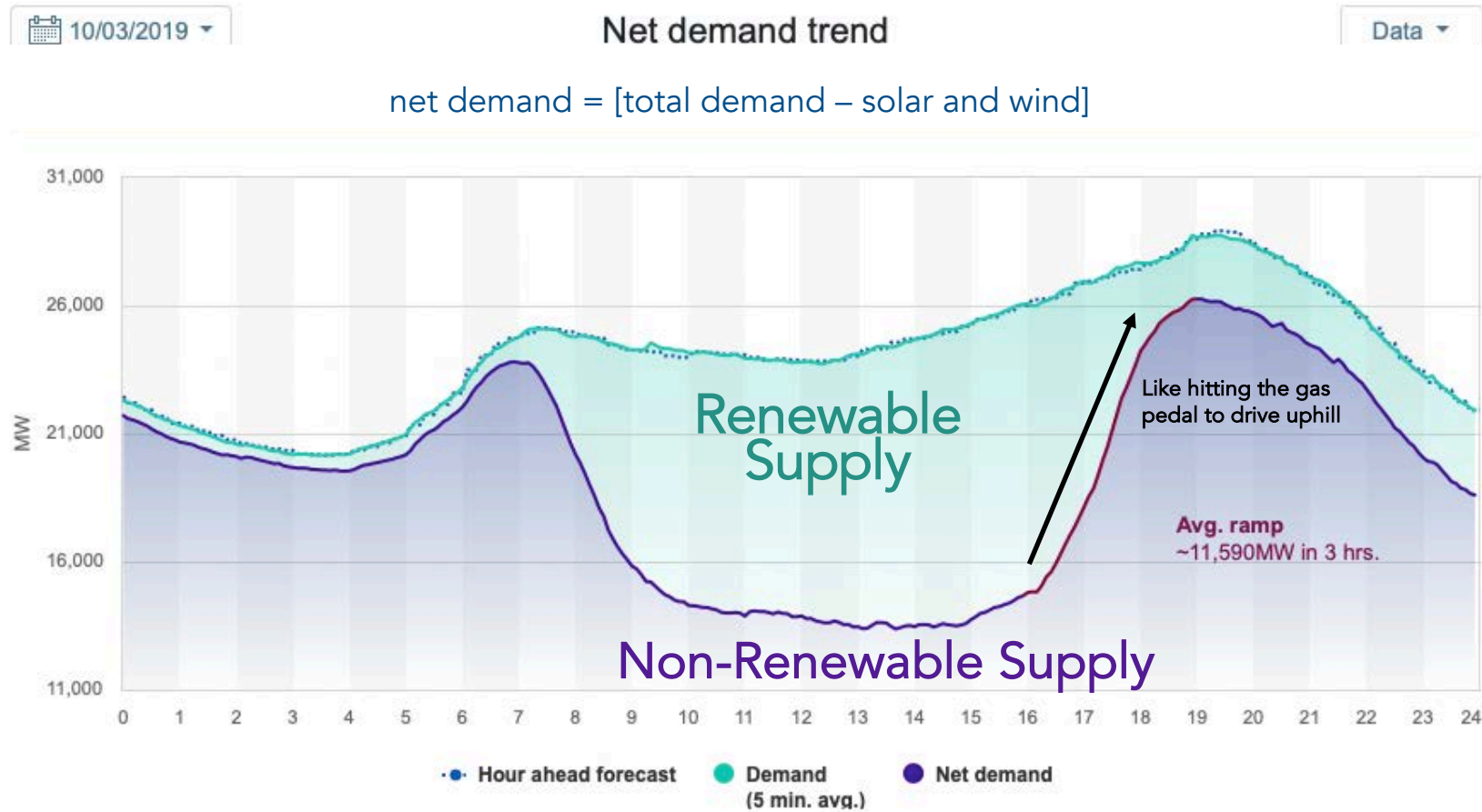
Source: California Independent System Operator (CAISO)

# Characteristics of Electricity Generation Technologies



Source: California Independent System Operator (CAISO)

# The Infamous Duck Curve



Source: California Independent System Operator (CAISO)

# Energy Supply Sources - Scale

## Distributed



Several KW to Several MW

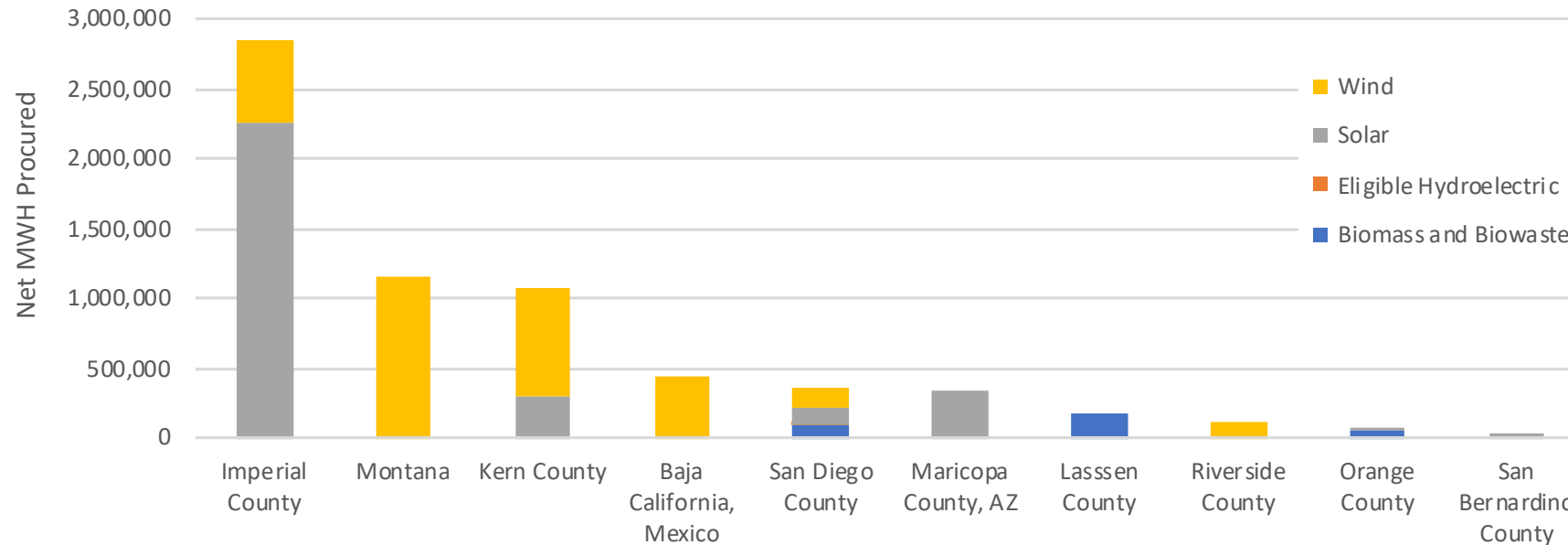
## Utility Scale



10s to 100s of MW

# Renewable Energy Supply in the San Diego Region

Location of Renewable Energy Sources Serving SDG&E, 2018  
Net MWh Procured by Technology



Source: California Energy Commission, Power Source Disclosure Program

# Electric Generation Players

- Investor-owned Utilities
- Publicly-owned Utilities
- Community Choice Aggregation Programs
- Independent Power Producers
- Direct Access Providers



# Transmission and Distribution (T&D)



# Transmission and Distribution System

- **Transmission**
  - Owned and Maintained by IOU or POU
  - Operated and Planned for by ISO or POU
  - Transmits electricity long distances
  - Analogous to freeway system
- **Distribution**
  - Owned, Operated, and Maintained by IOU or POU
  - Delivers electricity to homes and businesses
  - Analogous to surface and neighborhood streets



# Transmission and Distribution System

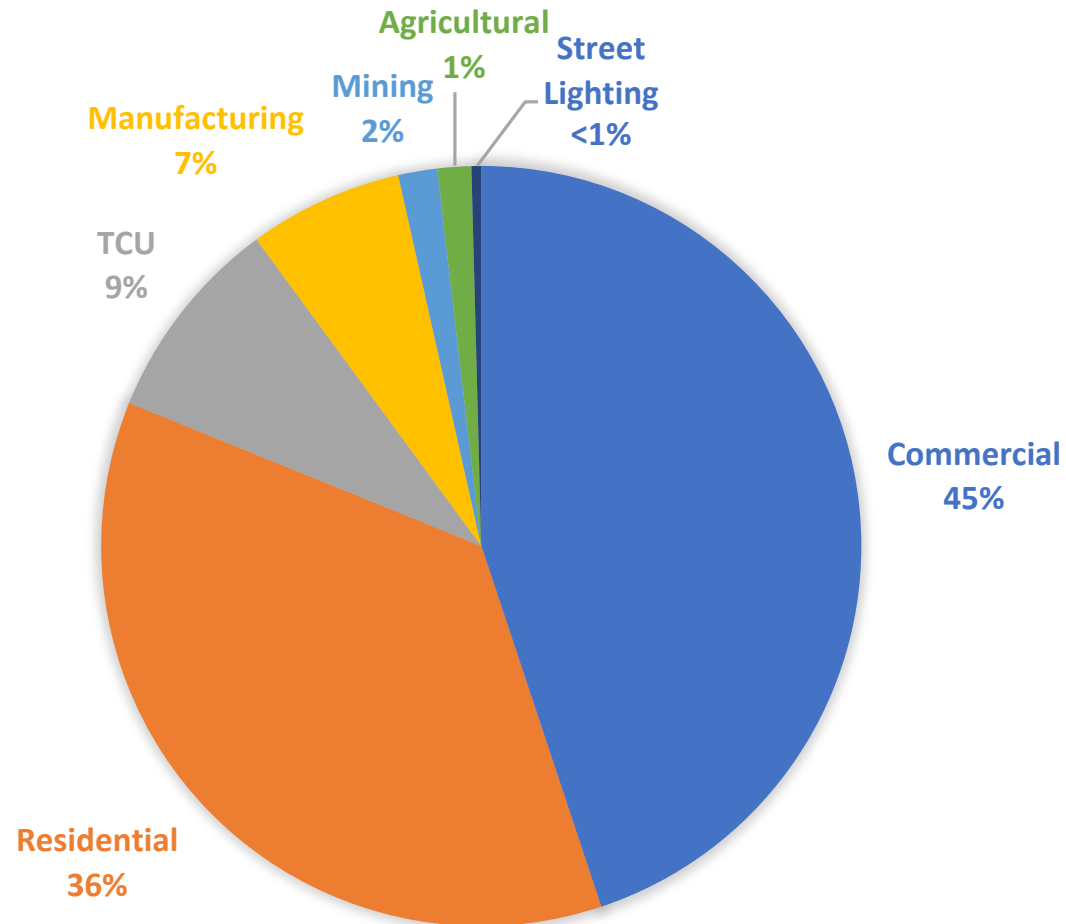
Concept	Road System	T&D System
Capacity	Number of lanes	Size of the wires/equipment
Flow	Number of vehicles moving	Amount of electricity delivered
Congestion	Inability to get to your destination (traffic)	Inability to deliver electricity
Peak	Highest rate of vehicle travel	Highest rate of electricity use

- **Limitation of analogy**
  - ISO as conductor of electricity flows – supply must equal demand 24/7 x 365

