



# THE UTILITY REFORM NETWORK

- Non-Profit Consumer Advocacy
  - 15 staff, including 7 energy/telecom attorneys, community organizer, etc.
- Fighting for Small Ratepayers since 1973
  - Founded by legendary advocate Sylvia Siegel
- Advocacy Work
  - Litigation at the California Public Utilities Commission
  - Legislative work in Sacramento
  - Community organizing with allies

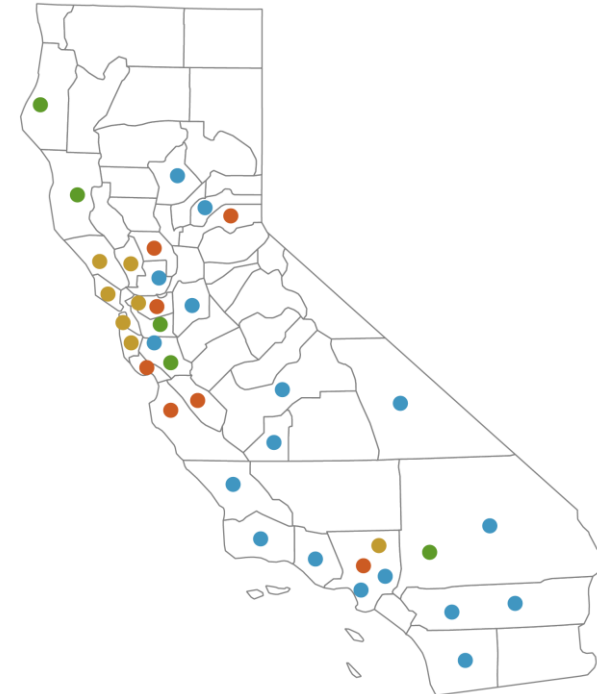
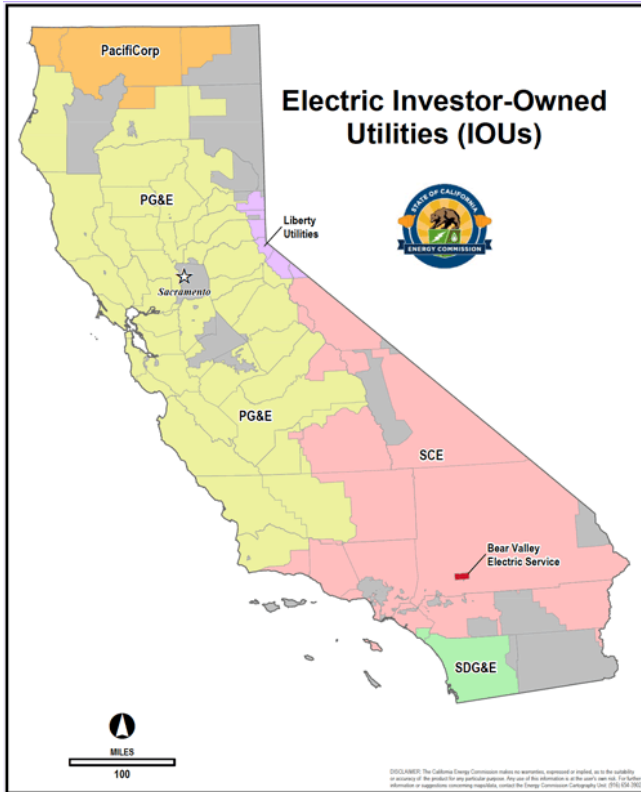
- Motivation for retail competition
- Retail competition impacts on residential customers
- Market structure and California's clean energy and reliability goals
- How can we continue to enlist residential customers in achieving clean energy goals

# The new procurement dance

## California Registered ESP List

Reliable ESPs in California will [register with the PUC](#).  
 registered include,

- 3 Phase Renewables
- Agera Energy
- Commerce Energy
- Commercial Energy of California
- Liberty Power Holdings
- Palm Power
- Shell Energy
- Tenaska Power Services
- Tiger Natural Gas
- YEP Energy

