

A G E N D A
CFEE Energy Summit
The Road to Carbon Neutrality
March 7-8, 2019
Silverado Conference Center, Napa

With a carbon neutrality executive order and the passage of SB100, California has once again reaffirmed its leadership on climate issues by codifying ever-more aggressive carbon reduction and neutralization efforts. Both policies, along with a host of existing directives, are propelling California to the forefront of the global energy transformation.

Not surprisingly, it's unclear what carbon neutrality and "zero carbon" edicts will – and should – mean in 2045. We must now ponder how to strategically and most cost-effectively pursue the road to carbon neutrality. This conference will focus on the large unresolved questions in California's energy makeover and provide clarity on the sensible approaches toward effectuating the state's decarbonization goals.

THURSDAY, MARCH 7
Silverado West

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| 12:00 – 1:00 pm | Buffet Lunch – Arrivals & Check-In – Vintner's Court |
| 1:00 – 1:15 pm | Welcome – Conference Overview and Roundtable Introductions |

- Recap of 2018 Energy Summit *"With the Eyes of the World on California's Energy Accomplishments...Now Comes the Hard Part"*
- Preview of conference topics, speakers, and goals

Jay Hansen, President & CEO, CFEE

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| 1:15 – 2:30 pm | Session 1: California's Climate Strategy, Now and Going Forward |
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As the state of California works to implement ambitious policies designed to decarbonize our energy system, there is an opportunity to take stock of our progress to date and contemplate what's coming next.

- What do the recent updates from the Intergovernmental Panel on Climate Change reveal about the state of greenhouse gas (GHG) emissions globally? How dire is the climate change crisis?
- What are some of the strategies that governments will need to pursue to act quickly but thoughtfully? Where else will we need to squeeze out emission reductions?
- To date, how successful has California been in lowering GHG emissions?
- Going forward, what are some of the main challenges and opportunities that the California Air Resources Board, the California Energy Commission and the California Public Utilities Commission envision as they endeavor to deliver carbon neutrality at lowest cost?

- What is the strategy for reducing emissions from the transportation and building sectors? How will the electricity system support their decarbonization?
- Other than decarbonization, what new policy motivators may arise?

Ravi Prasher, Associate Laboratory Director, Lawrence Berkeley National Laboratory (5-7 min)

Rajinder Sahota, Assistant Division Chief, California Air Resources Board (5-7 min)

Janea Scott, Commissioner, California Energy Commission (5-7 min)

Edward Randolph, Deputy Executive Director for Energy and Climate Policy, California Public Utilities Commission (5-7 min)

Roundtable Discussion

2:30 – 4:00 pm

Session 2: Taming Transportation

While the electric sector has made tremendous strides in reducing its emissions, California's transportation sector accounts for the largest tranche of the state's GHG emissions (41%). Any path to carbon neutrality will demand vast changes to our transportation system.

- What might inhibit the state's ability to fulfill Governor Brown's executive order to get a minimum of five million zero emission vehicles (ZEV's) on the road by 2030?
- What are the equity implications of shifting to non-internal combustion engine vehicles?
- Beyond ZEV's, what are the other approaches to reducing transportation sector emissions? Is there any low hanging fruit?

Daniel Sperling, Board Member, California Air Resources Board and Director, Institute of Transportation Studies, UC, Davis (5-7 min)

Caroline Choi, Senior Vice President of Corporate Affairs, Edison International & Southern California Edison Company (5-7 min)

Steve Douglas, Senior Director, Environmental Affairs, Alliance of Automobile Manufacturers (5-7 min)

Simon Mui, Director, California Vehicles & Fuels, Energy & Transportation Program, Natural Resources Defense Council (5-7 min)

Roundtable Discussion

4:00 – 4:15 pm

Break

4:15 – 5:30 pm

Session 3: Striking the Right Balance: What is the Oil and Gas Industry's Role in a Carbon Neutral Future?

As clean energy aspirations sweep across the state, California's sizeable oil & gas industry is under the microscope. In addition to facing local efforts to restrict oil and gas extraction due to community concerns about environmental and public health impacts, there are some who envisage the possibility of global carbon reductions by ending in-state production altogether. How is the industry adapting and changing, and more broadly, what should we expect from it in California's carbon neutral future?