# Energy End Use

# End-Use Sectors

SDG&E Service Territory Electricity Consumption (GWh), 2018

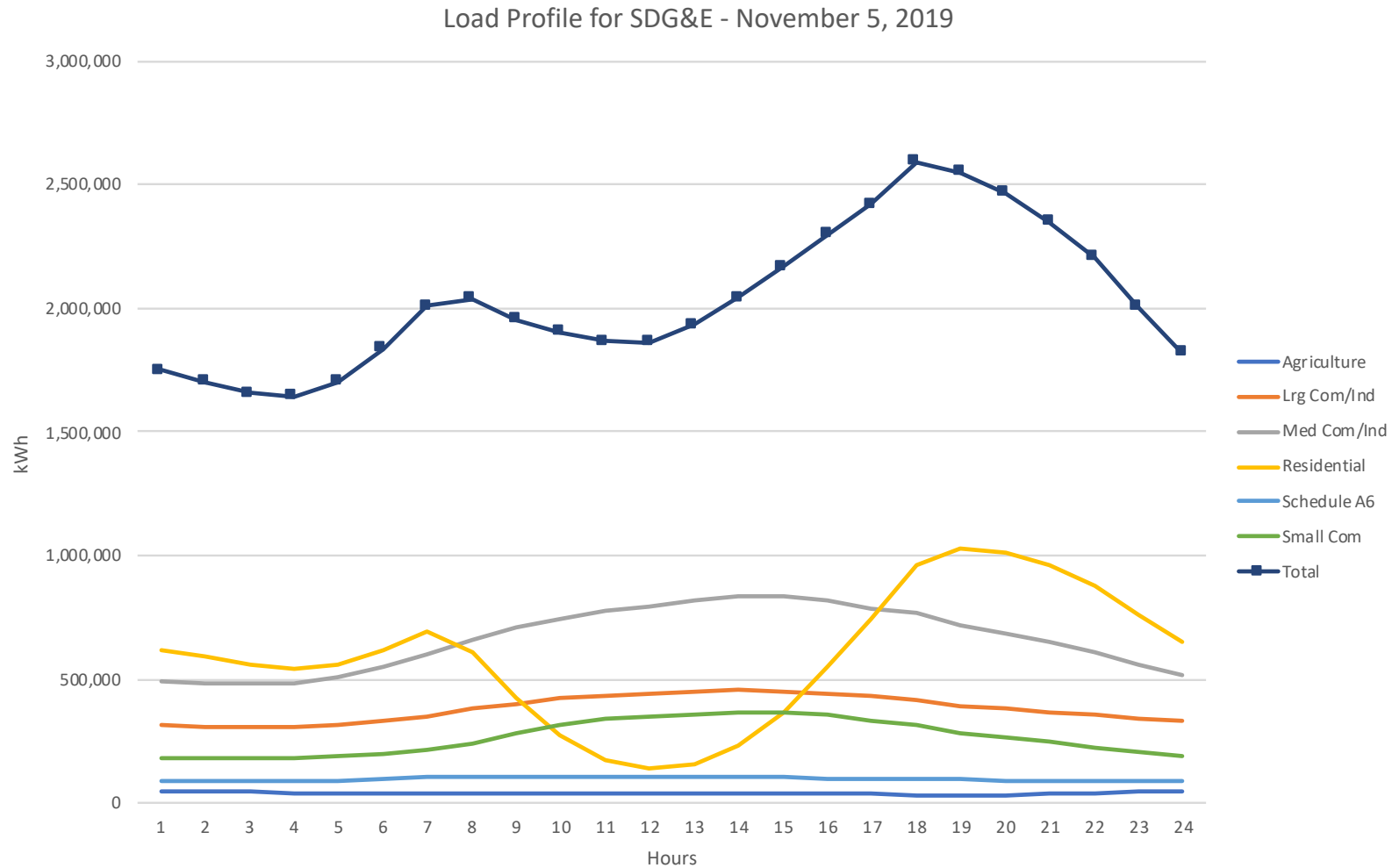


Local government operations are in the commercial sector

# End Use

- **Key Terms**
  - Consumption (kWh) – total amount of electricity consumed
  - Demand (kW) – size of the “pipe” needed to serve load
    - Industrial customer vs. residential customer
  - Peak Demand (kW) – maximum use in a given periods
- **Level of Analysis**
  - Customer
  - Utility
  - Total System

# End Use Across One Day



Source: SDG&E Dynamic Load Profiles

# End Use

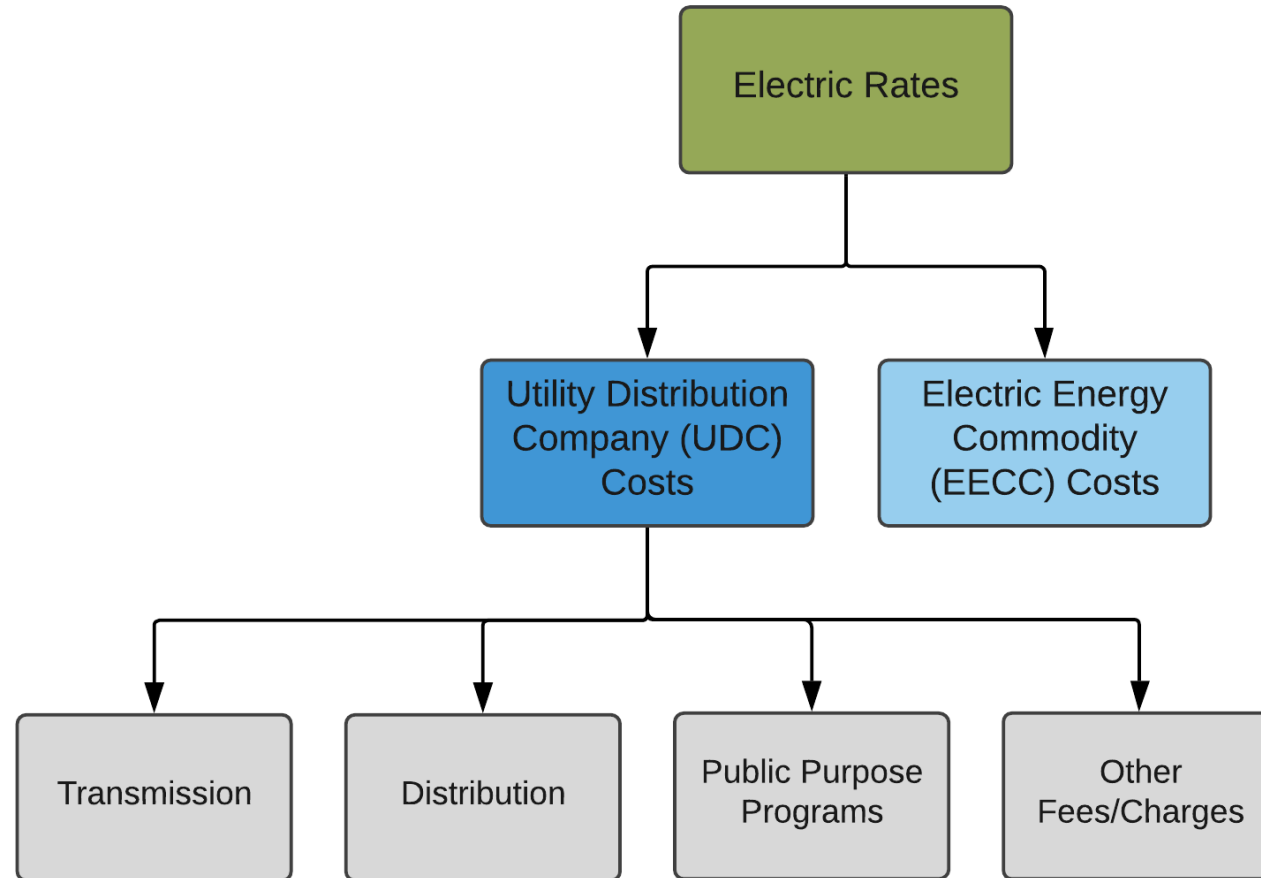
- **Different Load Profiles**
  - Sector
  - Customer Class
  - Appliance
  - Location
  - Building Type
  - Season
- **Other Factors**
  - Energy Efficiency
  - Distributed Generation

## Section 2: Rates





# Electric Rate Components



# Overview of Utility Ratemaking Process

## Step 1



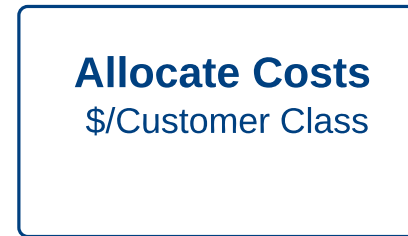
What level of income is needed?

## Step 2



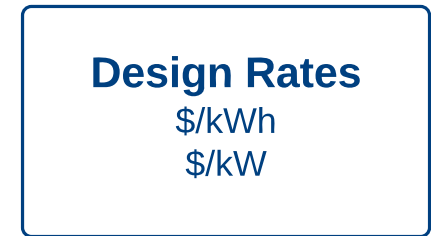
How to categorize cost?

## Step 3



Who causes costs?

## Step 4



How to collect revenue from customers?

$$RR = \text{Operating Expenses} + [(\text{Value of Assets}) \times \text{Regulated Rate of Return}]$$

|  
rate base

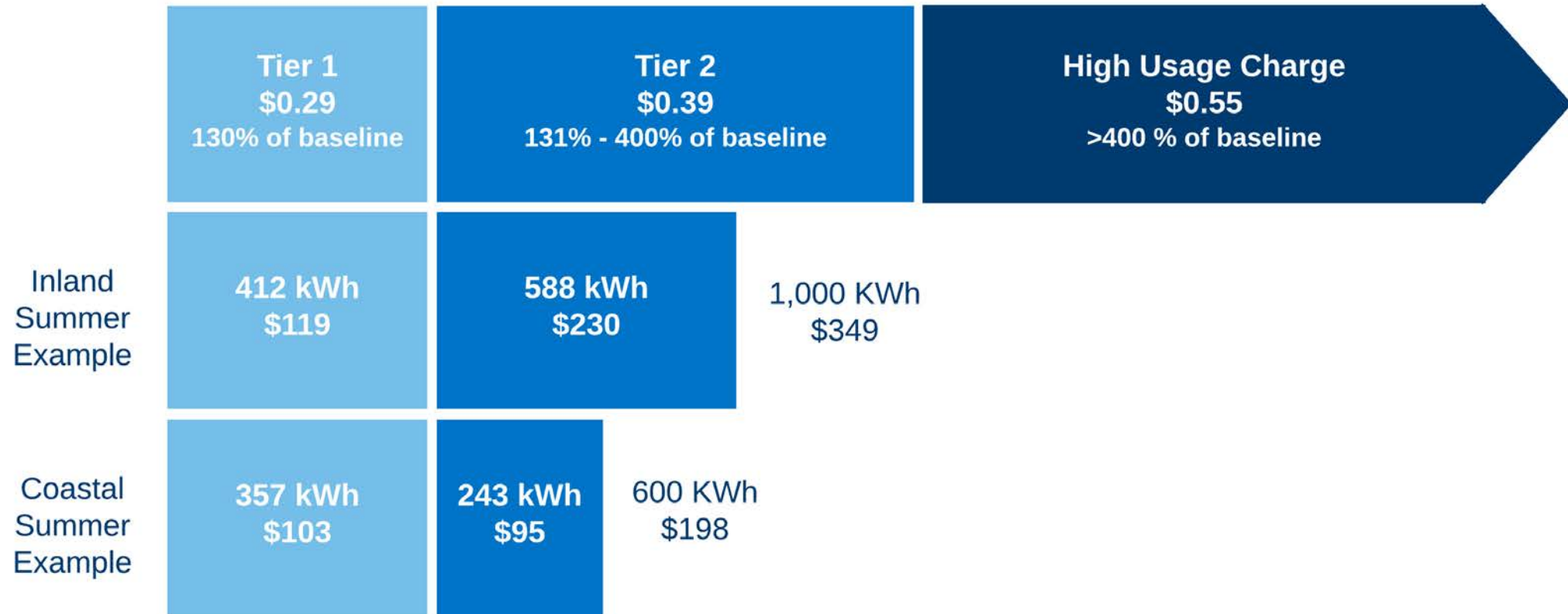
# Decoupling

- **What Happens if Energy Use Declines?**
  - The utility would not be able to collect its revenue requirement
  - Could be a disincentive for efficiency
  - Could be incentive to increase consumption
- **Enter Decoupling**
  - Provides a mechanism to allow utilities to adjust rates between rate cases
  - Guarantees revenue requirement
  - Removes disincentive for efficiency
  - Does not create an incentive to do efficiency

