California Energy Commission

Title: NASEO National Building Summit

Presenter: Rajiv Dabir, Branch Manager, Load Flexibility

Date: September 8, 2025

CALIFORNIA ENERGY COMMISSION

OUR FIVE COMMISSIONERS

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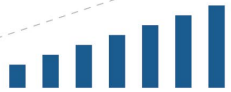
Leading the state to a 100% clean energy future for all.

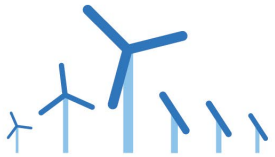
PRIMARY FUNCTIONS OF THE

CALIFORNIA ENERGY COMMISSION



Advancing State Energy Policy

Investing in Energy Innovation



Developing Renewable Energy

Preparing for Energy Emergencies

Achieving Energy Efficiency

Transforming Transportation

Overseeing Energy Infrastructure

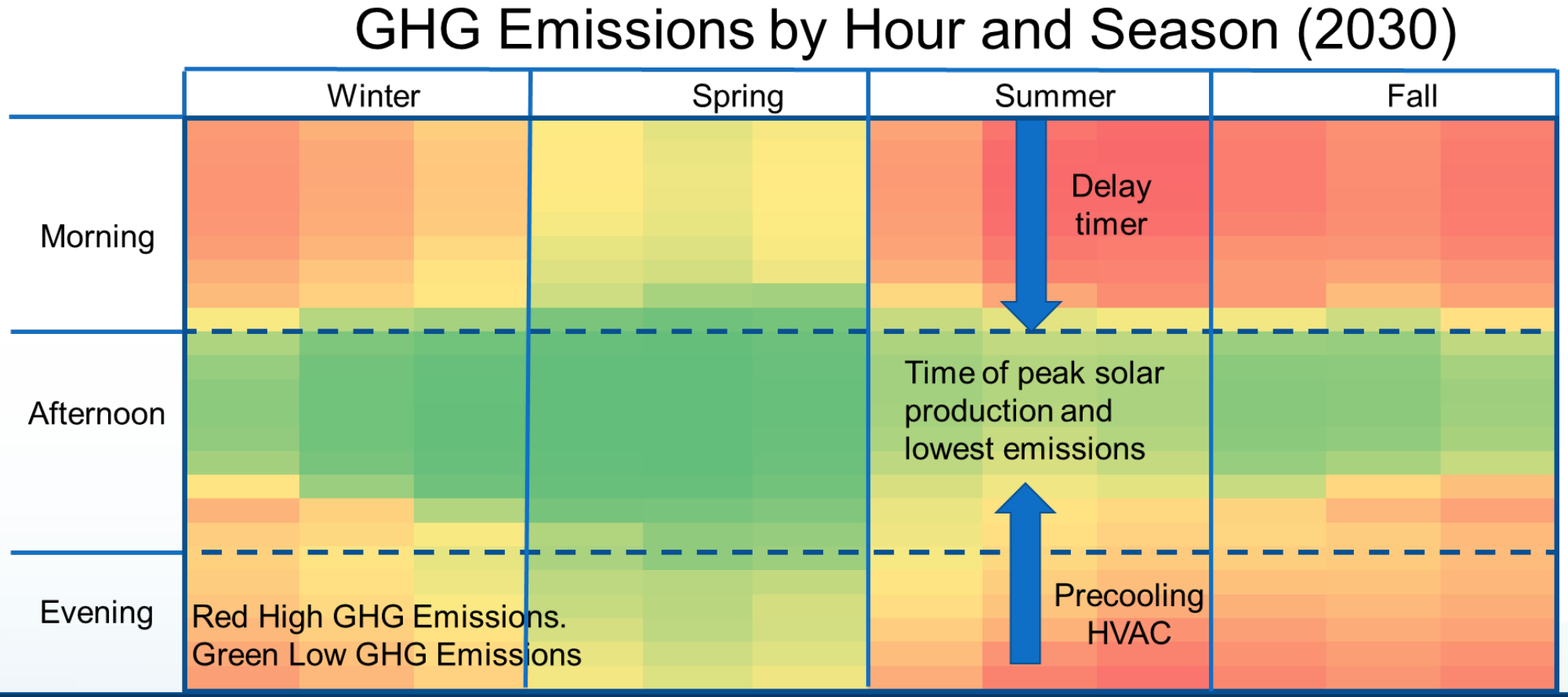
Efficiency Mission Statement

Efficiency Division

To develop and implement regulations, policies, and programs that facilitate achieving the state's energy and water conservation, resilience, and climate goals.