- What does a carbon neutral energy system mean for oil and gas production globally, and how might that be translated to California?
- How much oil does California produce in relation to refinery/consumer demand? How much oil does the state import and where does it come from?
- What does "Keep it in the Ground" actually mean? What are the social and economic implications of this proposed policy?
- What would a transition away from in-state production look like?
- How would the wind down of California oil production affect national and global production and/or consumption? Would it result in actual GHG reductions or will there be carbon leakage?
- What is the industry and California doing to protect the local environment and public health of communities living near oil and gas extraction activities? Is it sufficient?
- How can the oil & gas sector best align its operations with existing California environmental laws? How is the industry implementing rules on well operation (SB 4), groundwater injection (SB 83) and methane leak abatement, among others?

Ingrid Brostrom, Assistant Director, The Center on Race, Poverty and the Environment (5-7 min)

Cathy Reheis-Boyd, President, Western States Petroleum Association (5-7 min)

Severin Borenstein, Board Member, CAISO Board of Governors, and Professor, Energy Institute at Haas, UC Berkeley (5-7 min)

Pete Erickson, Senior Scientist, Stockholm Environment Institute (5-7 min)

Roundtable Discussion

6:00 pm

Meet in Front of Main Mansion – Transport to Reception & Dinner

Please meet in front of the Silverado Mansion. Shuttles begin departing at 6:00pm for the Black Stallion Winery. Reception and dinner to begin at 6:15pm.

FRIDAY, MARCH 8

Silverado West

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| 8:00 – 8:30 am | Breakfast – Silverado West |
| 8:30 – 10:30 am | Session 4: Passed but Not Forgotten: The Implementation of SB100 |

In pursuit of SB100's accelerated 2030 RPS standards and the 2045 "zero carbon" goal, we now have the opportunity to take a fresh look at California's energy mix and how to optimize it. Crucially, we must answer the basic question of what a 100 percent clean electricity sector actually means.

- What is the resource makeup now?
- What is a viable, optimal energy mix of 2030? 2045?
- What role do offshore wind, geothermal, biomass, natural gas, hydrogen and other technologies play in a zero-carbon future? Where will these resources be built and at what cost?
- How much and what kind of storage will we need?
- What will grid operators and load-serving entities need to do to ensure that supply and demand is continuously balanced as the resource mix evolves? What's the potential (and need) for more demand side management?

Edward Randolph, Deputy Executive Director for Energy and Climate Policy,
California Public Utilities Commission (5-7 min)

Jan Smutny-Jones, CEO, Independent Energy Producer's Association (5-7 min)

Geof Syphers, CEO, Sonoma Clean Power (5-7 min)

Keith Casey, Vice President, Market and Infrastructure Development, California
Independent System Operator (5-7 min)

Tim O'Connor, Senior Director, Energy Program, Environmental Defense Fund
(5-7 min)

Roundtable Discussion

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| 10:30 – 10:45 am | Break |
| 10:45 – 12:15 pm | Session 5: The Great Load Migration |

With the continued formation of CCA's and the lifting of the Direct Access cap, electrical load will have more suitors than ever in California. Yet restrictions on provider marketing, frustrations about data transparency, and the overlay of ambitious energy mandates make for a clumsy and contentious retail market. How can policymakers ensure this period of change ultimately results in a stable market that delivers on California's consumer, climate, and reliability objectives?

- Who is serving load now and how is load expected to shift in the coming years?
- How do we ensure a market structure that accommodates load migration?
- Who is to become the provider of last resort?
- Do we need a central buyer?

Greg Bass, Director, Western Regulatory and Legislative Affairs, Calpine Energy Solutions, LLC (5-7 min)

Kendall Helm, Vice President, Energy Supply, San Diego Gas & Electric (5-7 min)

Beth Vaughan, Executive Director, California Community Choice Association (5-7 min)

Roundtable Discussion

12:15 – 12:30 pm

Summary and Adjournment

- Summary of roundtable discussion
- Consideration of next steps

Jay Hansen, President & CEO, CFEE