



A G E N D A CFEE Energy Summit

On the Move... Going Beyond Goal Setting to Goal Getting – How Will We Do It?

March 3-4, 2022

Never shy to take the lead, California is both praised and criticized for its willingness to set big goals on the biggest challenges of the day. And after years of goalsetting to reduce greenhouse gases, California is in the thick of figuring out how to attain its latest targets while containing the ever creeping costs that come from these substantial investments. This conference will feature an honest examination of our progress in achieving our ambitious climate goals while we consider what is left undone, but promised, and determine what more can be done to support this critical undertaking.

Virtual Conference Etiquette and Guidelines

Name: Please input your full name and organization when you join by clicking the three dots in the upper right hand corner. Our guests and other participants appreciate knowing who you are. We also ask that whenever possible, you activate your video feed to help simulate the sense of attentiveness and respect that permeates our traditional in-person gathering.

Submitting Questions and Comments: You may 1) type your questions into the chat window or 2) use the "raise your hand" function on Zoom to indicate you would like to ask your question directly and you will be called on. We will provide an opportunity for 2-3 questions and comments immediately following each presentation. We will still reserve time after all panelist remarks for our traditional roundtable conversation. Please limit your comments and questions to two minutes.

Chatham House Rule - Cyber Edition: Those of you familiar with CFEE conferences are aware of the time-honored "Chatham House Rule" by which the Foundation operates. This means specific comments are not to be attributed to any one person in the goal of promoting a more candid exchange of knowledge and insights. At this time, video conferencing is an inherently less private forum and confidentiality is not guaranteed; however, we ask that you help us to uphold our longstanding and respected tradition. To that end, this conference will not be recorded, and we ask you not to record the discussions in any fashion or to share specific, attributable remarks. We appreciate you respecting and supporting the Chatham House Rule.

Materials. You have been emailed the final conference agenda, participant list, speaker biographies, a water “glossary,” and several news articles of interest. You may also access these materials on our website at <https://www.cfee.net/energy>.

Key Energy Goals and Deadlines

- 1.5 million zero-emission vehicles (ZEVs) on California roads | 2025 (EO B-48-1)
- Install 200 hydrogen fueling stations and 250,000 EV chargers | 2025 (EO B-48-1)
- 5 million ZEVs on California roads | 2030 (EO B-48-1)
- Reduce greenhouse gas emissions 40 percent below 1990 levels | 2030 (SB-32)
- Reduce short-lived climate pollutants below 2013 levels: reduce methane by 40 percent, hydrofluorocarbon gases by 40 percent, and black carbon by 50 percent 2030 | 2030 (SB-1383)
- 60 percent renewable energy in the electricity system | 2030 (SB-100)
- All new cars and passenger trucks sold in California are ZEVs | 2035 (EO N-79-20)
 - The California Air Resources Board (CARB) is set to adopt the Advanced Clean Cars 2 (ACC 2) regulatory standards in June 2022. Those new standards will require a mandate of vehicles for sale of:
 - 50 percent ZEVs in 2028
 - 76 percent in 2031
 - 100 percent in 2035
- 100 percent of medium and heavy-duty vehicles are ZEVs | 2045 (EO N-79-20)
- 100 percent renewable and zero carbon energy in the electricity system | 2045 (SB-100)
- Achieve statewide carbon neutrality | 2045 (EO B-55-18)

THURSDAY, MARCH 3

11:30 – 12:45pm	Arrival/Check-In and Lunch
12:45 – 1:00pm	Welcome – Conference Overview and Roundtable Introductions

- Preview of conference topics, speakers, and goals

Jay Hansen, President & CEO, CFEE

1:00pm – 2:30pm	<u>Session 1</u> Fossil Fueling the Present: What’s in the Future?
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Lest we think that our complete transition to carbon free energy will happen instantaneously or easily, fossil fuels – in their various forms – will provide a significant source of our energy needs for the foreseeable future. What strategies and technologies can we deploy to effectively strive for carbon neutrality while relying on fossil fuels during this real-world transition?

- As California currently consumes 14.3 billion gallons of gasoline, 4.2 billion gallons of diesel, and 2.2 trillion cubic feet of natural gas each year, what are

the consequences for our GHG emissions and achieving our corresponding goals? Why can't we wean ourselves off of fossil fuels in the next few years?

- What low and zero carbon fuel options are there for so-called hard-to-decarbonize sectors?
- The Intergovernmental Panel on Climate Change (IPCC) reports that active carbon dioxide removal is essential if we are to achieve global GHG goals – will California be part of this global effort to ramp up carbon removal or will we cede the stage to other states and countries? By embracing carbon removal, would we undermine our goals to transition away from fossil fuels?
- What types of CO2 removal programs will be needed? What about methane reduction opportunities for active and orphaned oil and gas operations?
- What's the difference between carbon capture and carbon removal, and what are the implications for state policy?
- With a looming expiration date for the workhorse GHG reduction program of Cap & Trade, what should its role be beyond 2030? What fate awaits the Low Carbon Fuels Standard (LCFS), another key GHG program?

Liane Randolph, Chair, California Air Resources Board (5-10 min)

Simon Pang, Carbon Capture Pillar Lead, LLNL Carbon Initiative
Lawrence Livermore National Labs (5-10 min)

(5-10 min)

Cathy Reheis-Boyd, President & CEO, Western States Petroleum Association

Virgil Welch, Executive Director, California Carbon Capture Coalition (5-10 min)

Michael Colvin, Director, California Energy Policy & Markets, Environmental Defense Fund (5-10 min)

Roundtable Discussion

2:30 – 2:45pm	Break
2:45 – 4:15pm	Session 2 Say Hello to Hydrogen – A Versatile Fuel Prepares to Take Off

With its potentially favorable carbon profile and versatility in its production, storage, and transport, hydrogen is poised to nab a growing share of the energy market. This session will take a close look at what some have called a “miracle fuel” and sort fact from fiction as we consider hydrogen’s place in California’s energy future.