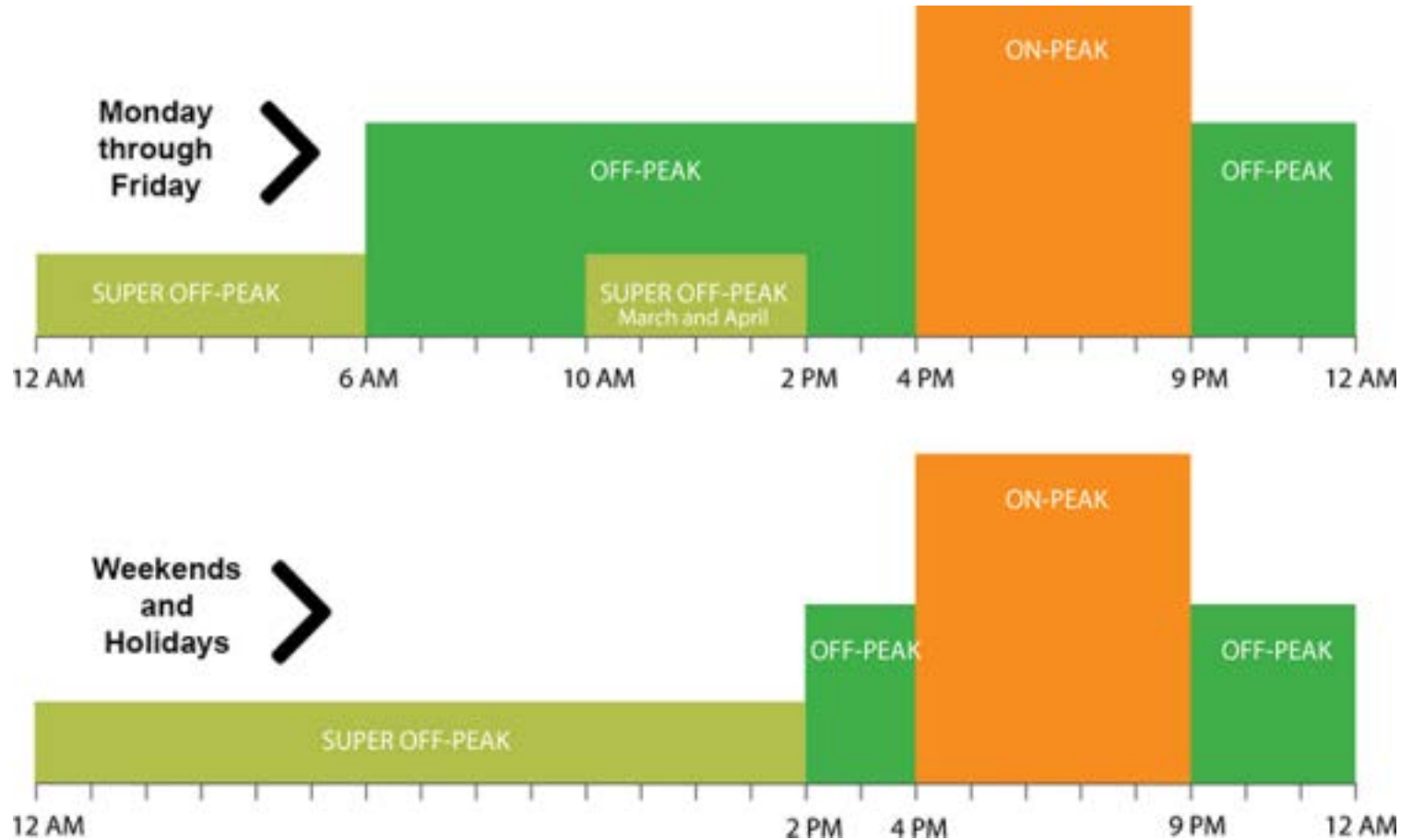
# Key Concepts

- **Cost Causation**
  - Allocate costs to those who cause them
- **Baseline Allocation**
  - Minimal level of usage
  - Varies by geography
- **Seasonality**
  - Winter and Summer
  - Reflects change energy use and costs
- **Rate Structures**
  - Time of Use
  - Block
  - Flat

# Block Rates - Residential



# Time of Use – Residential and Commercial

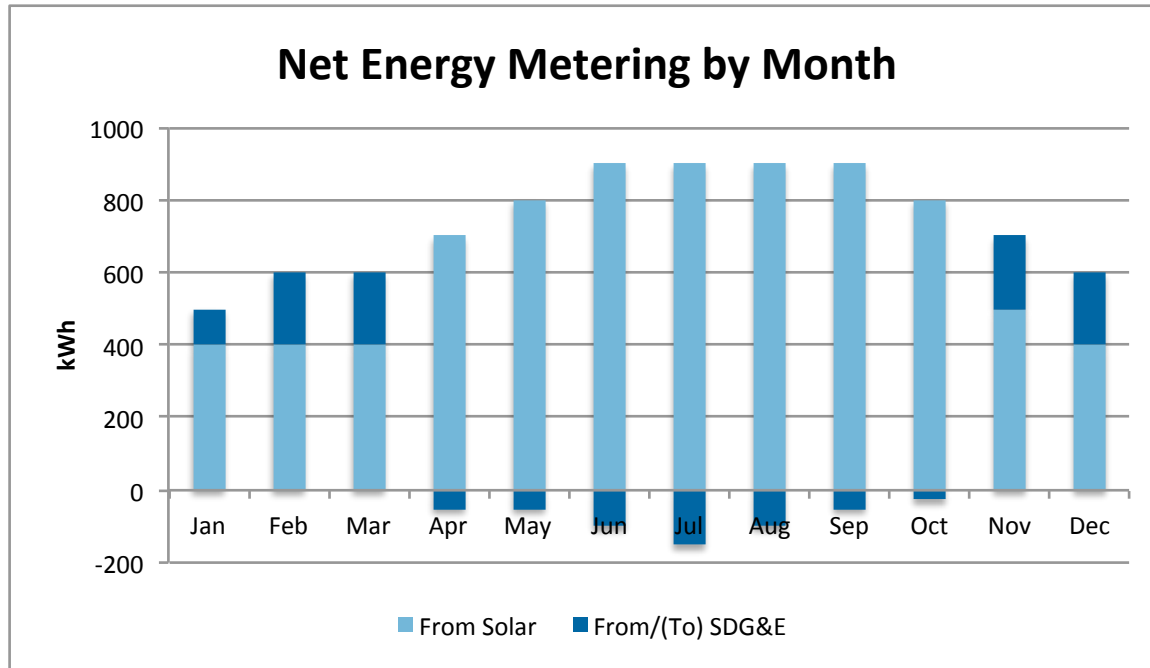


Commercial and Industrial Customers also pay demand charge (\$/kW)

# Net Energy Metering

- **Net Energy Metering (or Net Metering)**
  - Retail credit for energy sent to the electric grid
  - Credits calculated on a monthly basis
  - Retail credit for excess energy each month
  - Energy deposits and withdrawals netted annually
    - NOTE: This is different from net annual surplus credits
      - This is the amount of energy sent to the grid beyond needs on an annual basis
      - Compensated at the “wholesale” rate

# Net Energy Metering Example



From Solar	8,000
From SDG&E	900
<hr/>	
Total	8,900



## Section 3: Trends in the Electric Industry

# Central Role of Electricity in California's Climate Policy

## CALIFORNIA'S CLIMATE POLICY PORTFOLIO



Double building efficiency



Cleaner freight and goods movement



60% renewable power



Slash potent "super-pollutants" from dairies, landfills and refrigerants



More clean, renewable fuels



Cap emissions from transportation, industry, natural gas, and electricity



Cleaner zero or near-zero emission cars, trucks, and buses



Invest in communities to reduce emissions



Walkable/Bikeable communities with transit

# Electrification and Natural Gas Ordinances

Berkeley bans natural gas in new buildings, the first U.S. city to do so

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## San Jose Approves Ban Of Natural Gas In New Construction Projects

By Kiet Do September 17, 2019 at 9:41 pm Filed Under: Construction Projects, Electric Buildings, Greenhouse Gas, natural gas ban, San Jose News



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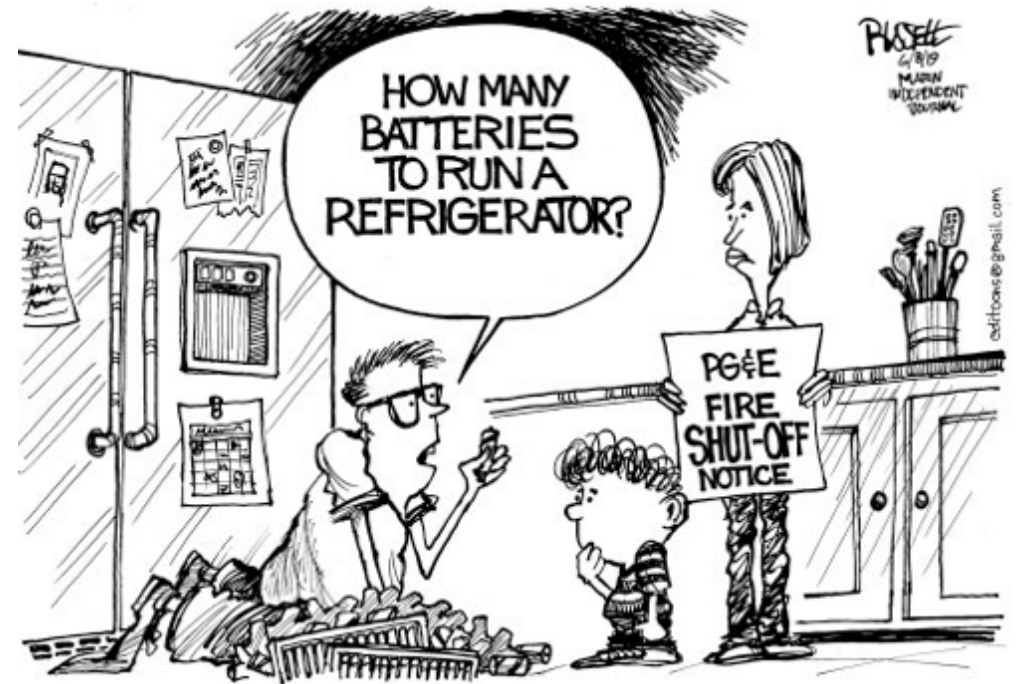
Grass Fire Burns Over 500 Acres In American Canyon Hills; 30% Contained

