



# 2021 Energy Industry Trends

SCAG Energy and Environment Committee  
January 7, 2021

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## Summary

- 2020 was a turbulent year in the energy sector
- Rapid developments are occurring in three core areas
  - Climate Change
  - Reliability
  - Affordability
- Regulators, elected officials, and energy providers are reacting in different ways
- Clean Power Alliance priorities

# CPA: The Clean Energy Future is Here

## Nation's Top Provider of 100% Renewable Energy

- Reduction of over 1 million tons of greenhouse gases annually
- Meeting California's Clean Energy Targets 10 years ahead of Schedule
- ~ 2500 Jobs Created through new renewable energy projects
- Local control, local accountability, and local benefit with revenues reinvested in local programs



## Who We Serve

VENTURA COUNTY

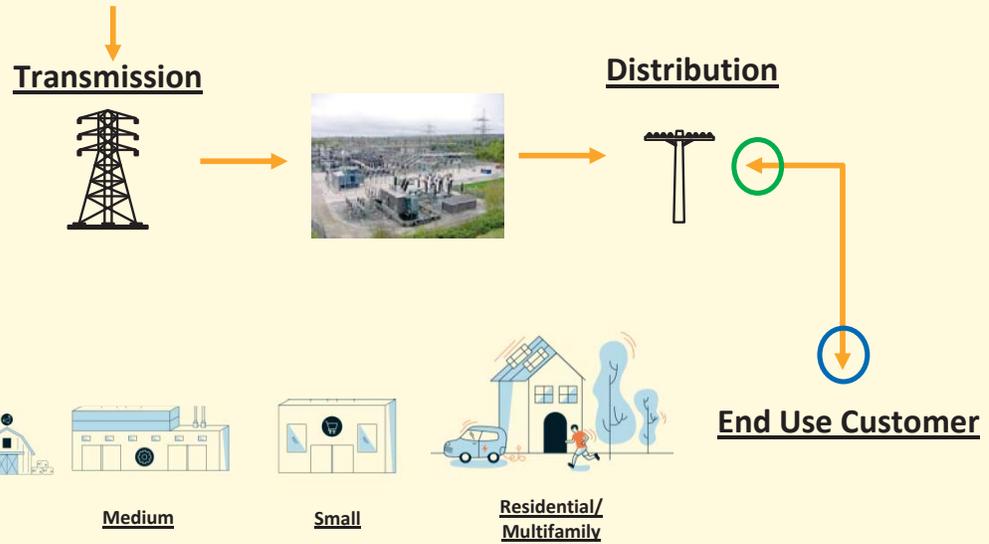
LOS ANGELES COUNTY



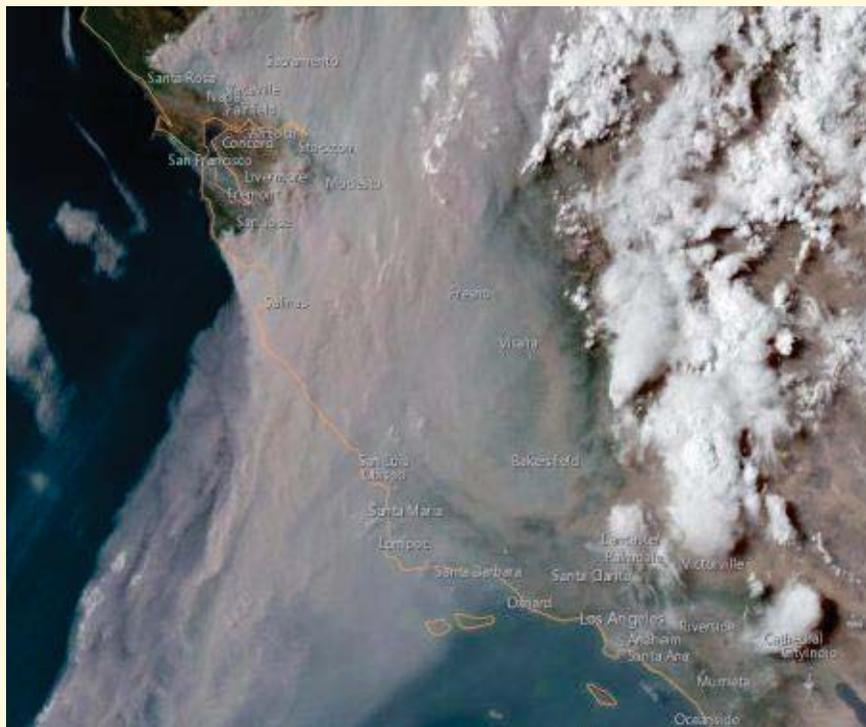
- ⚡ Over 1 million customer accounts
- ⚡ 32 member agency jurisdictions
- ⚡ 300,000+ customers receive 100% renewable energy
- ⚡ 50,000+ low-income customers receive renewable energy at no additional cost
- ⚡ Bill credits for 70,000 customers economically impacted by COVID-19

