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Title 20 Proposed Amendments for Hydrogen, Biodiesel, and Renewable Diesel Data Reporting

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Background: Assessments

Public Resources Code §25301 - 25304 (IEPR) directs the California Energy Commission to conduct assesments and forecasts on all aspects of California's energy industry.

Current data received through case-by-case agreements using standards and definitions adapted from petroleum industry.

Current trends show:

- Wider use of biodiesel and renewable diesel
- Growing number of hydrogen fueling stations
- Hydrogen production is starting to separate from petroleum refining
    - New methods and applications

Background: Emergency Planning

Public Resources Code §25700 – 25705 requires the CEC to collect information for the purpose of evaluating responses to energy emergencies:

- Biodiesel and renewable diesel are rapidly becoming replacements for petroleum diesel, potential primary fuels for heavy equipment and emergency infrastructure
- The CEC needs data for emergency planning to address hydrogen producer's current reliance on natural gas and electricity for production

Analytical Needs

Gain visibility of California's biodiesel, renewable diesel and hydrogen on par with petroleum refining:

- Inputs
- Production
- Shipments
- Storage at facility
- Wholesale Pricing

Not just data but uniformity:

- Reporting period
- Definitions

Proposed Amendments for Hydrogen Production

Hydrogen Production Requirements

Each hydrogen plant that produces more than **1,000 kilograms*** of on-purpose hydrogen during any month of the current or preceding calendar year located within California, shall file **monthly** reports containing all of the information specified:

*Looking to track large scale industrial production

Hydrogen Production Specifications

- Kilograms of on-purpose hydrogen and liquid hydrogen produced each month at the facility.
- Inventory levels of on-purpose hydrogen in kilograms at the beginning and end of each month.
- The type of chemical feedstock used to produce the hydrogen. Feedstock includes methane and water for steam methane reformation. For hydrogen produced by water electrolysis, feedstock is both water and electricity used.
- The amount of feedstock and inputs used to produce the hydrogen.
- The amount of on-purpose hydrogen in kilograms distributed to a petroleum refinery.
- The amount of on-purpose hydrogen in kilograms distributed to a hydrogen fueling station.
- The amount of on-purpose hydrogen in kilograms sold for other purposes besides petroleum refining or hydrogen fueling.
- The volume-weighted average price per kilogram of on-purpose hydrogen sold to fueling stations and the Low Carbon Fuel Standard credit price that underlies the sale for that month.

Proposed Amendments for Biodiesel and Renewable Diesel

Biodiesel and Renewable Diesel Requirements

Biodiesel Requirements

Any industrial plant that processes biomass feedstock and produces **more than 84,000 gallons of biodiesel** during any month of the current or preceding calendar year, shall file **monthly** reports containing all of the information specified:

Renewable Diesel Requirements

Any industrial plant that processes feedstock and produces **more than 84,000 gallons of renewable diesel** during any month of the current or preceding calendar year, shall file **monthly** reports containing all of the information specified:

Biodiesel Data Specifications

- All of the information specified on Forms EIA-819 or EIA-22M published by the United States Department of Energy.
- The type and amount of feedstock and/or California Air Resources Board Low Carbon Fuel Standard pathway used to produce biodiesel.
- Volumes of biodiesel distributed in gallons, categorized by the level of distribution: direct sale, wholesale, or export outside of California.
- A monthly volume-weighted average price per gallon of bio-diesel sold and assumed Low Carbon Fuel Standard credit price that underlies the sale.

Renewable Diesel Data Specifications

- All of the information specified on Forms EIA-819 or EIA-22M published by the United States Department of Energy.
- The type and amount of feedstock and/or California Air Resources Board Low Carbon Fuel Standard pathway used to produce biodiesel.
- Volumes of renewable diesel distributed in gallons, categorized by the level of distribution: direct sale, wholesale, or export outside of California.
- A monthly volume-weighted average price per gallon of bio-diesel sold and assumed Low Carbon Fuel Standard credit price that underlies the sale.

Forms EIA-819 and EIA-22M

Form EIA-819

- Dependent on the new draft form being adopted by Federal Gov't
- Currently covers blending of ethanol into gasoline
- Draft form intends to capture all types of "drop-in" fuels, biodiesel and renewable diesel included
  - other fuels: gasoline alternatives and advanced ethanol production

Form EIA-22M

- Currently reports production, inventory, and shipment data of biodiesel
- biodiesel based

Remaining Items

More that staff need to consider than just the amendment language:

- Time needed to collect data for submission
  - Biodiesel: EIA 22M data + CARB LCFS data
  - Renewable diesel: EIA 819(?) + CARB LCFS data
  - New for hydrogen producers?
- Extra costs
  - Labor
  - Infrastructure

Thank You!