



Climate Heat Impact Response Program (CHIRP)

Public Work Group Meeting
September 16, 2021

Today's Agenda

- Background
- Draft CHIRP Reporting
- Draft CHIRP Mitigation Plan
 - ✓ CHIRP Mitigation Goals
 - ✓ Potential Community Projects
 - ✓ Proposed Implementation Strategy
- Next Steps and Open Discussion

Background

- Emergency Proclamation on July 30, 2021
- The State can take actions to:
 - ✓ Reduce the strain on California's energy infrastructure
 - ✓ Increase energy capacity during such extreme heat events
- By November 2021, CARB is to develop a mitigation plan to mitigate any excess emissions
- Two components to CHIRP: Reporting and Mitigation Plan

Potential State Actions During an Extreme Heat Event

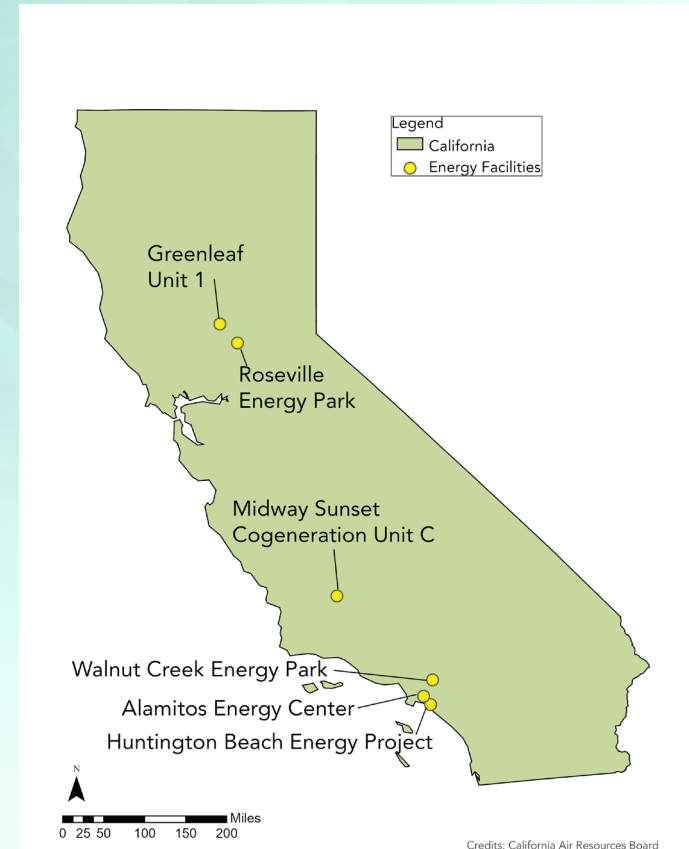
- Reduce energy use through conservation
- Deploy technologies that reduce load to the grid or increase grid capacity:
 - ✓ Back-up generators
 - ✓ Thermal power plants
 - ✓ Ships at berth

Back-Up Generators (Stationary and Portable)

- Back-up generators supply power to homes and businesses during emergency situations
- Generally, back-up generators over 50 horsepower (HP) have permitting requirements set by air districts (stationary) or by CARB (portable)
- During an extreme heat event, back-up generators can be used to reduce load to grid

Thermal Power Plants

- Thermal power plants convert heat energy (typically through combustion) into electricity
- During extreme heat events, thermal power plants under CEC jurisdiction can operate outside of their permitted requirements



