A G E N D A

With the Eyes of the World on California's Energy Accomplishments… Now Comes the Hard Part

A CFEE Roundtable Energy Summit

February 22-23, 2018

Cavallo Point, Sausalito, California

At present, the California energy story is a remarkable success. Following the energy crisis in the early 2000s, legislators and policymakers set California on a path toward a resilient clean energy future. A combination of forward thinking policies, prudent implementation, and technological advancements has resulted in significant increases in renewable energy, transformative improvements in energy efficiency, and substantial reductions in per capita greenhouse gas emissions. This has been achieved all while maintaining a steadily growing economy.

With this success comes attention. The eyes of the global community are now watching to see where we go from here as we enter the most technically daunting and structurally uncertain phase of the ongoing energy transition. This conference will take stock of California's energy accomplishments while exploring vulnerabilities that are in need of policymaker attention.

Thursday, February 22nd — Callippe Room

11:30 – 12:45 pm **Buffet Lunch – Verbena Room**

12:45 – 1:00 pm **Welcome, Introductions and Conference Overview**

***Patrick Mason*,** President and CEO, CFEE

1:00 – 1:30 pm **Session 1: The California Energy Story**

California's energy system has undergone an impressive transformation. Renewable energy (excluding large hydro) now comprises 30 percent of the state's power, energy efficiency improvements have abated the equivalent of 7 million automobiles worth of carbon dioxide, and overall greenhouse gas emission (per capita) reductions are 20 percent below 1990 levels.

- How did we get here? How are new policy mandates pushing the energy transition through 2030?
- Has this success come at a cost? What are the systemic vulnerabilities that could inhibit additional achievements or even undo our progress?
- What areas of the transition will require policymaker attention in the months and years ahead?

Mike Florio, Former CPUC Commissioner and Senior Fellow, Gridworks *(10 min)*

1:30 – 2:30 pm **Session 2: Day in the Life of the Grid Operator – The People, Technology, and Markets Needed for High Renewable Energy Scenarios**

Grid operators have extensive experience managing the electrical grid in all conditions. Whether it's a hot day when temperatures soar and customer demand saps an already stressed system or a cool, sunny afternoon when generational capacity far exceeds real-time consumption. Grid operators manage these and other operational challenges without any serious disruptions.

- What exactly goes into managing the grid and perfectly balancing supply and demand every second?
- What does it mean to curtail resources? How does this affect generators as well as energy providers and ratepayers?
- What technologies are currently available and affordable? What other tools and resources can help manage evolving grid demands as well as the substantial evening ramp ups as the sun goes down?
- What will the grid have to do as more and more renewables come online? Will we have the technology, resources, and market structure to continue delivering reliability?

Mark Rothleder, VP for Renewable Integration and Market Quality, CAISO *(~15 min)*

Paul Denholm, Principal Energy Analyst, National Renewable Energy Laboratory (NREL) *(7-10 min)*

Roundtable Discussion

2:30 – 3:45 pm **Session 3: Power Market Problems? Are We Encouraging the Investments We Need?**

Our modern lifestyle is made possible by power plants that, in addition to generation, provide essential services to the electric grid that make system reliability and stability possible. However, some are concerned that market forces and state policy are pressuring such strategic power stations – such as low carbon and fast-ramping natural gas plants – offline prematurely without a sufficient, cost-conscious replacement plan to support a future where renewable and distributed resources compromise the majority of the system.

- What incentives and/or market structures are in place to encourage these grid-enabling resources and services?
- Are there natural gas fueled electric generation technologies that should be encouraged?
- According to energy sector modeling, how much natural gas is expected to be available at higher levels of renewable penetration? Is this consistent with industry forecasting?
- Moving forward, what market structures are needed to incent the capital investments and service offerings that will support a low to zero carbon energy sector?

