### **Governor Newsom Issues Executive Order N-82-20**



"...develop a Natural and Working Lands Climate Smart Strategy that serves as a framework to advances the State's carbon neutrality goal and builds climate resilience."

"...it is the goal of the State to conserve at least 30 percent of California's land and coastal waters by 2030."



## Governor Newsom's Announcement on Hydrogen



"California is all in on clean, renewable hydrogen – an essential aspect of how we'll power our future and cut pollution," said Governor Newsom. "This strategy will lay out the pathway for building a robust hydrogen market to help us fully embrace this source of clean energy."

Aug 08, 2023



Alliance for Renewable Clean Hydrogen Energy Systems

## State Bioenergy Policies and Statutes

- BioMAT/BioRAM forest biomass-based power procurement (CPUC)
- Firm power mandates (CPUC)
- Biomethane procurement mandates (CPUC 72.8 Bcf by 2030)
- Projected 1,700x growth in H<sub>2</sub> and 90% SAF by 2045 (CARB)
- Bioenergy with CO<sub>2</sub> capture as a NWL strategy (CARB)
- Comprehensive report on Hydrogen (SB 1075, CARB)
- Low Carbon Fuel Standard (LCFS) incentive program (CARB)
- Wood Utilization Plan (Wildfire & Forest Resilience Task Force)

**Department of Conservation** 

- DOC Forest Biomass to CO<sub>2</sub>-negative Fuels
- SB 905 CCS Framework

# State Bioenergy Funding Programs

- Ultra-low-Carbon Fuels Demonstration Program (CEC)
- Business and Workforce Development Grants (CAL FIRE)
- Climate Catalyst Program (IBank)
- Forest Biomass to Carbon-Negative Biofuels Pilot Program (DOC)
- California Competes innovation tax credits (GO-Biz)
- Dairy digesters to methane, healthy soils and biochar (CDFA)
- Biomethane pipeline interconnections (CPUC, SB 1440)
- Sales/use tax exemption for bioenergy/recycling equipment/materials (Treasurer's Office)

## Federal Funding Programs for Biofuels

#### **IRA**

- Title 17 DOE loans for "innovative projects"
- USFS and NRCS ag and forest management and landscape resilience and biomass/carbon removal
- USFS wood innovations grant program

#### IIJA

- Clean H2 research and development
- H2 Hubs (ARCHES, in CA)
- Grid hardening
- Charging and fueling infrastructure grants

#### **Complementary carbon capture programs**

- IIJA and IRA
- Grant funding, loans, tax credits

## Next Steps and Needs in the Sector

- Permit streamlining for all bioenergy types (not just dairies!)
- Expand and modernize the BioMAT program
  - Extend the sunset date
  - Allow for islanding
- Reactivate BioRAM facilities with emissions retrofits
- Lifecycle emissions (LCFS) and cost quantification (Rates)
- Accelerate interconnection process through:
  - Standardization
  - Time-delineated process
  - Grid infrastructure maintenance requirements
- Grid upgrades for state electrification goals and new power sources