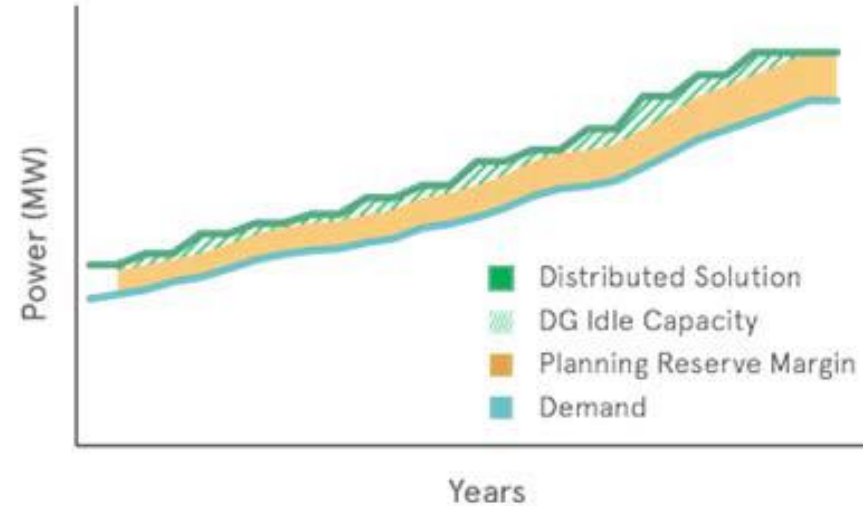
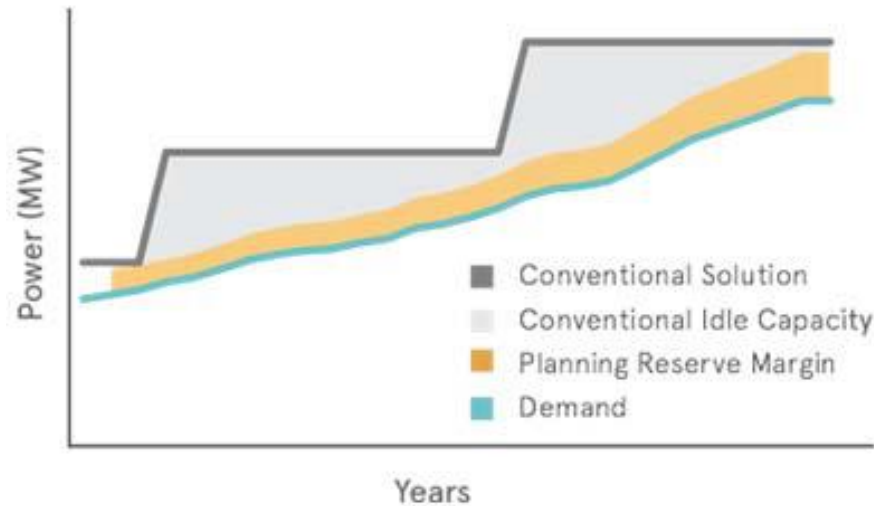