- **Admin Branch**
- **Appliance Efficiency Branch**
- **Load Flexibility Branch**
- **Building Standards Branch**
- **Existing Buildings Branch**
- **Standards Compliance Branch**

Load Flex - Schedule, Shift, and Curtail



Flexibility is key to reducing emissions from homes and businesses

Flexible Demand Appliance Standards (FDAS)

- **Senate Bill 49 (2019)** requires the CEC to adopt standards to facilitate the deployment of flexible demand technologies which:
  - Improve electrical grid reliability,
  - Reduce greenhouse gas emissions from electricity generation, and
  - Are cost effective.

Flexible Demand Technologies

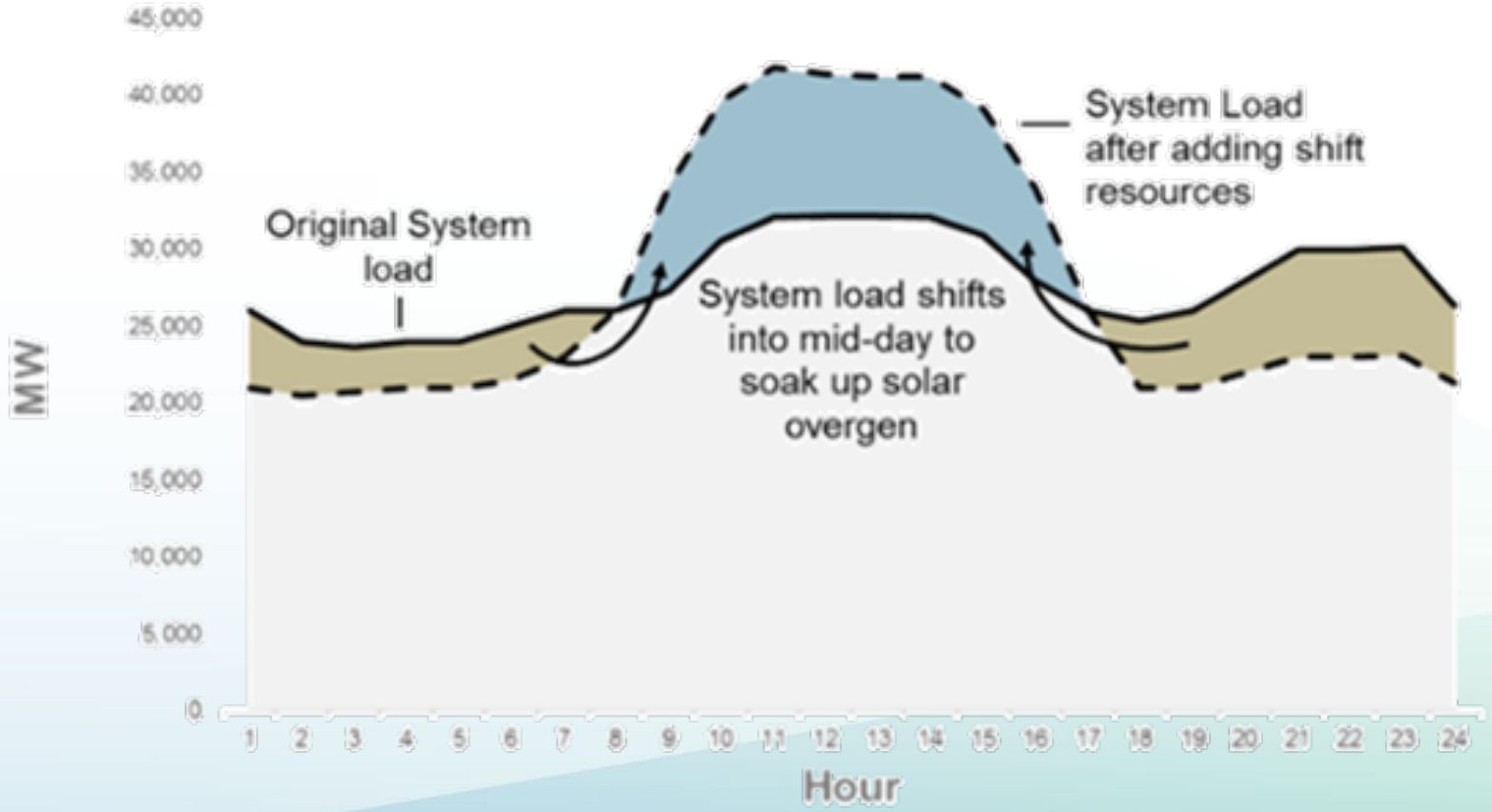
- Automatically shift the timing of electricity consumption to match demand and supply
- Take advantage of renewable energy (solar, wind)
- Reduce the use of fossil fuel energy during times of peak electricity demand
- Help consumers receive bill savings through time of use rate plans