Warm Fall Weather Sparks Tarantula Mating Season Across Bay Area

Gas stoves are being phased out in Berkeley; the city council on Tuesday approved the ban. (Berkeley News Group)

# Wildfires

- Likelihood of Future Fires
- Public Safety Power Shut Off
  - Will affect CCA customers
  - Operations challenges for CCA
- SDG&E Advanced Fire Mitigation
- Resiliency Challenge
  - Outages due to fires or PSPS
  - Bay Area CCAs seeking distributed solution
    - Also resource adequacy solution



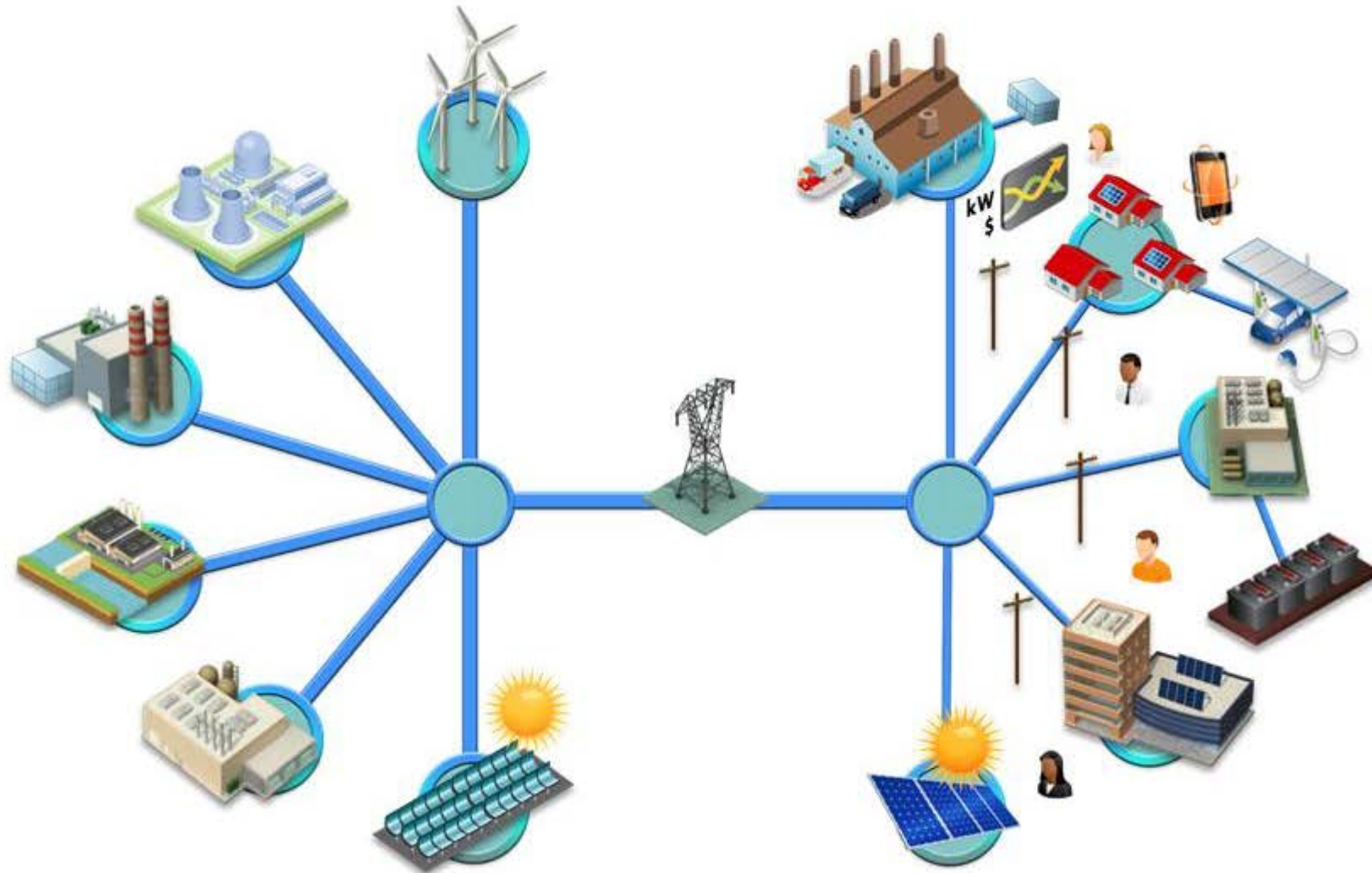
# Energy Storage

**POWERWALL**  
TESLA HOME BATTERY





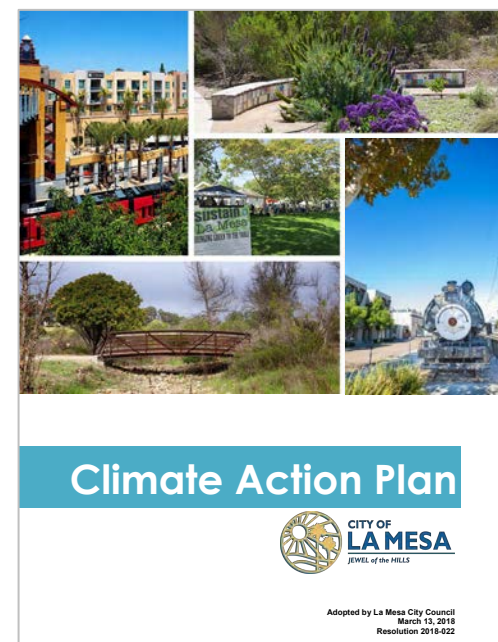
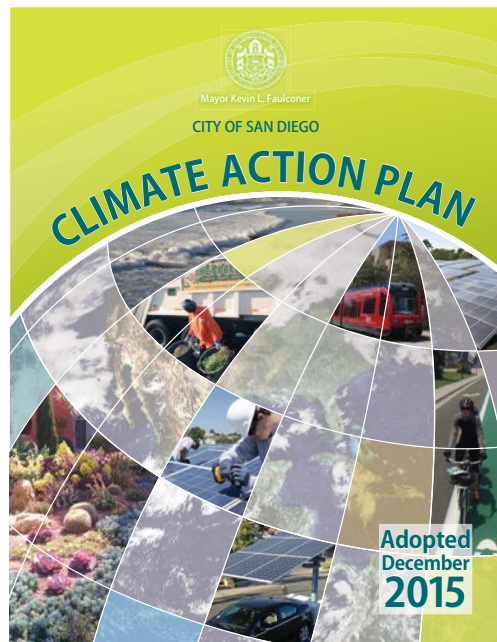
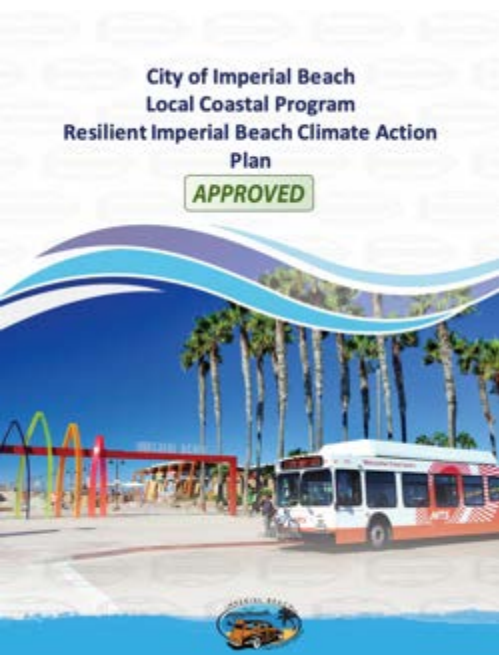
# Energy System of the Future



End use?

## Section 4: Trends in San Diego Region

# Climate Action Plans



Renewable energy targets

Opportunity to coordinate energy and land use roles



# Future Role of SDG&E

## How SDG&E Plans to Quit the Electricity Procurement Business

With San Diego and neighboring cities poised to adopt community-choice energy, SDG&E says it wants a “glide path out of the energy procurement space.”

JUSTIN GERDES | FEBRUARY 04, 2019



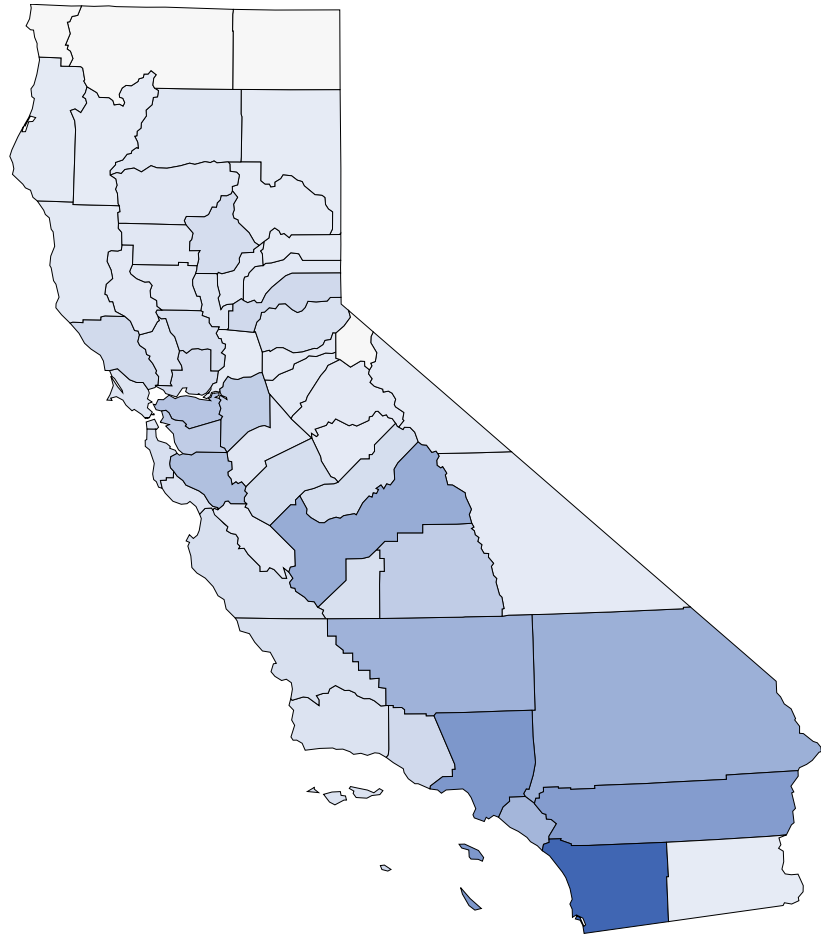
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SDG&E moves to become a poles-and-wires company.