- What are the different types of hydrogen? Grey? Blue? Green?
- How can hydrogen be produced, shipped, stored, and used?
- What is the international experience with hydrogen? Why are some countries supporting hydrogen and others not?
- What role can hydrogen play in California’s clean energy economy? What end uses are best suited for hydrogen, and what end uses are less suitable?

- What environmental impacts are associated with hydrogen? What should we know about hydrogen leakage?
- What new costs would be associated with investing in hydrogen?

Jack Brouwer, Director, National Fuel Cell Research Center and Advanced Power and Energy Program, University of California, Irvine (5-10 min)

Maryam Brown, President, Southern California Gas Company (5-10 min)

Tom Baca, International VP of the Western States, Boilermakers Union (5-10 min)

Rachel Fakhry, Policy Analyst, Climate & Clean Energy Program, Natural Resources Defense Council (5-10 min)

Teresa Cooke, Executive Director, California Hydrogen Coalition (5-10 min)

Roundtable Discussion

4:15 – 4:30pm	Break
4:30 – 5:45pm	Session 3 Not Out Of the Woods Yet – The Reliability Risk Remains Real

After a turbulent summer for the electricity grid in 2020, California successfully avoided major power outages in 2021 even when the margins were alarmingly thin. However, we are not out of the woods yet as more baseload plants retire, renewable energy facilities take their place, and energy demand continues to increase. What is the latest work being done on this front?

- What is the outlook for 2022 for avoiding power outages? What scenarios are keeping grid operators up at night?
- What is the mid to long term outlook for resource adequacy? Are we on track to procure the right mix of resources to ensure reliability?
- How does collaboration with our western neighbors support grid reliability? How can California optimize regional participation?
- What is the current state of battery technology?
- What low carbon options are there for getting us through the notorious “neck of the duck” in the late afternoon and early evening hours as renewables go offline and demand increases? Is biomass a potential solution?
- Are there any promising use cases of technologies and programs that have successfully shifted load during periods of high demand?
- What is the nexus between grid reliability and our commitment to address environmental justice priorities?

Elliot Mainzer, President & CEO, CAISO (5-10 min)

Brent Buffington, Principal Manager, Integrated Resource Planning, Southern California Edison (5-10 min)

Shana Lazerow, Legal Director, Communities for a Better Environment (5-10 min)

Dawn Weisz, Chief Executive Officer, MCE Clean Energy (5-10 min)

Roundtable Discussion

6:00pm	Reception and Dinner
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FRIDAY, MARCH 4

7:30 – 8:45am	Breakfast
8:45 – 10:15am	<u>Session 4</u> The Missing Link – The Needed Evolution for Our Transmission System

Often forgotten in high-minded discussions of decarbonization, the transmission system is the forgotten link of any successful transformation of our electric grid. Many believe we are falling far behind. What's going on here, and what must be done to ensure we have the transmission system we need to make good on our promises of clean energy, reliability, and affordability?

- How far behind are we? What is the current status of the California and regional transmission system?
- How can we make better use of our existing infrastructure?
- How has the transmission system developed over time? What entities are responsible for planning, approving, building, and paying for it?
- What investments are needed to help California meet its renewable energy goals? How will this impact utility bills?
- How are other states going about modernizing their transmission system? What lessons can we learn?
- What regulatory, political, and financial impediments are delaying progress in siting and building new transmission assets?
- Who can help remove these roadblocks? The Governor's Office? The Legislature?

Jan Smutny-Jones, Chief Executive Officer, Independent Energy Producers Association (5-10 min)

Molly Sterkel, Program Manager CPUC (5-10 min)

Mark Toney, Executive Director, The Utility Reform Network (TURN) (5-10 min)

Cameron Yourkowski, Regulatory and Market Affairs Manager, EDP
Renewables (5-10 min)

Roundtable Discussion

10:15 – 10:30am	Break
10:30 – 12:00pm	Session 5 Looking to Policymakers for Leadership and Legislation – What’s the Plan?

With a long inventory of climate-centric goals on our to-do list, it is an all-hand-on-deck moment as agencies, industries, workers, and communities are doing their part to help California press onward. Yet it is increasingly clear that more help is needed if we are to make it happen. Our closing panel will give state leaders an opportunity to outline their vision for how we can achieve goals already on the books, and critically, share their plans for smart ways to finance this effort.

- What legislative packages can we expect to help California reach existing goals? Should we expect any new targets?
- With a flush state budget and federal stimulus on the way, where are these monies being prioritized?
- What opportunities are there to manage rising energy costs? Will we see any reforms of electricity rates as part of an emphasis on containing and sharing costs?
- Are there plans to implement regulatory reforms that can accelerate our climate investments?
- What can the state do to help develop resilient supply chains for the raw materials needed to do build out our clean energy infrastructure?

Eduardo Garcia, Chair, Assembly Committee on Utilities and Energy (5-10 min)

Alice Reynolds, President, California Public Utilities Commission (5-10 min)

David Hochschild, Chair, California Energy Commission (5-10 min)

Hunter Stern, Asst. Business Manager, I.B.E.W., Local Union 1245 (5-10 min)

Roundtable Discussion

12:00pm	Summary, Next Steps, and Adjournment
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Jay Hansen, President & CEO, CFEE