

Specifications Guide

Carbon Intensity and Low Carbon Markets

Latest update: December 2025

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Definitions of the trading locations for which Platts publishes daily indexes or assessments

The following specifications guide contains the primary specifications for Platts Low Carbon Gas, Biomethane Guarantees of Origin, and Carbon Intensity price assessments. All the assessments listed here employ Platts Assessments Methodology, as published at <https://www.spglobal.com/content/dam/spglobal/ci/en/documents/platts/en/our-methodology/methodology-specifications/platts-assessments-methodology-guide.pdf>

This guide is designed to give Platts subscribers as much information as possible about a wide range of methodology and specification questions.

This guide is current at the time of publication. Platts may issue further updates and enhancements to this guide and will announce these to subscribers through its usual publications of record. Such updates will be included in the next version of this guide. Platts editorial staff and managers are available to provide guidance when assessment issues require clarification.

European Biomethane GO and RGGO Assessments

| Assessment Name | Eur/MWh | GBP/MWh | Min |
|--|---------|---------|-------|
| European Unsubsidized Biomethane (EUB) Certified Waste Spot Eur/MWh | ASIZA00 | | 5 GWh |
| European Unsubsidized Biomethane (EUB) Certified Waste Yr01 Eur/MWh | ASIZY01 | | 5 GWh |
| European Unsubsidized Biomethane (EUB) Certified Waste Spot Eur/MWh MAvg | ASIZA03 | | 5 GWh |
| European Unsubsidized Biomethane (EUB) Certified Waste Yr01 Eur/MWh MAvg | ASIZY03 | | 5 GWh |
| UK Renewable Gas Guarantees of Origin (RGGO) Waste Spot | GORUA00 | GORUC00 | 5 GWh |
| UK Renewable Gas Guarantees of Origin (RGGO) Waste Yr01 | GORUA01 | GORUC01 | 5 GWh |
| UK Renewable Gas Guarantees of Origin (RGGO) Crop Spot | AUKAA00 | AUKAC00 | 5 GWh |
| UK Renewable Gas Guarantees of Origin (RGGO) Crop Yr01 | AUKAB00 | AUKAD00 | 5 GWh |
| UK RGGO Certified and Subsidized Waste Spot | ARGGA00 | ARGGB00 | 5 GWh |
| UK RGGO Certified and Subsidized Waste Yr01 | ARGAY01 | ARGBY01 | 5 GWh |
| Denmark Biomethane Guarantees of Origin (GO) Waste Spot | GORDA00 | | 5 GWh |
| Denmark Biomethane Guarantees of Origin (GO) Waste Yr01 | GORDA01 | | 5 GWh |
| Denmark Biomethane Guarantees of Origin (GO) Manure Spot | ADENA00 | | 5 GWh |
| Denmark Biomethane Guarantees of Origin (GO) Manure Yr01 | ADENB00 | | 5 GWh |
| Denmark Biomethane Guarantees of Origin (GO) Unsubsidised Waste Spot | DBGOA00 | | 5 GWh |
| Denmark Biomethane Guarantees of Origin (GO) Unsubsidised Waste Yr01 | DBGOA01 | | 5 GWh |
| Germany Biomethane Guarantees of Origin (GO) Waste Spot | GORGA00 | | 5 GWh |
| Germany Biomethane Guarantees of Origin (GO) Waste Yr01 | GORGA01 | | 5 GWh |
| Netherlands Biomethane Guarantees of Origin (GO) Waste Spot | GORNA00 | | 5 GWh |
| Netherlands Biomethane Guarantees of Origin (GO) Waste Yr01 | GORNA01 | | 5 GWh |
| Netherlands Biomethane Guarantees of Origin (GO) Manure Spot | ANETA00 | | 5 GWh |
| Netherlands Biomethane Guarantees of Origin (GO) Manure Yr01 | ANETB00 | | 5 GWh |
| Netherlands Biomethane Guarantees of Origin (GO) Unsubsidised Waste Spot | DBGOB00 | | 5 GWh |
| Netherlands Biomethane Guarantees of Origin (GO) Unsubsidised Waste Yr01 | DBGOB01 | | 5 GWh |

European Biomethane Guarantee of Origin and UK Biomethane Renewable Gas Guarantee of Origin Assessments

Platts publishes daily spot market assessments for European Biomethane Guarantees of Origin (GOs) and UK Renewable Gas Guarantees of Origin (RGGOs).

Both European GOs and UK RGGOs are electronic tracking certificates that represent the environmental attributes of 1 megawatt hour of biomethane entering the natural gas grid. Biomethane is purified biogas, which itself is an alternative to traditional, fossil fuel-derived natural gas, generated through the processing of organic residues from different feedstocks, many of which may otherwise emit methane into the atmosphere. Biogas can be generated by a number of sources, including from landfills, agricultural waste and livestock waste.

GOs and RGGOs are issued by the relevant registries certifying biomethane production within each country but can be traded and retired internationally. GOs and RGGOs represent a premium for gas with a clear organic pathway over the cost of gas with an undisclosed origin pathway in the natural gas grid.

Both GOs and RGGOs can be bought and sold until they are retired by a counterparty.

Platts' Biomethane GO and RGGO assessments reflect feedstock certificates spot and one year forward.

Platts' assessments reflect bids, offers and transactions as reported in either the Platts Market on Close assessment process, in the brokered market, or on trading and exchange instruments. Assessments are timestamped to 16:30 London time and are published according to the Platts London holiday calendar.