Standards for Pool Controls

- Adopted in October 2023
- Require a default operating schedule that avoids peak electricity demand hours
- Require pool controls to have the capability to wirelessly communicate via open standards
- Require cybersecurity measures
- Require consumer option to opt-out when needed

Flexible Demand Appliances

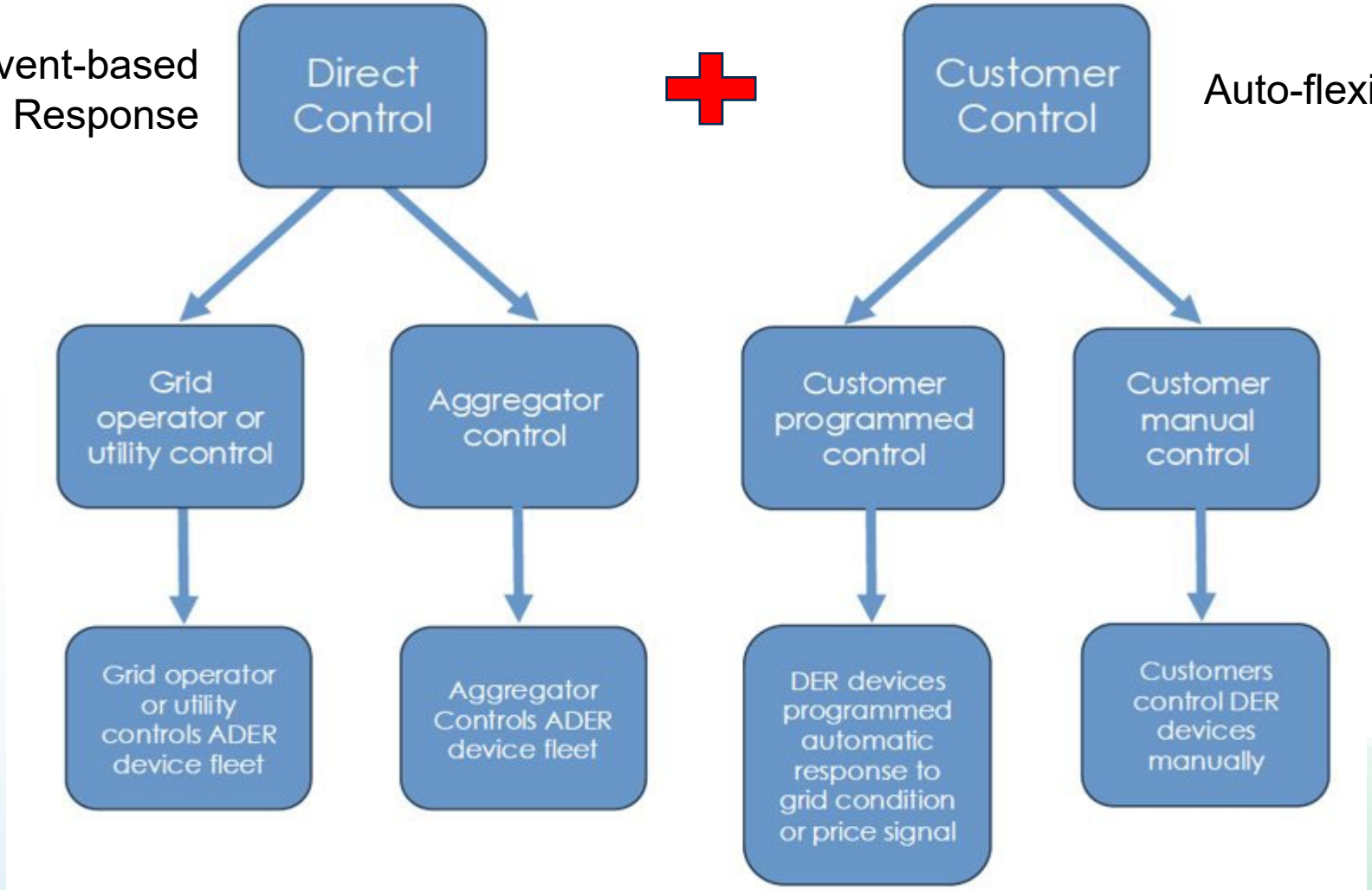
Shift Service Type: Shifting load from hour to hour to alleviate curtailment/ overgeneration



