WELCOME TO TODAY’S WEBINAR!

Decarbonization Update

August 20, 2020
Decarbonization Overview

- California continues to lead the nation in charting a path to decarbonizing our energy system
- SB1477 and other recent policies play an important role in setting the path for accelerated decarbonization
- But we are facing many challenges and obstacles – particularly during the past week and a half
- Nevertheless, decarbonization continues to be one of our state’s highest priorities
- Today, we will take a deeper dive into some of the policies, the barriers, and potential solutions
Today’s Speakers

- Nate Kinsey, CPUC
- Jan Berman, PG&E
- JP Ross, EBCE
- Sila Kiliccote, elQ Mobility
- Chris King, Siemens

Webinar Moderator: Greg Wikler, CEDMC
Audience Q&A Curator: Serj Berelson, CEDMC
A Few Administrative Items

• Questions for each speaker can be asked at any time by using the chat function (on the lower bar of your screen)...we will be monitoring the chat log throughout the webinar.
• We will prompt the audience for live Q&A at various points during the panel discussion; please indicate your intention to ask a live question through the chat function.
• Please mute your lines and turn off your videos unless you are asking a question.
• We will record today’s session and make that recording available to all shortly after today’s webinar.
Building Decarbonization
Overview

August 20, 2020
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Building Decarbonization at the CPUC

Not a Three-Pronged Test, but a Three-Pronged Strategy:

1. Energy Efficiency
2. Building Electrification
3. Decarbonization of the pipe
Building Decarbonization at the CPUC

Timeline of Building Decarbonization Activities:

- **June 2017** – NRDC and CEDMC file Petition for Review and Modification of the energy efficiency three-prong test.
- **September 2018** – SB 1477, AB 3232, and SB 1440 signed by Governor Brown.
- **December 2018** – CPUC adopts D. 18-12-015 approving electrification of 1000+ households in the San Joaquin Valley.
- **July 2019** – CPUC adopts D. 19-06-032 implementing AB 2868 Energy Storage Programs including WatterSaver for load-shifting HPWHs.
- **August 2019** – CPUC adopts D. 19-08-009 replacing the three-prong test with the Fuel Substitution Test for energy efficiency measures.
- **September 2019** – CPUC adopts D. 19-09-027 creating a $4 million budget to fund HPHWs in SGIP for equity customers.
- **November 2019** – SCE files its ESA 2021 -2026 A. 19-11-004 requesting approval of two electrification pilots.
Building Decarbonization at the CPUC

Timeline of Building Decarbonization Activities, continued:

- **December 2019** – Energy Division hosts a technical workshop on SB 1440 implementation.
- **January 2020** – CPUC adopts D. 20-01-001 providing an additional $40.7 million in SGIP funding for HPWHs.
- **March 2020** – CPUC adopts D. 20-03-027 establishing the SB 1477 building decarbonization pilot programs.
- **March 2020** – Energy Division hosts SGIP HPWH Part One Workshop.
- **March 2020** – SCE files A. 20-03-004 which includes a Smart HPWH Load Shift program.
- **April 2020** – Joint Motion for Approval of Settlement Agreement for Voluntary Renewable Gas Tariff filed by SoCalGas and SDG&E.
- **April 2020** – CPUC adopts D.20-04-004 on the MHP Conversion program and ordered a Phase 2 to explore MHP and coach electrification topics.
- **May 2020** – Energy Division hosts SGIP HPWH Part Two Workshop.
- **July 2020** – CEC files Draft Implementation Plan for the BUILD program.
- **August 2020** – Building Decarbonization and Renewable Natural Gas Section formally created.
Building Decarbonization at the CPUC

CPUC Building Decarbonization Facts:
The CPUC has approved or is considering approval of:
- 15 different building electrification programs across multiple proceedings. Total funding as currently proposed is approximately $435 million;*
- A voluntary renewable natural gas tariff in SoCalGas and SDG&E service territory;
- Procurement requirements in compliance with SB 1440 for RNG.

CA Building Decarbonization Facts:
Other state agencies & actors are also funding electrification
- Multiple POU's – SMUD and Palo Alto
- Multiple CCAs – MCE, SCP, SJCE, SVCE, PCE, SJCE
- BAAQMD – Advanced Energy Rebuild
- BayREN – Bay Area Midstream HPWH
- SCAQMD – Zero-NOx Multifamily Affordable Housing Electrification
- CSD – Low Income Weatherization Program (LIWP) Multifamily Program

* Funding total does not include future third party or IOU energy efficiency programs.
Decarbonization update

August 2020
California is Targeting:

- 60% renewables by 2030
- 5M zero-emission vehicles by 2030
- 2x energy efficiency in existing buildings by 2030

California’s Ambitious Climate Goals

Source: California Air Resources Board

PG&E is a critical partner in achieving California’s clean energy goals.
East Bay Community Energy: Electrification

- Educate
- Train
- People
- Reward
- Empower

Codes
Rules
Standards
Guidelines
Compliance
Fleet Electrification

Motivation

In California only
- AB 32
- SB 32
- SB 100
- Senate Bill 1275 & Executive Orders B-16-2012 & B-48-18
- Order B-32-15
- ACT Rule
- LCFS Credits

Opportunity

Total # of fleet vehicles
30+ Million
- 31% Passenger Cars
- 56% Class 1-5
- 7% Class 6-8
- 6% Busses

14% of all GHG in the US

Expected Market Size for Electric Fleets in 2030*
$16B – $36B

Challenge

- Picking vehicles, chargers & locations
- Financing & deploying assets
- Operating e-fleet & tracking performance & costs
- Scaling

*Ref: 14% of all GHG in the US
Electrification Benefits and Key Enablers

**ECONOMIC**
- For Drivers
  - Lower Total Cost of Ownership
- For Ratepayers
  - Lower electricity rates
- For the Electric Grid
  - Greater efficiencies
- For the Community
  - Jobs including new skill sets
  - Greater diversity of fuel choices

**HEALTH**
- For the Community
  - Lower air emissions
  - Less noise pollution
  - Improved air quality

**INFRASTRUCTURE**
- Availability & access to private & public EV charging
- Standards & interoperability, including payment
- Price signals
- Interconnection

**TOTAL COST OF OWNERSHIP**
- Up-front capital
- Energy

**ECOSYSTEM**
- Market access
- Power flows
- Program requirements

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Discussion and Q&A

Please ask your questions through the chat box, located on the control panel at the bottom of your screen.
Thank you for attending today’s webinar!

Save the Date…This Virtual Event Cannot be Missed!

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