

## FAQ: Argus California R99 Bulk Price Assessments



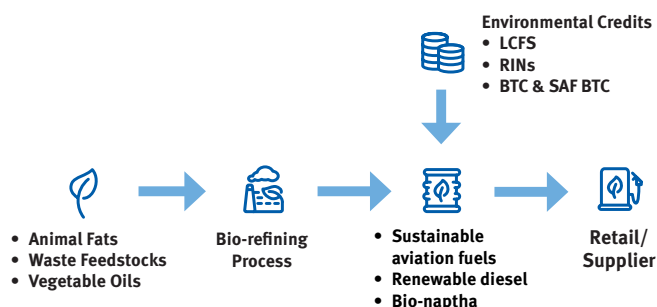
*Using real market transactions and bids/offers, resulting in prices that accurately reflect the daily values and specific supply/demand dynamics of this increasingly important low carbon renewable fuel market.*

With U.S. production capacity for renewable diesel more than doubling from current levels by the end of 2027, it is critical to ensure fair and reflective values are provided for market participants. This is provided by the R99 assessment which are underpinned by actual physical bids, offers and trades of renewable diesel. Between 2011 and 2021, consumption grew from 1 million barrels to 28 million barrels per year, over 18 times its original volume. If all announced/planned projects are executed, capacity is expected to rise to 373 KB/d.

### What is renewable diesel?

Renewable diesel is a non-petroleum hydrocarbon fuel made up of 100pc renewable raw materials. These include food and feed crops such as palm oil, rapeseed oil or soybean oil, waste products such as used cooking oil (UCO) and palm oil mill effluent (POME) as well as tallow. Renewable diesel is chemically identical to conventional road diesel.

### Renewable fuel refining process



### Why are the Argus renewable diesel bulk assessments based in California?

California consumes 99pc of US RD in supply, Oregon and Washington consume the remaining 1pc. Renewable diesel and biodiesel replaced over 50% of the diesel used in

California in the first quarter of 2023. Lastly, there are large financial incentives provided by state based low carbon fuel standards along the US west coast, the US Renewable Fuel Standard, the US Biodiesel Tax Credit, and potentially the Inflation Reduction Act. Driven by supportive legislation, there is significant renewable diesel volumes including major conversion projects in California which benefit from these incentives and drive volumes to highly incentivized states like California.

### Who should use the Argus California R99 bulk assessments?

- Producers that need a market value renewable
- Downstream fuels suppliers needing to understand the most economic option for blending renewable fuels to comply with regulatory mandates
- Renewable diesel feedstock originators seeking to understand the value of the finished product to help them price their feedstock
- Traders that connect renewable diesel producers and suppliers
- Downstream fuel retailers and pricing managers that need price input to set accurate renewable diesel sales prices for end-consumers
- Analysts needing a valuation tool for renewable fuels, for example for investments into hydrotreated renewable fuels capacity
- Risk managers needing to control financial exposure related to renewable diesel

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■ Road transport companies and other downstream fuel consumers being supplied renewable diesel on term contracts

■ Sustainable Aviation Fuels (SAF) market participants - for example, HEFA SAF producers looking to understand values for alternative hydrotreated products or SAF buyers keen to follow a more frequently traded hydrotreated product than SAF

### How will Argus assess the California R99 bulk assessments?

#### R99 California spot

Weekly assessments of the price of material traded since the last assessment meeting the criteria set out below. Prices are assessed on the last publishing day of the week as low-high differentials to CARB and its attributes (CCA cost for diesel + LCFS deficit cost for diesel + crude CI deficit cost for diesel) and are also published as daily outright prices and as daily differentials to front-month Nymex ULSD. Information about trade, bids and offers on any pricing basis may be considered for inclusion in the assessment if deemed relevant.