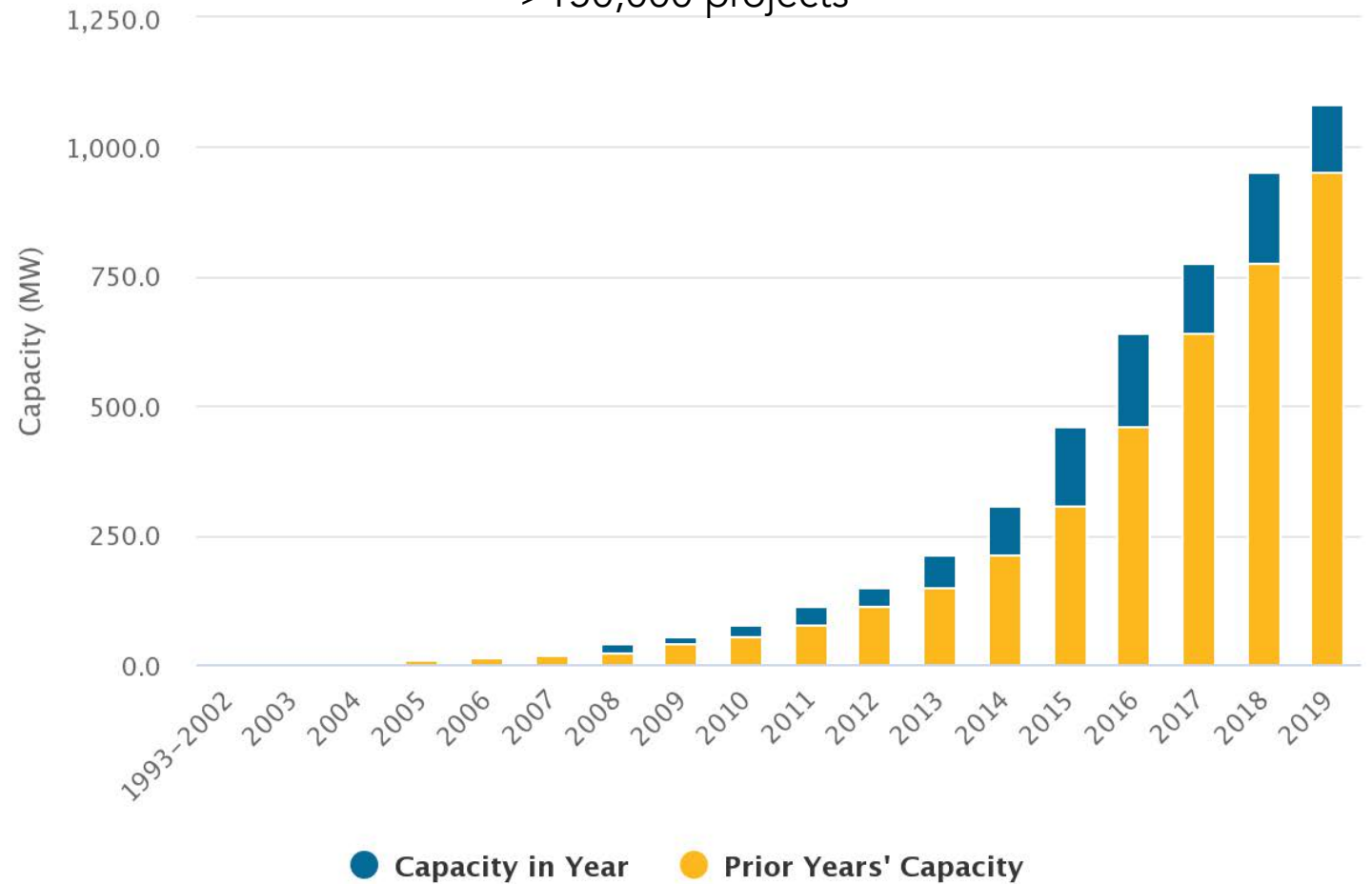
Photo Credit: SDG&E

Source: Greentech Media

# Rooftop Solar



Totals for San Diego County  
>150,000 projects



Source: California Distributed Generation Statistics. Data through 9-30-19.

# Renewable Energy Supply from SDG&E

**Table 1: Actual 2018 Large Investor-Owned Utilities' RPS Procurement Percentages**

Pacific Gas and Electric	39%
Southern California Edison	36%
San Diego Gas & Electric	44%

Data Source: IOUs' Annual RPS Compliance Reports, August 2019

Thank You!

Scott Anders  
scottanders@sandiego.edu



# *Community Choice Energy Overview*

**BETH VAUGHAN**

Executive Director, CalCCA

# San Diego Regional Community Choice Energy Authority Energy Briefing

November 16, 2019

Dempsey Holder Center  
950 Ocean Lane  
Imperial Beach, CA 91932

# Presentation Outline

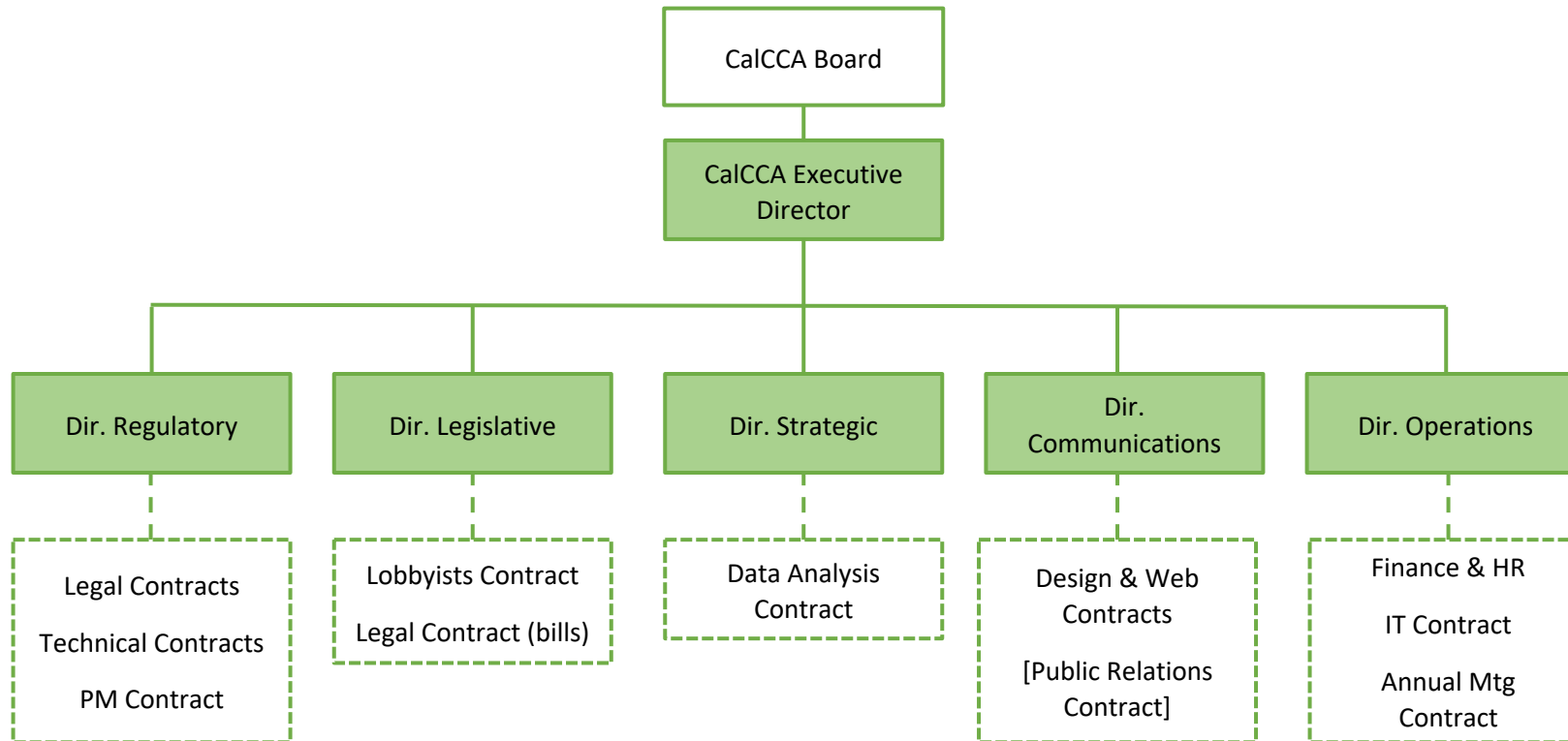
1. CalCCA Role and Structure
2. Regulatory Proceedings
3. Legislative Affairs
4. Programs and Best Practices
  - ❖ Business Models
  - ❖ Compliance Requirements
5. Outreach and Communications

# CalCCA's Role is to:

- Coordinate and lead policy development among members
- Develop a vision of California's energy future and create a pathway to implement that vision
- Be the voice of CCAs at the legislature and the regulatory agencies
- Facilitate sharing of best practices among CCAs to accelerate adoption of programs
- Support developing/emerging community choice programs
- Communicate and Educate
  - Advocate policy positions and platform
  - Elevate and amplify the energy procurement and programs of CCAs that collectively advance the goals of decarbonization, reliability, affordability and social equity.
  - Provide the venues to educate, advocate and network



# CalCCA Organizational Chart



# Regulatory and Legal Challenges

## Transitioning to a democratized and decentralized system is complex...

- Load shifting, stranded costs, exit fees
- Tensions between centralized and decentralized oversight, planning and delivery
- Market impacts and market design
- Implications of “wires only” utilities
- Rate of change (new entities, procurement, programs, etc.)

# Regulatory Engagement

## CalCCA's Regulatory Committee:

- Tracks and analyzes proceedings impacting CCA across CPUC, CEC, CAISO, CARB
- Recommends Board action
- Develops policy position, files comments, and advocates for positive regulatory outcomes
- Educates policymakers and regulatory staff on CCA activities and CCA issues
- Works with regulatory stakeholders to build coalitions supportive of CCA-positive outcomes

## Key 2019 Proceedings:

- **Power Charge Indifference Adjustment (CPUC):** PCIA Phase 2 includes several critical CCA regulatory policies, including benchmarking, portfolio optimization and management, and pre-payment
- **Resource Adequacy (CPUC):** The RA Proceeding includes issues of RA compliance, multi-year RA procurement, central RA procurement, and other key CCA issues.
- **Integrated Resource Planning (CPUC):** IRP now serves as the central coordinating venue for statewide long-term energy planning, including new procurement.
- **Direct Access Re-Opening / SB 237 (CPUC):** The DA proceeding established the process for a limited, new DA load to depart from IOUs/CCAs and will report to the legislature on further DA expansion in 2020.
- **De-Energization (CPUC):** The De-Energization proceeding explores issues associated with the IOUs Public Safety Power Shutoff (PSPS) programs intended to reduce utility wildfire risk.
- **CAISO Stakeholder Initiatives:** RA Enhancements, DER participation in wholesale markets, Hybrid Resources, etc.
- **Other Proceedings:** Other key regulatory proceedings include: Power Content Label (CEC), Affordability (CPUC), Disconnections (CPUC), PG&E Safety Culture (CPUC), Microgrids (CPUC), etc.