Grid Connected Heat Pump Water Heater

Direct & Customer Control working together

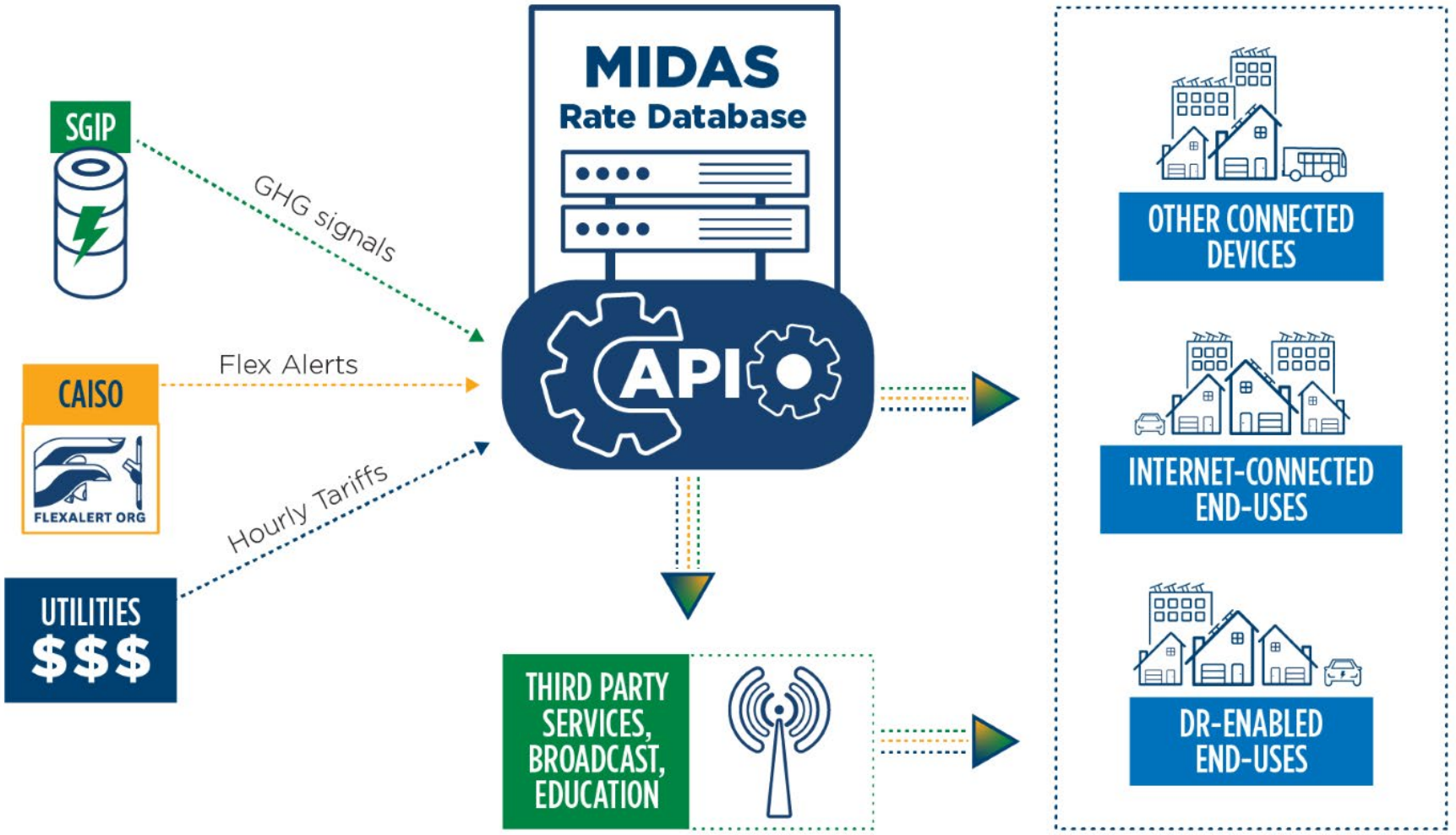
Event-based Demand Response



Auto-flexing

NARUC Report – Aggregated Distributed Energy Resources in 2024: The Fundamentals.

Market Informed Demand Automation Server



Adopted Load Management Standards

Rate Database	• Maintain the accuracy of existing and future time-varying rates in the publicly available and machine-readable MIDAS rate database.
Third-Party Services	• Develop a standard rate information access tool to support third-party services (RateID/RIN)
Hourly Rates	• Develop and submit locational rates that change at least hourly to reflect marginal wholesale costs.
Customer Education	• Integrate information about new time-varying rates and automation technologies into existing customer education and outreach programs.

Demand Flexibility Takeaways

Support hourly and highly dynamic pricing which allow load shifting technologies to save consumers on their electricity bills.

Encourage alternative rate and program designs that incentivize load shifting.

Deploy information infrastructure to support load shifting – Market Informed Demand Automation Server (MIDAS)

Adopt standards to enable appliance operations to be shifted, scheduled, or curtailed - Flexible Demand Appliance Standards (FDAS)

Thank You!

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