# How is electricity generated and delivered?

## Power Supply (Generation)

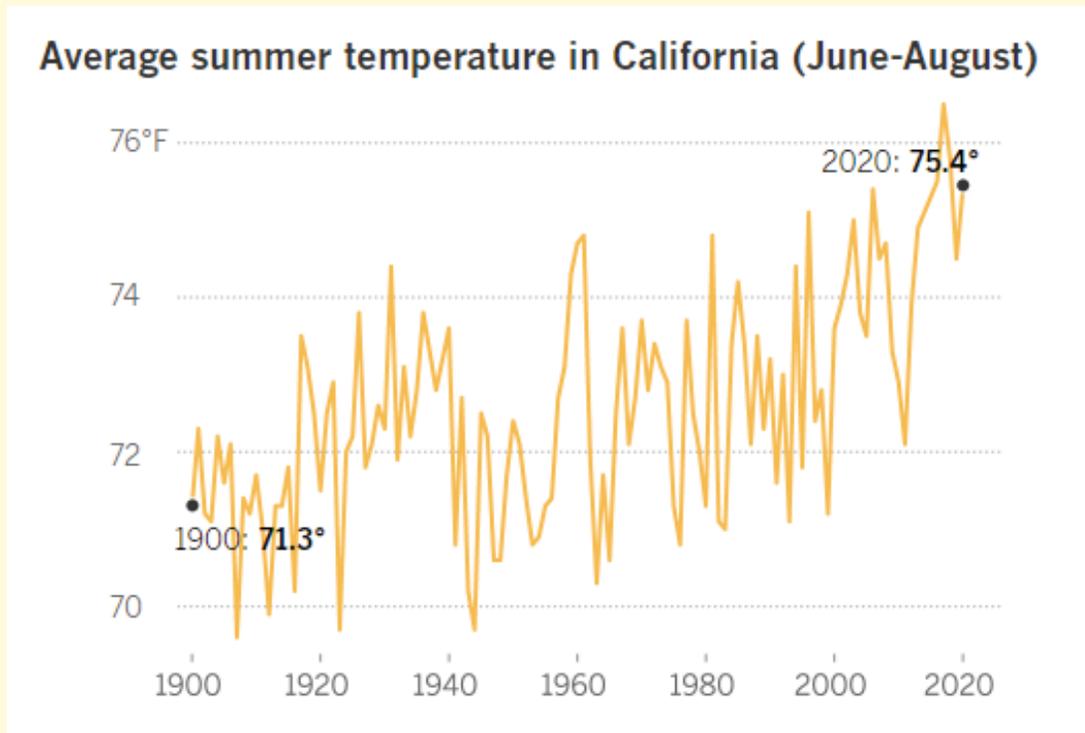


## Climate Change – Impacts are severe



September 9, 2020

## Climate Change – Its not getting better near-term

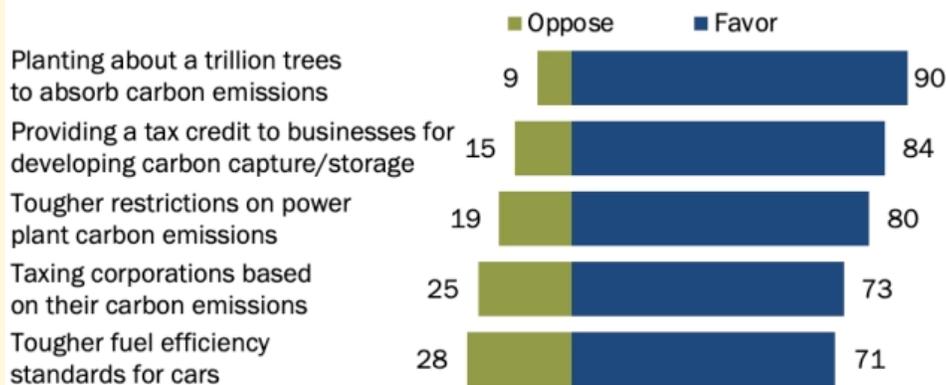


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## Climate Change – Support for Mitigation is Strong and Growing

### Strong public support for a range of policies to limit carbon output, reduce the effects of climate change

*% of U.S. adults who \_\_\_ each of the following proposals to reduce the effects of global climate change*



Note: Respondents who did not give an answer are not shown.

Source: Survey conducted April 29-May 5, 2020.