Case Name/Number	Tier Designation	CalCCA Role	Status	Case Manager
Affordability (R.18-07-006)	C	Monitor	Active	Sam
AB 693 Implementation/NEM 2.0 (R.14-07-002)				
Building Decarbonization				
Direct Access (R.19-03-009)	B	Lead	Active	Poonum
Disconnections (R.18-07-005)	C	Monitor	Active	Ross
Demand Response (R.13-09-011)				
De-Energization in Dangerous Conditions (R.18-12-005) (NEW)				
Distribution Resource Plans (R.14-08-013)				
Energy Efficiency OIR (R.13-11-005)				
EE Business Plan OIR (A.17-01-013 et al)				
Integrated Distributed Energy Resources (R.14-10-003)				
Integrated Resource Planning (R.16-02-007)	B (Phase 2=A)	Lead	Active	Hilary
PCIA OIR (R.17-06-026)	B (WG 1&2=B, 3=A)	Lead	Active	Todd/Neal/Matt
PG&E General Rate Case Phase II (A.16-06-013)				
PG&E 2018-2022 Demand Response (A.17-01-012)				
PG&E 2019 ERRA			Upcoming (June 1)	
PG&E ERRA Compliance				
Residential Rate Reform Rulemaking (R.12-06-013)				
Rate Design Window Applications (A.17-12-011 et al)				
Resource Adequacy Rulemaking (R.17-09-020)	A?	Lead	Active	Jeremy
RPS Program (R.18-07-003, formerly R.15-02-020)				
Safety Culture OIR (I.15-08-019) (NEW)	x	Lead	Active	
SCE 2019 ERRA			Upcoming (June 1)	
SCE 2018 General Rate Case (A.16-09-001)				
Statewide Marketing, Education and Outreach (A.12-08-007)				
Wildfire Cost Recovery "Stress Test" (R.19-01-006)				
CAISO RA - Backstop Capacity: RMR / CPM Initiatives and Contracts				
CAISO RA - Flexible RA and Must Offer Obligation Phase 2				
CAISO Transmission - Transmission Planning Process				
CAISO Transmission - Review Transmission Access Charge				
CAISO Transmission - CRR Auction Efficiency				
CAISO Regionalization - EIM Enhancements and Expansions				
CAISO Regionalization - Western ISO Development				
Other CAISO Market Initiatives				
Other FERC Proceedings				
Low Carbon Fuel Standards	C	Monitor	Active	Neal Reardon
Scoping Plan 2030 Update				
Data Collection from LSEs (16-OIR-03)				
Disaggregated Data/Access to Consumer Usage Data (NEW)	M			
AB 1110 Implementation (16-OIR-05)	C	Monitor	Active	CC Song
EE Policy Work (IEPR / SB 350)				

# Legislative Engagement

## CalCCA's Legislative Committee:

- Tracks and analyzes bills impacting CCA.
- Recommends Board action
- Develops positions, negotiates amendments, and advocates for bill passage / defeat
- Educates legislators and legislative / administration staff on CCA activities and CCA issues
- Works with legislative stakeholders to build coalitions supportive of CCA-positive outcomes

## Key 2019 Legislation:

- **Assembly Bill 56 (Garcia) – Oppose:** Would establish a central procurement mechanism with sweeping authority to procure resources on behalf of (and allocate costs to) CCA customers.
- **Assembly Bill 1362 (O'Donnell) – Oppose:** Would have re-opened cornerstone policies protecting CCAs from unfair IOU interference during CCA formation process; several problematic provisions removed through CalCCA lobbying.
- **Senate Bill 155 (Bradford) – Oppose:** Would have established significant additional state authority over CCA Integrated Resource Plans; several problematic provisions removed through CalCCA lobbying.
- **Senate Bill 350 (Hertzberg) – Concerns:** Would authorize the CPUC to establish a multi-year resource adequacy procurement mechanism.
- **Senate Bill 520 (Hertzberg) – Concerns:** Would establish statutory guidance on Provider of Last Resort, including pathway for non-utility entity to serve as Provider of Last Resort.
- **Senate Bill 772 (Bradford) – Concerns:** Would require CAISO to procure 2,000MW of long-duration energy storage projects by 2022.
- **Senate Bill 774 (Stern) – Support if Amended:** Would require IOUs to identify locations for improved distribution grid resiliency and back-up power; requesting amendments to incorporate CCAs into planning process.

# 2020 Anticipated Legislative Priorities

## Key 2020 Legislation

**Assembly Bill 56 (Garcia) and Senate Bills 350 (Hertzberg), & 772 (Bradford):** All of these bills were either defeated or stalled due to the lack of support, however each bill is still active and expected to have a new hearing in 2020 as legislative sessions run in 2-year cycles.

**Assembly Bill 235 (Mayes):** Creates the Wildfire Victims Recovery Fund by allowing the state to issue tax exempt bonds to pay back the victims as well as cover other wildfire related costs. The bonds would be paid back through a surcharge on the customer's bill that, in theory, is then credited back to the customer by PG&E through a corporate revenue reduction approved by the CPUC.

**Senate Bill 378 (Wiener):** Establishes ratepayer protections related to Public Safety Power Shutoff incidents. Protections include transparency over IOU infrastructure maintenance records, cost reimbursements for customers and local governments, IOU fines for shutoffs, and anti-municipalization marketing restrictions.

**Senate Bill 592 (Hueso):** Would require the development of a 500 MW pumped hydro project in Southern California. The project would be required to be at least 8 hours of capacity located on a surface water reservoir of at least 200,000 acre feet that is in existence on January 1, 2019 that is also owned, substantially or fully, by one or more public agencies.

# Additional Key Legislative Topics for 2020

## Likely 2020 Legislative Proposals

- **Public Safety Power Shutoffs (PSPS):** Rules and parameters for designating PSPS events, mitigation of impacts (microgrids, DERs), and customer protections.
- **Wildfire Resiliency, Response, and Recovery:** Grid infrastructure hardening, forest health, building fireproofing, and homeowners insurance.
- **PG&E bankruptcy:** Competing PG&E reorganization plans from debtors, bondholder, and others (AB 235).
- **Grid restructuring:** IOU exit from retail, municipalization, customer-owned cooperatives, central buyer and provider of last resort.
- **Preventing another energy crisis:** Reliability deficiency and IRP compliance.

# Best Practices



# CCA Compliance Requirements (partial list)

Report	Frequency	Agency	Report	Frequency	Agency
Resource Adequacy (Load Forecast-Year Ahead)	Annual	CEC/CPUC	RPS Report	Annual	CPUC
Resource Adequacy (Compliance Demonstration: System, Local, Flexible)	Monthly	CPUC	RPS Closing Report	As Requested	CEC/CPUC
Resource Adequacy (Year Ahead Compliance Demonstration Local/System)	Annual	CEC/CPUC	EIA 861M	Monthly	DOE
Resource Adequacy (Historical Load Data)	Annual	CEC	EIA 861	Annual	DOE
Resource Adequacy (Price Data Request)	As Requested	CPUC	WREGIS REC Retirement Report	Annual	WREGIS
Resource Adequacy (Load Forecast Updates)	As Needed	CEC	AMI Data Privacy Audit	Triennial	CPUC
Flexible Capacity Needs Report	Annual	CAISO	AMI Data Privacy Report	Annual	CPUC
IEPR-Demand Forecast and Resource Plans	Biennial	CEC	Energy Storage Tier 2 Advice Letter	Biennial	CPUC
IEPR-Resource Plans Updates	Biennial	CEC	GHG Emission Performance Standard Advice Letter	Annual	CPUC
Power Source Disclosure	Annual	CEC	Integrated Resource Plans	Biennial	CPUC
QFER 1306B	Quarterly	CEC			
Officer Certification	Annual	CAISO			
Annual Retail Sales Report	Annual	CARB			
Wind Power Purchases-Form 1386	Quarterly	CEC			

\*This table intended to serve as a sample of CCA compliance obligations

# New IRP Compliance Requirements (11-7-19)

**Quantity:** 3,300MW, allocated proportionally\* to all LSEs

**Product:** Incremental System Resource Adequacy (with some resource limitations)

**Timeline:** 50% by 8/1/2021, 75% by 8/1/2022, 100% by 8/1/2023

**Accounting:** Based on September ELCC / QC values

**Self-Procurement Election:** Non-IOU LSEs may elect not to self-procure by February 15, 2020

**Backstop:** LSEs electing not to / failing to procure will be backstopped by IOUs as central buyers

\*Allocates the obligation to all LSEs using a two-step formula (first by LSE class by peak demand, second within LSE class by load)

# Compliance Requirements (Cont'd)

## Resource Limitations:

- Resources must be *incremental* to the 2017-2018 IRP Baseline List (most CCA resources under contract should be considered incremental)
- Imports are limited to 20% for any LSE
- September ELCC accounting (significant reduction in compliance value of solar and wind)
- Greenfield fossil is excluded
- Minimum terms of 10 years (new resources), 5 years (energy efficiency), or 3 years (imports and existing resources)

## Key Milestones:

- 11/7/2019: [Decision Adopted](#)
- 12/2/2019: Baseline Resource list to be posted
- 2/15/2020: LSEs Progress Reports; CCAs and ESPs must notify the CPUC if they choose not to self-procure
- 8/1/2021: Compliance deadline (50%)
- 8/1/2022: Compliance deadline (75%)
- 8/1/2023: Compliance deadline (100%)
- Annual progress reports due in February/May

# Compliance Timeline



# Comparison:

## CCAs, POU's, IOUs and ESPs

	Community Choice Aggregators (CCAs)	Publicly-Owned Utilities (POUs)	Investor-Owned Utilities (IOUs)	Energy Service Providers (ESPs)
Ownership	A local government body or joint powers authority (JPA) board made up of elected officials.	A local government body and/or customers/members of the utility in the case of a coop.	Shareholders or investors.	Shareholders, investors or other forms of private ownership.
Structure/ Management/ Regulation	Non-profit public entity managed by locally-elected or government-appointed officials.  CCAs offer generation service to customers located within the service territory of an IOU and are required to have their implementation plans certified by the CPUC.	Non-profit public entity managed by locally elected officials/ public employees.	Private company. Shareholder-elected board appoints management team of private sector employees. Regulated by California Public Utilities Commission (CPUC).	ESPs offer "direct access" electric service to non-residential customers located within the service territory of an IOU and are required to register with the CPUC.
Rate Setting and Regulation	Customer rates are set by each CCA's governing body-board or city council in a public forum. CPUC and CEC provide oversight of compliance with applicable state energy policies.	Customer rates are set by each POU's governing body-board or city council in a public forum. California Energy Commission (CEC) provides oversight of compliance with applicable state energy policies.	Customer rates are set and regulated by the CPUC through a public process that includes some customer participation.	CPUC provides oversight of compliance with applicable state energy policies.
Mission/ Goals	Optimize benefits for communities/customers, usually in the form of lower energy rates, cleaner energy options, local programs/projects, and economic development.	Optimize benefits for local customer owners usually in the form of lower energy rates.	Optimize return on investment for shareholders.	Optimize return on investment for shareholders/investors.
Financing	CCAs have access to low-interest loans from member communities and financing institutions (banks).	Public utilities have access to tax-free bonds and co-ops have access to low-interest loans usually at the local level.	Stockholders (investors), the sale of bonds and bank borrowing help finance the utility's operations.	Investor and bank financing
Power Generation	Purchase power through contracts or operate their own generation facilities.	Operate their own generation facilities or purchase power through contracts.	Purchase power through contracts and operate their own generation facilities.	Purchase power through contracts.
Profit/ Net Revenue	Rates are set to recover costs and earn additional return to invest in new facilities and fund local projects and programs.	Rates are set to recover costs and earn additional return to maintain bond ratings and invest in new facilities.	Utility rates are set to recover costs and earn a reasonable return as profits for investors in return for the risk they bear for investing in new facilities.	ESPs earn a return through the contracts they sign with non-residential customers.
Number in California	19 operational CCAs.	More than 40 POU's.	Six. The main three are PG&E, SCE, and SDG&E.	21 ESPs registered with the CPUC.