## MUNICIPAL UTILITIES

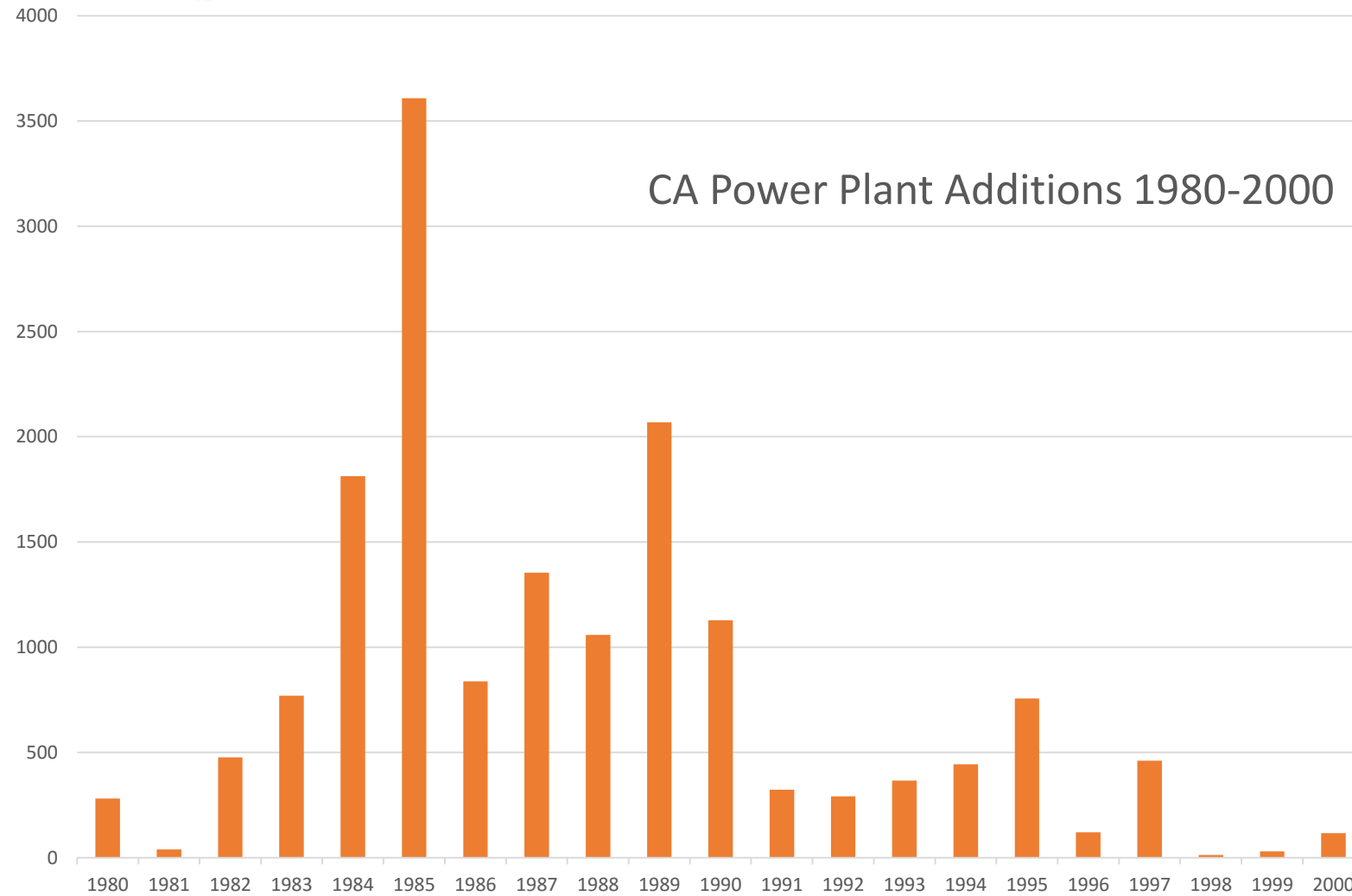
- LADWP
- SMUD
- IID/MID
- And many many others