**Specification:** Kinder Morgan RD

**Locations:** head of pipeline in Los Angeles and San Francisco

**Timing:** any time during the named month at buyer's option; excluding specified delivery times

**Volume:** 5,000 bl min

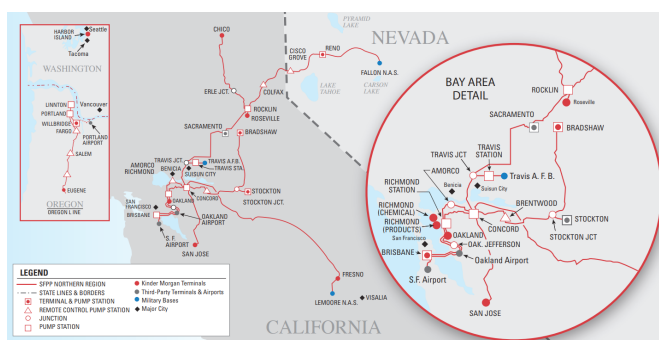
#### Attached credits:

Assessments are for material from which RINs, LCFS and blender's tax credits have been stripped.

#### Basis roll timing:

The basis for the Los Angeles assessment tracks the Kinder Morgan pump dates schedule for CARB diesel. In San Francisco, the day fourth-cycle CARB diesel enters the freeze for that month (the period during which changes to tendered volumes can no longer be made) will be the first day of prompt renewable diesel timing for the next month.

### Kinder Morgan gathering systems, pipelines and terminals in Northern and Southern California



North America daily renewable diesel price assessments	
Description	PA Code
Renewable diesel R99 hop Los Angeles (CARB complex basis)	PA40777
Renewable diesel R99 hop Los Angeles (NYMEX heating oil basis)	PA40778
Renewable diesel R99 hop San Francisco (CARB complex basis)	PA40779
Renewable diesel R99 hop San Francisco (NYMEX heating oil basis)	PA40780
Renewable diesel R100 (soybean oil-based) del California	PA0034485
Renewable diesel R100 (tallow-based) del California	PA0034486
Renewable diesel R100 (used cooking oil-based) del California	PA0034487
Renewable diesel R100 (corn oil based) del California	PA0034488
Renewable diesel R100 (soybean oil-based) del Oregon	PA0034489
Renewable diesel R100 (tallow based) del Oregon	PA0034490
Renewable diesel R100 (used cooking oil-based) del Oregon	PA0034491
Renewable diesel R100 (corn oil-based) del Oregon	PA0034492
Renewable diesel margin indicator US Gulf coast	PA0034973

\*Prices available in Argus Americas Biofuels and Argus US Products

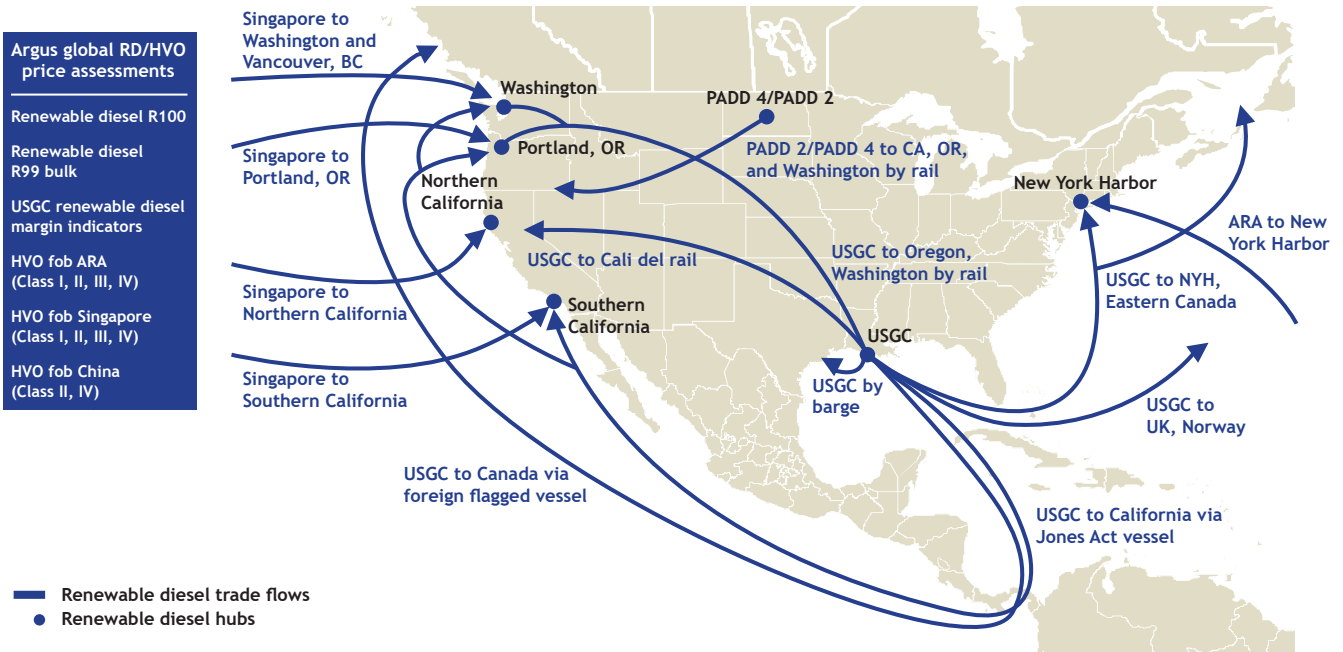
European and Asia-Pacific daily HVO (hydrotreated vegetable oil) price assessments:	
Renewable Diesel Price Assessment Name	PA Code
HVO (hydrotreated vegetable oil) fob ARA range (Class I) USD/t	PA0030620
HVO (hydrotreated vegetable oil) fob ARA range (Class II) USD/t	PA0030623
HVO (hydrotreated vegetable oil) fob ARA range (Class III) USD/t	PA0030626
HVO (hydrotreated vegetable oil) fob ARA range (Class IV) USD/t	PA0039451
RED HVO fob Singapore (Class I) netback	PA0031231
RED HVO fob Singapore (Class II) netback	PA0031232
RED HVO fob Singapore (Class III) netback	PA0031233
RED HVO fob Singapore (Class IV) netback	PA0039452
HVO (hydrotreated vegetable oil) fob China (Class II)	PA0033032
HVO (hydrotreated vegetable oil) fob China (Class IV)	PA0040398