"Two-Thirds of Americans Think Government Should Do More on Climate"

PEW RESEARCH CENTER

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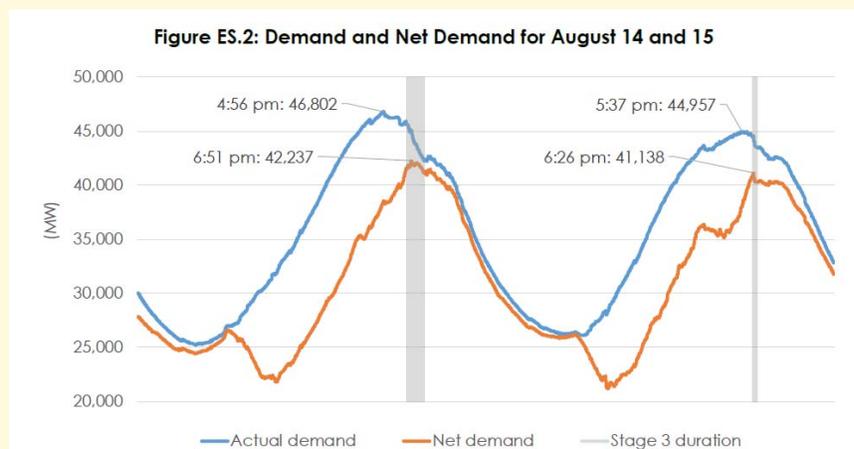
## Reliability

- **Weather Related Outages are Growing** – Infrastructure failure, Public Safety Power Shutoffs (PSPS), Supply deficiencies in certain hours
- **Regulations and Planning Tools Are Slow to Adapt** – Confluence of weather-related extreme demand, changing resource mix, growth of customer-sited generation makes old paradigms unreliable
- **Political Risk is High** – Political impacts of 2000-2001 energy crisis are well remembered; while technically rotating outages are planned for every ten years, signal from policy makers is that any rotating outages are unacceptable

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## Capacity Shortfall - Outages and Grid Stress in August

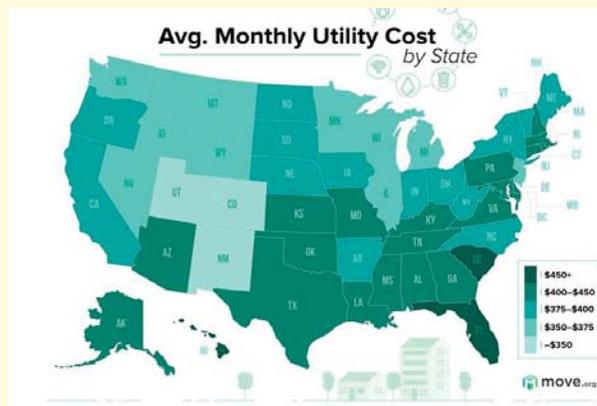
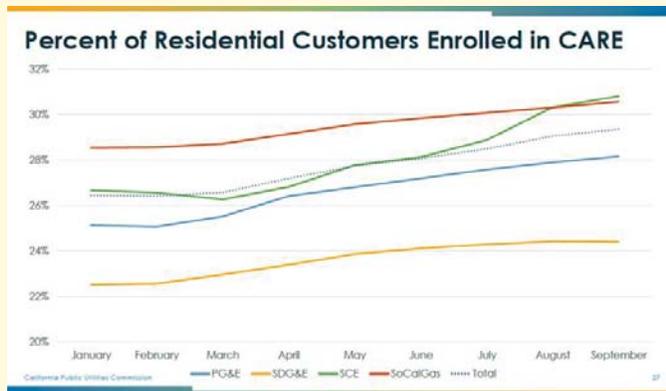
- Rotating outages occurred after the system peak but coincided with the “net peak” (i.e. demand net of wind and solar supply). Currently regulations are designed around peak demand, not “net peak”
- All resources, except for solar, delivered less energy in real time than contracted



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## Affordability

- Infrastructure upgrades to adapt to current climate *and* supply/storage decarbonization efforts to limit future damage will be expensive
- Resources will be needed to deal with short-term Covid-19 overhang; long-term, CA energy bills will go up but are among the 15 lowest in the nation
- Customers have shown willingness to pay more for environmental progress



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## Regulatory Response

1. Reliability Overhaul
  - Summer 2021
  - Focus on storage and Diablo Canyon retirement
  - Can customer-sited resources be incorporated and valued?
2. Covid-19
  - Dealing with bad debt
  - Resumption of disconnections?
3. Focus on implementation of existing goals and targets

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## Legislative Response

1. New engagement at the federal level
  - Low carbon economic stimulus?
  - Acceleration of targets to 2035?
2. State focus on reliability and adaptation
  - Acute problems
  - Limited resources
3. Big goals in transportation and building electrification
  - Big remaining carbon reductions
  - Drought?