# Why is there renewed interest in retail competition?

## The issue is lumpy investments in generation

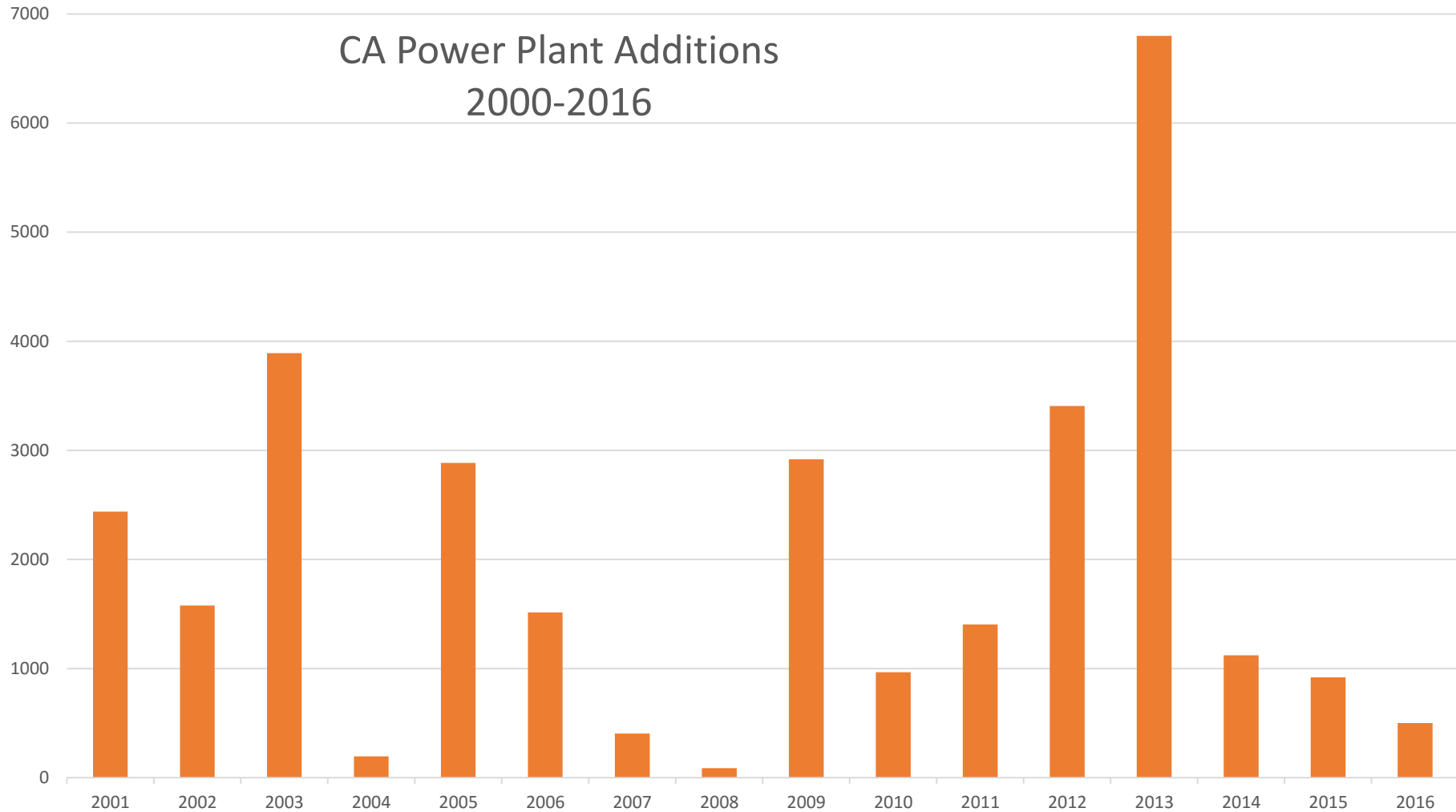