\*Prices available in Argus Americas Biofuels and Argus US Products



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### Global Renewable diesel/HVO trade flows



### What are the attributes for CARB Diesel?

Petroleum diesel is a deficit generating fuel in states with LCFS programs (CA, OR, WA) and therefore incurs LCFS costs, which would increase the value of the alternative renewable diesel – Argus publishes this LCFS deficit compliance cost for diesel in CA, OR and WA. Furthermore, in states with state cap-and-trade programs (CA, WA), compliance costs are levied on the diesel fuel position holder at the terminal – Argus publishes this CCA cost for diesel at the rack in CA and WA. This also adds cost to the diesel and therefore value to the alternative renewable diesel.

- PA0014057 - California Carbon Allowance cost for CARB diesel

Compliance costs for California cap and trade program levied on the diesel fuel position holder at the terminal, based on the Argus assessment of prompt-month allowances. It adds costs to diesel and therefore value to the diesel alternative (RD).

- PA0014061 - California LCFS deficit cost for CARB diesel

Petroleum diesel in California is obligated under the LCFS, incurs additional cost, and in turn adds value to its alternative RD. This is a cents per gallon cost based on the Argus spot LCFS credit assessment.

- PA0030383 - California LCFs deficit cost - crude CI CARB diesel

This is a cost to account for the crude CI score that CARB updates every year. If it goes above a certain level, the agency adds more deficits to accounts.

Together, these three PA codes are viewed as the avoidance costs of conventional diesel in California.

### How does the R99 bulk assessment fit in with the global renewable diesel market?

Renewable diesel is produced across the US, Europe and Asia and exported to the highest valued markets with biofuels incentives and mandates. Our global suite of indices will allow traders and plant operators to evaluate changing market conditions and opportunities and deliver to key market locations based on the appropriate benchmark index.

### What additional renewable diesel market coverage and analysis does Argus provide?

*Argus Americas Biofuels Forward Curves* – Renewable diesel R100 (soybean, corn oil and used cooking oil)

*Argus Biofuels Outlook and Argus Biofuels Analytics* – Renewable diesel R100 price forecast

*Argus International Biofuels Forward Curves* – RED HVO fob ARA range (Class II) and RED HVO fob Singapore (Class II) netback

*Argus Biofuels Outlook and Argus Biofuels Analytics* – HVO fob ARA and Singapore (Class I, II, III and Palm Oil)

#### For more information:

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