## Energy Provider Response

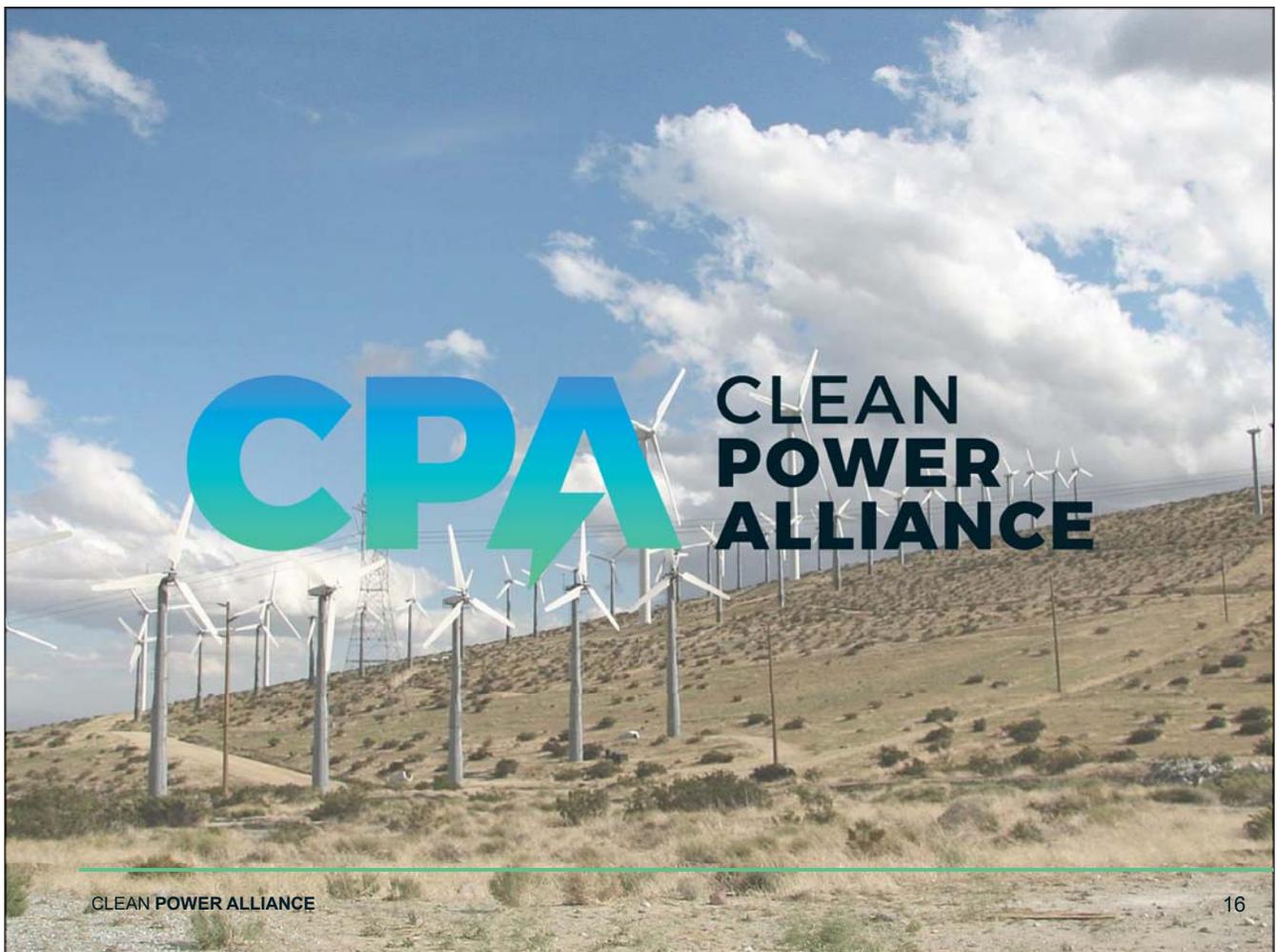
1. Reliable decarbonization
  - Who can move fastest while staying or enhancing competitiveness?
  - Centralized vs decentralized
2. Expansion of CCAs
  - More diversity of goals
  - Turning customers into “prosumers”/co-managers of energy system
  - Continue to face regulatory and political headwinds
3. Big goals in transportation and building electrification
  - Big remaining carbon reductions
  - Drought?

## Clean Power Alliance Priorities and Opportunities

1. Reliable decarbonization
  - Resource diversity to meet customer demand for renewables
  - Betting big on batteries
2. Program Expansion
  - Power Ready program for critical facilities
  - Continue to help customers work through the COVID-19 overhang
  - Focus on Disadvantaged Communities
3. Transportation and building electrification
  - Link to public health outcomes
  - Local leadership opportunity

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