## Direct Access Round 1



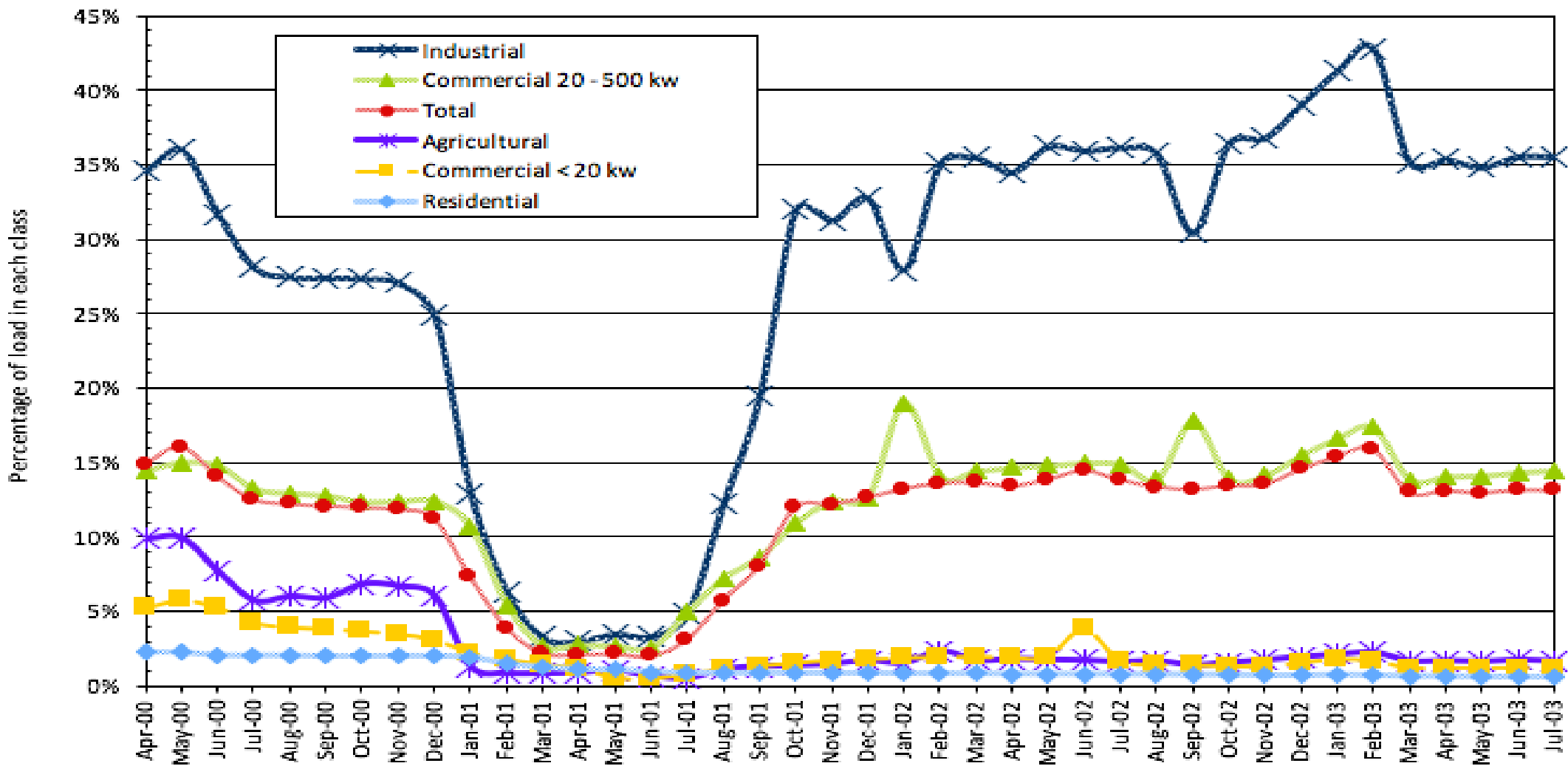
## Result of capacity additions in 1980's:

- Cheap power in wholesale spot market
- High utility rates based on average (embedded) costs
- Large industrial and commercial customers want access to cheap wholesale power



# Electric Customers Served By Direct Access

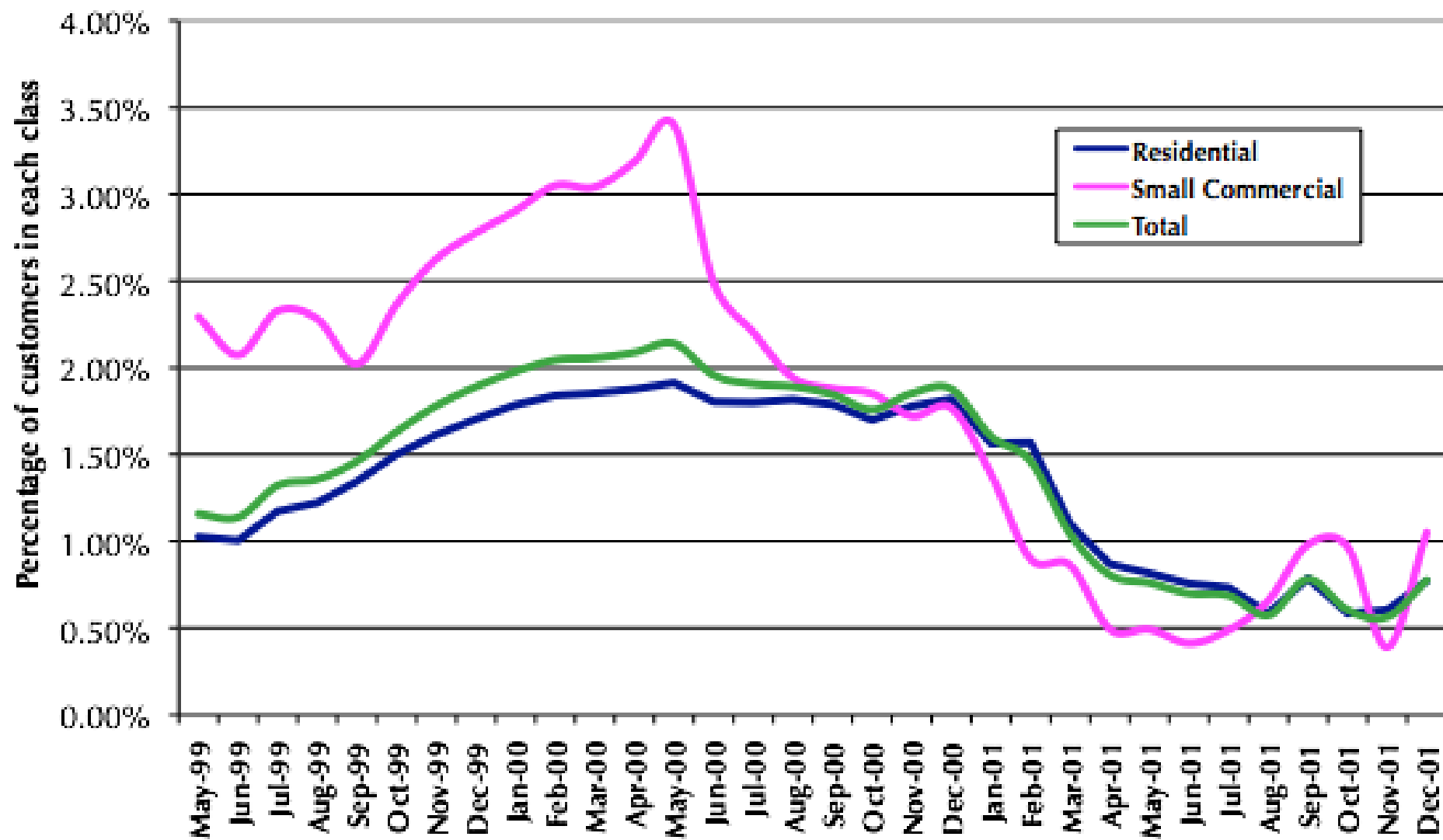
*by percentage of class load*





# Customers Choosing Green Power in California

*by percentage of customers*



# Did direct access benefit residential customers?

- Residential customers signed up for clean power based on illusory promises
- DA model:
  - Cherry picking large C&I customers with good load factors
  - Short term supply contracts
  - Reliability costs could be shifted to utility customers
  - Acquisition costs for residential customers too high
- Evidence in states with retail competition shows prices higher for residential customers than under the default utility rate
- New York State started process in Dec. 2016 to consider whether to end residential retail competition due to lack of price or environmental benefits

## Difference between CCA and DA:

- Community Choice Aggregators
  - Stable customer base
  - Accountability to local public officials
- Energy Service Providers
  - Short term and uncertain customer base
  - Accountability through contract terms

## Key issue with respect to existing market structure:

- How do we get to a 50%+ renewable energy future
  - Do we continue to rely on IOUs to procure long-term capacity and allocate costs among other entities
  - Do we require all entities to meet clean energy and reliability goals
  - Do we create separate procurement entity

## Key issue with respect to existing market structure:

- Getting to 50%+ with the existing mix of IOU/CCA/Self-Gen will already be a challenge
- We should not reopen retail competition until we figure out some of these problems
- Other states and jurisdictions are watching California

# Conclusions

- Clean energy goals are not achieved by
  - Paying premiums for RECs associated with energy that would have produced and sold anyway
  - Resource Shuffling
- If you think the problem is hard, just “opening up competition” actually makes it harder, not easier.
  - Creating load uncertainty for every load serving entity dramatically complicates the question of long-term planning and procurement for reliability and clean energy.

## Current procurement and mechanisms for indifference:

- IOUs jump-started RPS and backstop reliability
- Equity and indifference addressed by
  - CAM – accounting mechanism to recover reliability costs due to customer migration
  - PCIA – accounting mechanism to recover legacy long-term renewable contract costs after to customer migration
- NEM – accounting method to promote self-generation

## Residential Customer Preferences:

- Customers want to save money
- Customers want low bills and stable bills
- Customers do not really want to think about electricity
- Customers want to "do the right thing" for the environment and society
- Customers don't trust the utilities