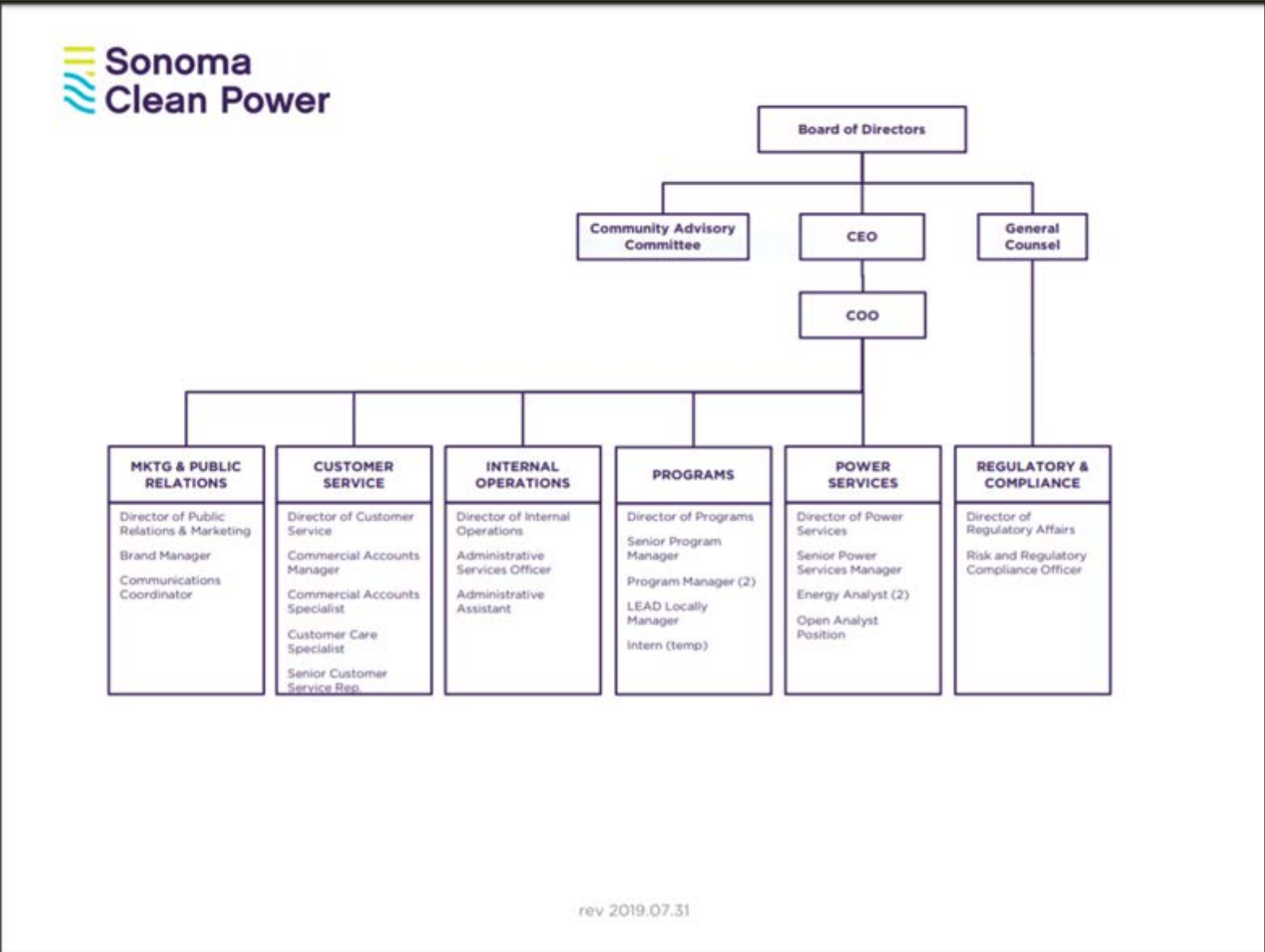


# Sample JPA CCA Organizational Chart

## Silicon Valley Clean Energy



# Sample JPA CCA Organizational Chart



# CCA Focus: Local DER Programs


"CCAs tend to offer their customers innovative and tailored programs that suit their communities' preferences and interests. These types of local programs, sometimes known as distributed energy resources, can provide a multitude of grid benefits."

*- UCLA Luskin Center for Innovation Study*



# CalCCA Website: CCAs Customer Programs

Electric Vehicles and EV Infrastructure



Lancaster Choice Energy

MCE

Monterey Bay Community Power

Peninsula Clean Energy

Silicon Valley Clean Energy

Sonoma Clean Power


Valley Clean Energy

Community Advisory Committees

Local Innovation

Outreach/Innovation Grants

Resilience: Microgrids, Local Solar+Storage



East Bay Community Energy/Peninsula Clean Energy

Lancaster Choice Energy

Monterey Bay Community Power

Redwood Coast Energy Authority

Building Decarbonization/Electrification


Energy Efficiency

Net Energy Metering

Feed-in Tariff

Citizen Sourcing

# Range of CCA Customer Programs

		Apple Valley Choice Energy	CleanPowerSF	Clean Power Alliance	East Bay Community Energy	King City Community Power	Lancaster Choice Energy	Marin Clean Energy	Monterey Bay Community Power	Peninsula Clean Energy	Pioneer	PRIME	Rancho Mirage Energy Authority	Redwood Coast Energy Authority	San Jacinto Power	San Jose Clean Energy	Silicon Valley Clean Energy	Solana Energy Alliance	Sonoma Clean Power	Valley Clean Energy
Budget Billing		<i>In dev.</i>					✓													
Battery Storage Rate		<i>In dev.</i>			✓ (pilot)			✓												
Demand Response		✓	<i>In dev.</i>	✓				<i>In dev.</i>		<i>In dev.</i>							<i>In dev.</i>		✓	✓
EV Rate		✓	✓	✓ (Same as PG&E)			✓	✓	✓	✓		✓				✓ (Same as PG&E)	✓ (Same as PG&E)	✓	✓	✓ (Same as PG&E)
EV Bus Program		✓					✓			✓									✓	
EV Incentives (vehicles and/or charging)							✓	✓	✓	✓				✓		<i>In dev.</i>	<i>In dev.</i>		✓	<i>In dev.</i>
EV Load Shifting				<i>In dev.</i>				✓									<i>In dev.</i>			
Energy Efficiency							✓	✓				<i>In dev.</i>		✓					✓	
Energy Efficiency Data Sharing					✓															
Low-Income & Multifamily EE								✓		<i>In dev.</i>		✓		✓						
Feed-In Tariff		<i>In dev.</i>						✓	<i>In dev.</i>					✓					✓	
Fuel Switching (Electrification)					<i>In dev.</i>			✓	<i>In dev.</i>	<i>In dev.</i>				✓			✓		✓	<i>In dev.</i>
Solar Incentives													✓							
Low-Income Solar Incentives		✓	<i>In dev.</i>	✓				✓	✓	<i>In dev.</i>		✓								
On-Bill Repayment		<i>In dev.</i>						✓											<i>In dev.</i>	
Outreach/ Innovation Grants					✓					✓	<i>In dev.</i>						✓			
Customer Load Shifting		✓						✓									<i>In dev.</i>		✓	
Microgrid Development							✓		✓					✓					<i>In dev.</i>	
Citizen Sourcing				✓			✓							✓						
Energy Education in Local Schools		<i>In dev.</i>								✓						✓			✓	
Dividend Program									✓											✓
Solar Referral Service				<i>In dev.</i>																
Solar+Storage on Critical Facilities					✓					✓				✓						
Advancing Reach Codes					✓					✓							✓		✓	
Advanced Energy Rebuild								✓											✓	
TOU Rates		✓		✓ (Same as PG&E)			✓	✓						✓		✓ (Same as PG&E)	✓ (Same as PG&E)	✓		✓ (Same as PG&E)
Customer C&I Clean Power Offerings																	✓			

# CalCCA's Role is to:

- Coordinate and lead policy development among members
- Develop a vision of California's energy future and create a pathway to implement that vision
- Be the voice of CCAs at the legislature and the regulatory agencies
- Facilitate sharing of best practices among CCAs to accelerate adoption of programs
- Support developing/emerging community choice programs
- **Communicate and Educate**
  - **Advocate policy positions and platform**
  - **Elevate and amplify the energy procurement and programs of CCAs that collectively advance the goals of decarbonization, reliability, affordability and social equity.**
  - **Provide the venues to educate, advocate and network**

# ***Working Lunch***

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# *Information Exchange*

## Community Choice Energy – Here and Beyond

**CODY HOOVEN**, Moderator

**MATT LANGER**, Chief Operating Officer, Clean Power Alliance, Los Angeles

**GREG WADE**, City Manager, City of Solana Beach

**TY TOSDAL**, Attorney, Tosdal Law

**BETH VAUGHN**, Executive Director, CalCCA

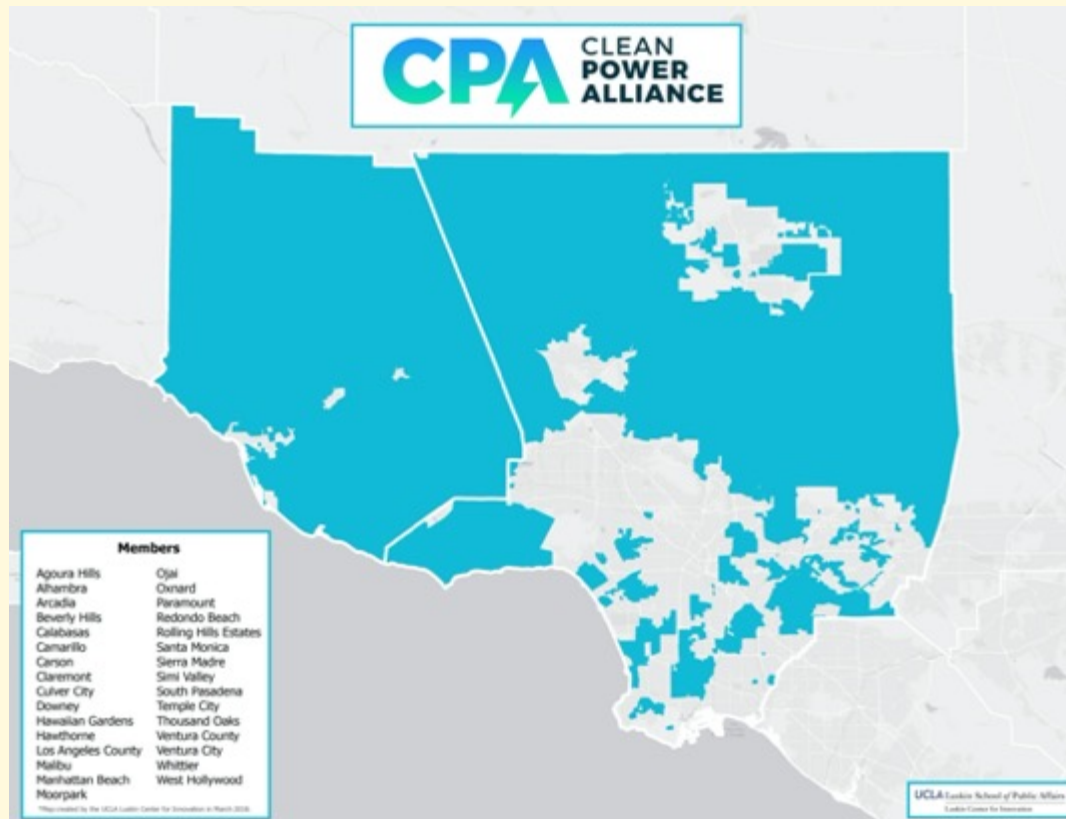
**SCOTT ANDERS**, Director, Energy Policy Initiatives Center