Amber Mahone, Director, Climate Policy Analysis, E3 Energy + Environmental Economics *(5-7 min)*

Julie Gill, Director of Regulatory & Gov. Affairs, AES Southland *(5-7 min)*

Laura Wisland, Senior Energy Analyst, Union of Concerned Scientists *(5-7 min)*

Roundtable Discussion

3:45 – 4:00 pm **Break**

4:00 – 5:15 pm **Session 4: Meeting Climate, Affordability, and Reliability Goals in a World of Increasing Customer Choice**

With the rapid roll out of Community Choice Aggregation (CCAs), expansion of rooftop solar, requirements for more distributed generation, and the possibility of reintroducing direct access, the century old system of providing and delivering energy is undergoing revolutionary change.

- What will this new world look like? Who is procuring energy?
- What are the advantages for the customers and the challenges to the overall integrity and reliability of the grid system?
- How does a new model address our mandated goals such as lower carbon, improved air quality, low and stable prices, and social equity questions?

Barbara Hale, Assistant General Manager, Power, San Francisco Public Utilities Commission *(5-7 min)*

Arlen Orchard, General Manager and CEO, SMUD *(5-7 min)*

Mark Byron, Executive Director, Renewable Energy Programs, University of California Office of the President *(5-7 min)*

Steve Malnight, Senior Vice President, Strategy & Policy, Pacific Gas and Electric Corporation *(5-7 min)*

Roundtable Discussion

5:30 pm **Reception – Callippe Foyer**

6:30 pm **Dinner – Verbena Room**

Friday, February 23rd — Callippe Room

7:30 – 8:30 am **Continental Breakfast – Callippe Foyer**

8:30 – 10:00 am **Session 5: Speed Bumps on the Road to a Carbon Free Economy? What Does a Transition Away from Petroleum Products Look Like?**

AB32 and SB32 mandate ambitious greenhouse gas (GHG) reduction targets to be met by 2020 and 2030, respectively. While significant progress has been made in the energy sector, additional GHG reductions will necessarily be felt more broadly across the California economy.

- What can we expect from deeper decarbonization? Are there winners and losers?
- How will different geographical regions be impacted? How will the transition affect underserved communities?
- What role will electric vehicle adoption and a proposed 2040 ban on sales of internal combustion engines (ICE) play in the energy transition?

Ryan McCarthy, Science and Technology Policy Advisor, Office of the Chair, California Air Resources Board *(5-7 min)*

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

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

Severin Borenstein, Professor and Researcher, Energy Institute at Haas, UC Berkeley *(5-7 min)*

Roundtable Discussion

10:00 – 11:15 am **Session 6: The Odd Couple? Environmental Markets and Social Equity**

One important aspect of the ongoing energy transition is the implementation of the landmark cap and trade extension, AB 398, which sustains the effort to reduce carbon emissions out to 2030. However, many environmental justice groups are still concerned that the agreement doesn't adequately address the negative externalities associated with a carbon-fueled economy.

- What is at the core of the friction? How might this friction undermine implementation?
- How does the cap and trade mechanism work? How does the program tackle local air quality concerns?
- What are "offsets" and how can they play a role in ensuring the carbon market is a sustainable mechanism for reducing emissions while also supporting the economy and local jobs as well as health and wellbeing?

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

Jean-Philippe Brisson, Partner, Latham & Watkins *(5-7 min)*

Alvaro Sanchez, Environmental Equity Director, The Greenlining Institute *(5-7 min)*

Roundtable Discussion

11:15 – 11:30 am **Break – Grab box lunch**

11:30 – 12:30 pm **Session 7: Through the Looking Glass – Lessons from Around the World**

CFEE regularly conducts international study travel projects to learn about best practices, observe advanced technologies, and examine innovative policies to gain insights for California. This session will highlight the energy policy lessons learned from past visits to countries like Germany, Chile, Ireland, and the United Kingdom.

- How does California compare to its international counterparts? What lessons can be applied to policymaking in California?
- Why is the world so interested in us?

Jan Smutny-Jones, CEO, Independent Energy Producers Association *(7-10 min)*

Anthony Cannella, Member, California State Senate, and Member of Energy, Utilities and Communications Committee *(5-7 min)*

Roundtable Discussion

12:30 pm **Summary and Adjourn – Patrick Mason**