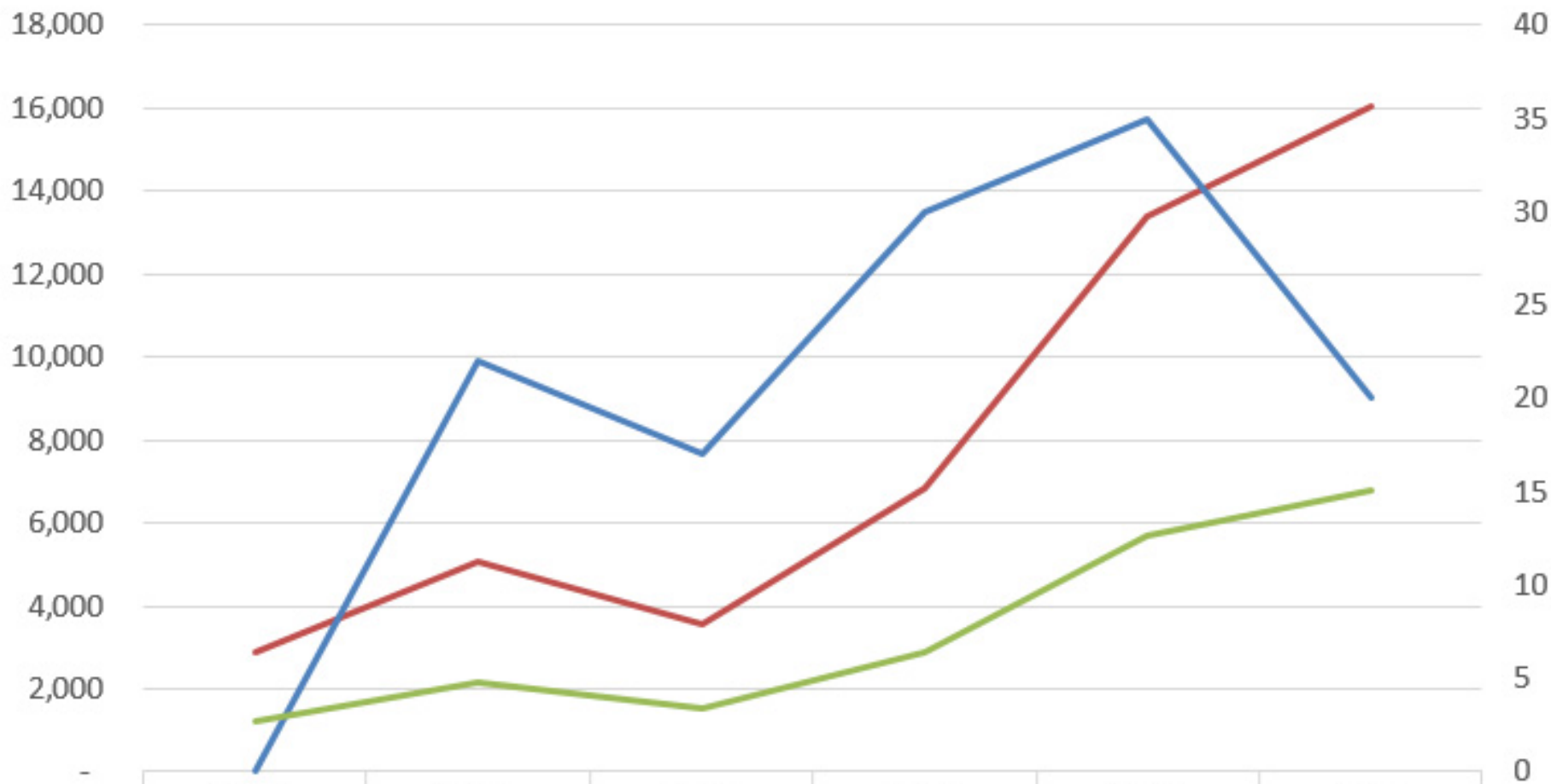


# Residential Customer Preferences

## Demand Response



# SDP Residential Attrition



	2011	2012	2013	2014	2015	2016
Total Customer Requested Attrition	2,867	5,058	3,571	6,835	13,405	16,016
Total Event Hours	0	22	17	30	35	20
Estimated MW Lost	2.7	4.8	3.4	6.4	12.6	15.1

Estimated MW's lost based on load impact ex ante results for September 2014; 1 in 2 year; average of 0.94 kWh per Residential Service Account

Flip off the lights, give your thermostat a break, and do something spontaneous this Tuesday from 8:00-9:00PM PDT



## Tuesday #OhmHour 8:00-9:00PM PDT

You're participating! Your estimated forecast during this hour is **1.71 kWh**. If you use less than your forecast, points are coming your way! If you go over, you will lose points.