# **Clean Power Alliance Clean Energy Procurement**

November 16, 2019

# Who is Clean Power Alliance



- A Joint Powers Authority, CPA has 31 member jurisdictions within Los Angeles and Ventura counties
- CPA launched service to customers in February 2018
- CPA serves over 1 million customer accounts and is the largest CCA in the state

# Who does Clean Power Alliance serve?

## Communities Served:

Unincorporated Los Angeles County, unincorporated Ventura County and the cities of: Agoura Hills, Alhambra, Arcadia, Beverly Hills, Calabasas, Camarillo, Claremont, Carson, Culver City, Downey, Hawaiian Gardens, Hawthorne, Malibu, Manhattan Beach, Moorpark, Ojai, Oxnard, Paramount, Redondo Beach, Rolling Hills Estates, Santa Monica, Sierra Madre, Simi Valley, South Pasadena, Temple City, Thousand Oaks, Ventura, West Hollywood, and Whittier





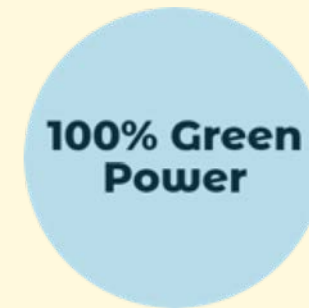
# Clean Power Alliance offers choices



**Lean Power** provides 36% renewable energy content at the lowest possible cost, with the added benefit of local management and control



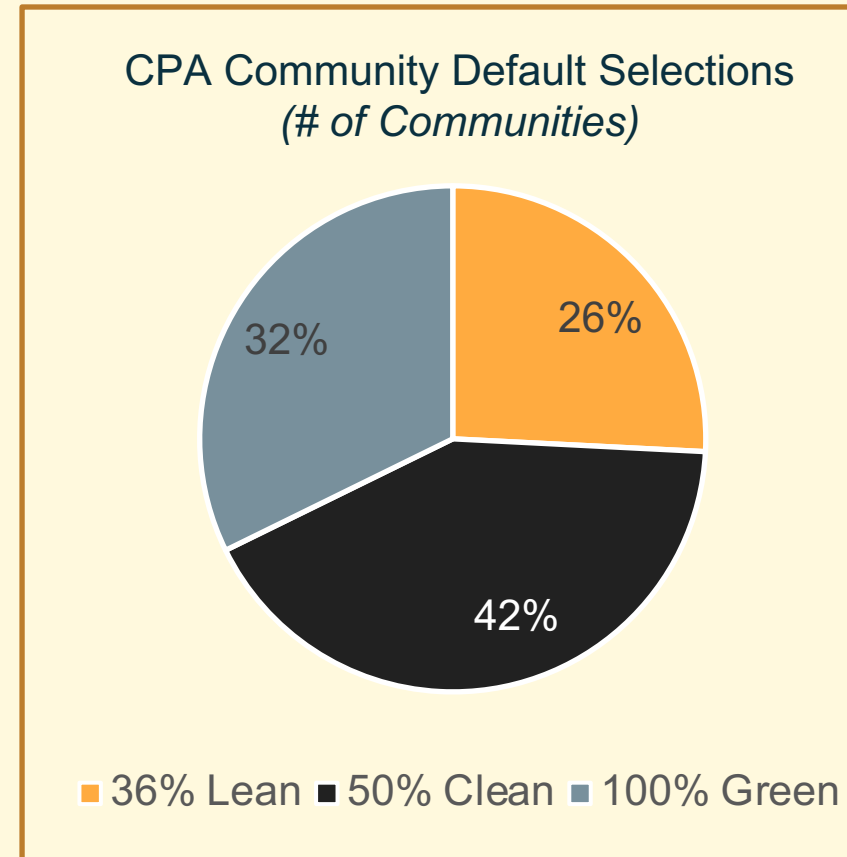
**Clean Power** provides 50% renewable energy content and the opportunity to support building a cleaner future, all at cost-competitive rates




**100% Green Power** provides 100% renewable energy content and allows customers to support the environment—leading the way to a greener future

## Default Tier Selections

- Each participating jurisdiction decides its own renewable energy default – 36%, 50% or 100%
- Defaults are extremely important. Behavioral studies demonstrate that a vast majority of people stick with the default status
- For those communities with a 100% default, CARE, FERA, and Medical Baseline customers will have the plan benefit at no additional cost. This provision protects the most financially vulnerable customers



# CPA Power Sources

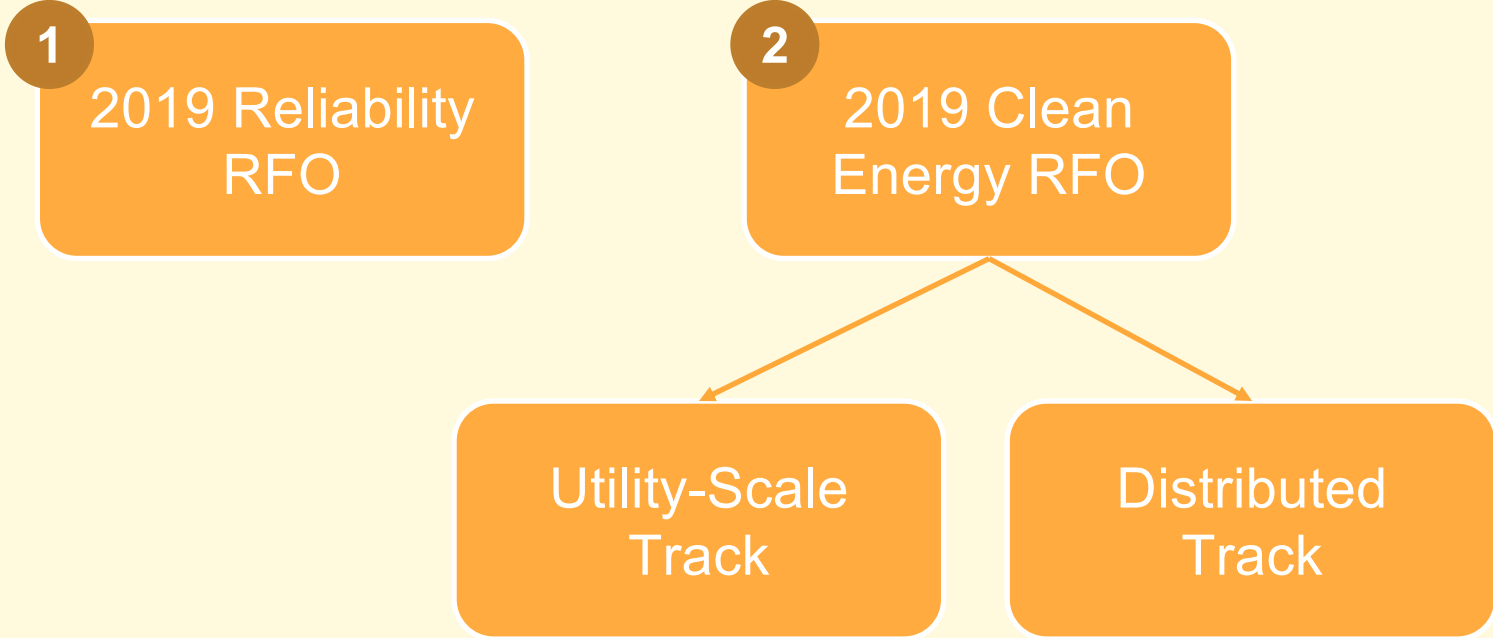
Electric Power Generation Mix*			
	Lean Power 36% renewable	Clean Power 50% renewable	100% Green Power 100% renewable
Specific Purchases	Percent of Total Retail Sales (kWh)		
<b>Renewable</b>	<b>36%</b>	<b>61%</b>	<b>100%</b>
Biomass & Biowaste	0%	0%	0%
Geothermal	0%	0%	0%
Small Hydroelectric	0%	0%	0%
Solar Electric	0%	38%	0%
Wind	36%	23%	100%
<b>Non-Renewable</b>	<b>64%</b>	<b>39%</b>	<b>0%</b>
Coal	0%	0%	0%
Large Hydroelectric	45%	27%	0%
Natural Gas	0%	0%	0%
Nuclear	0%	0%	0%
Other	0%	0%	0%
Unspecified Sources**	19%	13%	0%
<b>Total</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>

\*Clean Power Alliance generation data represents final 2018 data provided through the California Energy Commission's Power Source Disclosure Program.

\*\*Unspecified sources of power mean electricity from transactions that are not traceable to specific generation sources.

# 2019 Long-term RFOs

- CPA launched two long-term RFO processes in October:



# Evaluation Criteria

Individual projects will receive a rank for each of the following criteria:

REC Value  
(\$/MWh)

Environmental  
Stewardship

Workforce  
Development

Development  
Risk

Project  
Location

Benefits to  
DACs

## Local Programs

- Evaluating Local Program Goals and Priorities
- Distributed Energy Resources (DER) Pilot
- Peak Management Program for load shifting
- Disadvantaged Communities (DAC) Green Tariff and DAC Community Solar programs
- Considering new programs for local resiliency

## Working with SCE

The CCA-IOU relationship covers a variety of topics

- Billing and data
- Enrollment
- Customer service
- Procurement
- Rates
- Regulatory







# *Panel Discussion*

**CODY HOOVEN**, Moderator

**MATT LANGER**, Chief Operating Officer, Clean Power Alliance, Los Angeles

**GREG WADE**, City Manager, City of Solana Beach

**TY TOSDAL**, Attorney

**BETH VAUGHAN**, Executive Director, CalCCA

**SCOTT ANDERS**, Director, Energy Policy Initiatives Center

# *Closing Remarks*

**CODY HOOVEN**

Chief Sustainability Officer, City of San Diego and Interim Executive Officer,  
San Diego Regional Community Choice Energy Authority

***Meeting Adjourned***

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