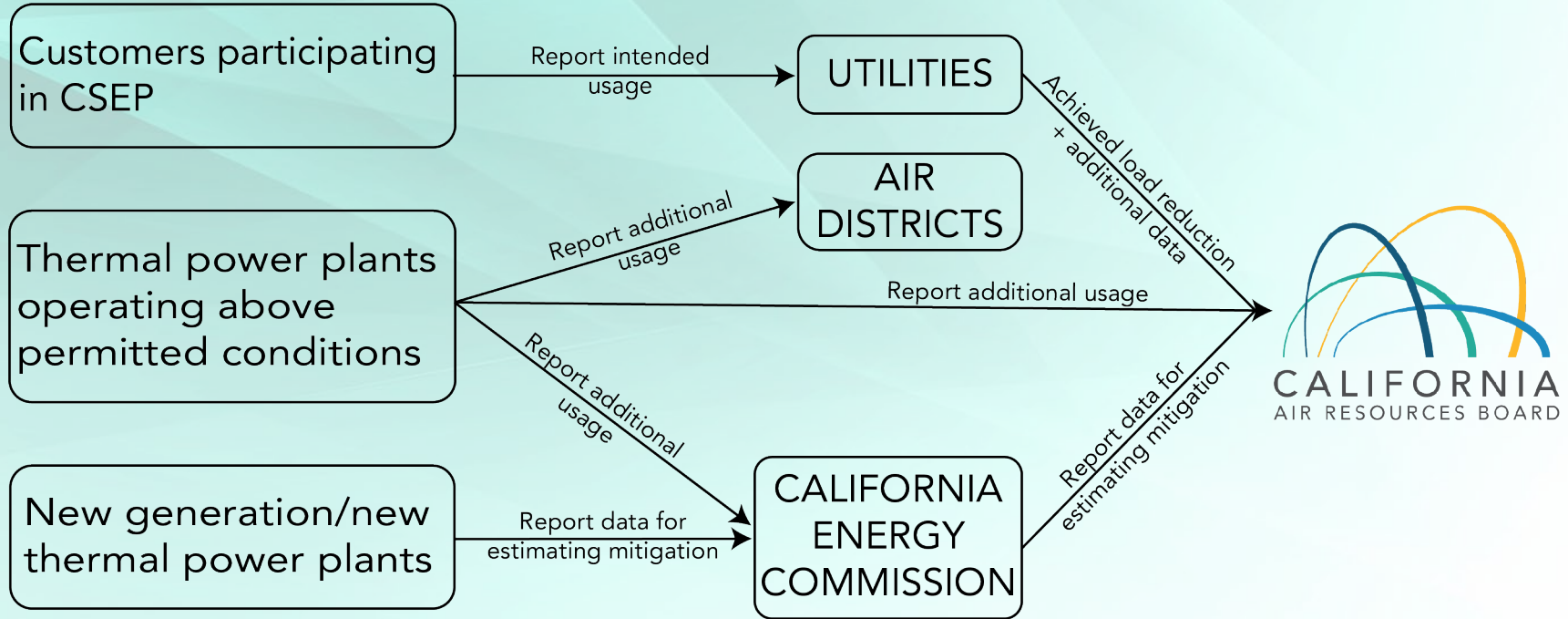
Ships At Berth

- Per CARB regulation, certain ships are required to turn-off their auxiliary engines and plug into shore power when at the port
- During an extreme heat event, ships could be allowed to run their auxiliary engines



CHIRP Reporting Requirements

Reporting Requirements of Proclamation



Draft CHIRP Mitigation Plan

Draft CHIRP Mitigation Goals

- Mitigate excess emissions generated during California Independent System Operator (CAISO)- designated extreme heat events
- Consult and engage affected communities to determine desired community-focused projects that yield long-term/sustainable benefits
- Develop a comprehensive program that could continue with future proclamations
- Provide transparency through regular updates to public on project progress and outcomes

Draft CHIRP Mitigation Process



An extreme heat event occurs, resulting in increased demand for power which is met by the state allowing power generation above permitted limits. These above permit-level emissions must be mitigated per the Governor's Proclamation.



CARB, in consultation with air districts & the CEC, determine emissions from potential sources deployed during the extreme heat event.



CARB determines funding to be allocated based on emissions & locations of those emissions.*

* Occurs on annual basis



CARB, air district partners, & impacted communities collectively determine how to invest the funds for mitigating event-generated emissions & further reduce impacts from future extreme heat events.

Estimated Emission Impacts of Generating 1000MW of Power for 1 Hour

- Estimates assume that any source provides all 1000MWh of power, this is unlikely and will be some combination of these sources
- Estimates based on inventory data



NG Thermal
Power Plant



Diesel Backup
Generator



Ship at
Berth

NO _x	0.035	11.0	12.2
PM	0.015	0.72	0.20
ROG (in tons)	0.010	0.70	0.60

Potential Community Projects

- With impacted communities, identify potential projects to mitigate and reduce current and future emission impacts and build grid resiliency
- Potential projects include:
 - ✓ Emission mitigation measures currently supported through existing programs
 - ✓ New mitigation projects allowed after a public meeting with CARB Executive Officer approval

Proposed Implementation Strategy

- Conduct a public meeting in the community to discuss:
 - ✓ The emission impacts that occurred
 - ✓ Mitigation measure options
 - ✓ Options for who implements the mitigation measures
- CARB enters into agreement with the selected implementing agent
- Responsibilities of implementing agent:
 - ✓ Ensure communities needs are met
 - ✓ Deploy projects
 - ✓ Report progress back

Next Steps

- Finalize CHIRP data sources and mitigation plan framework
- Take proposed mitigation plan framework to CARB Board for consideration in November 2021
- Once approved, use framework to mitigate increased event-generated emissions per the Proclamation

Official CHIRP Program Page

- Visit CHIRP's [Website](#):
 - ✓ For mitigation plan information, reporting, contact information, and more



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On July 30, 2021, Governor Newsom signed a Proclamation of a State of Emergency (Proclamation) to expedite clean energy projects and reduce demand on the electrical grid during extreme weather events in California. The Proclamation suspends certain

Questions?

Thank you for participating in today's work group meeting.

For more information, please visit our website:

<https://ww2.arb.ca.gov/our-work/programs/climate-heat-impact-response-program-chirp>

If you have additional thoughts, questions, please contact us at: CHIRP@arb.ca.gov

Additional Information

Here are additional links to State partner websites:

- For information on CEC's emergency program, please visit: <https://www.energy.ca.gov/programs-and-topics/programs/temporary-and-emergency-generation-program>
- For information on DOF's emergency program: [https://dof.ca.gov/Programs/California State Emergency Program/](https://dof.ca.gov/Programs/California_State_Emergency_Program/)