**Question:** Who is correct in their assessment of residential customer behavior?

- SCE – residential customers do not want many days with 2-4 hour interruptions during peak conditions
- OhmConnect – residential customers want multiple involvements in 1-hour increments

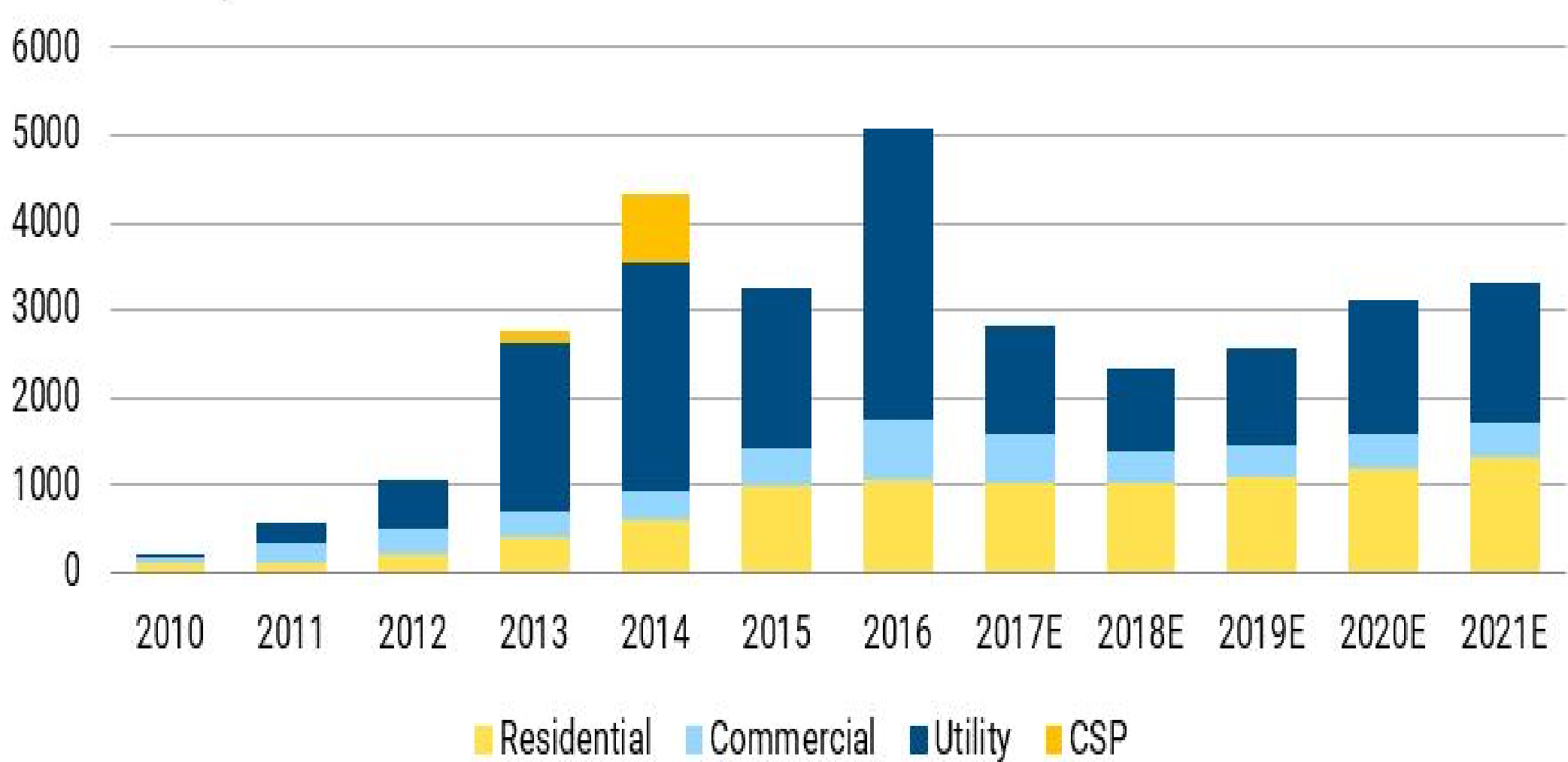
Potential **Impact** – Sometime in 10-20 years, if we expect DR will replace some peaker plants, we will need to start dispatching DR more frequently, and for multiple hours.



# Residential Customer Preferences

## Rooftop Solar

# California Annual Solar Installations



## What made rooftop solar successful?

A confluence of policies and market reactions that created certainty and provided private economic benefits:

- CSI program in 2006
- Federal tax credits in 2006
- Manufacturing boom in China around 2010
- Net energy metering and high upper tier rates

## Challenges ahead create uncertainty

- NEM creates significant distributional cost shift not resolved in NEM 2.0
- Changing rate design creates uncertainty in avoided costs and thus future value of solar
- Shifting TOU periods reduce value of solar