Platts also assesses European Guarantees of Origin (EuGOs), UK Renewable Energy Guarantees of Origin (REGOs), alongside US and International Renewable Energy Certificates. The

specifications for these assessments can be found here: <https://www.spglobal.com/content/dam/spglobal/ci/en/documents/platts/en/our-methodology/methodology-specifications/energy-transition/renewables-certificates-specifications.pdf>

Feedstock definitions

Platts publishes daily Biomethane GO and RGGO assessments for several feedstocks with accompanying Carbon Intensity definitions as calculated under EU Renewable Energy Directive methodology.

Assessments for biomethane GOs and RGGOs from waste feedstock reflect a carbon intensity of between +20.00 g CO₂e/MJ to +0.00 CO₂e/MJ.

Assessments for biomethane GOs and RGGOs from manure feedstock reflect a carbon intensity of – 85.00 g CO₂e/MJ and lower.

Assessments for biomethane GOs and RGGOs from crop feedstock reflect a carbon intensity of +25.00 g CO₂e/MJ with no maximum. Platts understands that biomethane of significantly higher Carbon Intensity do not receive GOs.

Bids/offers/trades/indicative values received outside of these definitions may be normalised to these definitions during the assessment process.

Vintage

Platts publishes daily Biomethane GO and RGGO assessments for both spot and forward year markets.

The spot assessment reflects transactions for immediate delivery where contracts have a minimum validity of three months from the date of transaction. The forward year assessment reflects transactions for delivery in the next calendar year of contracts that are issued in that same calendar year.

Platts reflects both Biomethane GO and RGGO bids, offers and trades for contracts that remain valid for three months from the date of title transfer, with title transfer at time of trade.

For example, if Company A sold 1 GWh of Biomethane GOs to Company B on March 18, 2022, Company A would be able to deliver GOs of vintage June 2021 and later.

The majority of Biomethane GOs must be retired within 12 months of issuance, while UK RGGOs must be retired within 36 months of issuance.

Volume

Platts assessments reflect bids, offers and trades of a minimum of 5GWh of Biomethane GOs and RGGOs. Platts does not currently apply a maximum to the volumes reflected in its assessments.

Certification

The assessments for Denmark and the Netherlands reflect certified GOs while the RGGO assessments for the UK reflect certified and uncertified volumes. Certification is considered as a voluntary standard achieved by a producer of biomethane which the market accepts as improving fungibility of the associated guarantee of origin. This includes, but is not exclusive to, standards such as ISCC and REDCert.

Subsidised and Unsubsidised certificates

Assessments for UK RGGOs are for subsidised certificates. Assessments for Denmark and the Netherlands include subsidised waste, unsubsidised waste and unsubsidised manure.

Location

Platts publishes daily Biomethane GO assessments for certificates issued for the current year and one year forward originating in the Netherlands, Denmark, Germany or other relevant competing markets and available for trade

internationally. Platts publishes daily Biomethane RGGO assessments for certificates issued for the current year and one year forward originating in the UK, and available for trade internationally.

Units

Platts publishes its Biomethane GO assessments in Eur/MWh, UK RGGOs are published in GBP/MWh, with conversions for Eur/MWh.

European Unsubsidised Biomethane (EUB) certified waste

The EUB assessment reflects the most competitive spot and year-ahead value for certified unsubsidised waste of European origin. EUB assessments also reflect Annex IX A feedstocks under the EU's Renewable Energy Directive as defined below:

<https://wikis.ec.europa.eu/spaces/UDBBIS/pages/116163541/Raw+materials+intermediate+products+Revision+April+2025>

North America Renewable Natural Gas Premiums

| Assessment Name | \$/MMBtu |
|--|----------|
| North America Renewable Natural Gas Premium (California) | AEWAA00 |
| North America Renewable Natural Gas Premium (Excl. California) | AEWAB00 |
| North Ameirca RNG CI value per point | AEWAC00 |

North America Renewable Natural Gas Assessments

Platts publishes North America RNG price assessments reflecting the premium for pipeline quality RNG relative to pipeline quality natural gas. Assessments reflect volumes delivered on a spot basis in North America, with a pathway that has a carbon intensity of 45g CO2e/MJ under the California Air Resources Board methodology. The carbon intensity of 45g CO2e/MJ represents that of landfill derived RNG.

The North America Renewable Natural Gas Premium (California) price assessment reflects the RNG premium for gas sold into California. The North America Renewable Natural Gas Premium (excl. California) price assessment reflects the RNG premium for gas sold to consumers outside of California.

The North America Renewable Natural Gas carbon intensity value per point price assessment represents the change in

value of the North America Renewable Natural Gas Premium based on a one-point decrease in the carbon intensity. The price varies based on the value of the prompt quarter Low Carbon Fuel Standard (LCFS) credit price. The RNG premium increases for a production pathway with a carbon intensity less than 45g CO2e/MJ and decreases for a production pathway with a carbon intensity greater than 45g CO2e/MJ. For example, an RNG production pathway with a carbon intensity of 10 at a carbon intensity value per point of \$0.08 would have a higher RNG premium by $(45 - 10) \times \$0.08 = \2.80 . Similarly, an RNG production pathway with a carbon intensity of 100 at a carbon intensity value per point of \$0.08 would have a lower RNG premium by $(45 - 100) \times \$0.08 = (\$4.40)$.

Platts uses data from market participants to inform the assessment process for the RNG assessments. Information used includes trades, bids, offers, indicative values and other information deemed relevant to the assessment process.

Platts will normalize trade details such as carbon intensity and tenor in the assessment process where necessary.

Delivery

Platts publishes daily RNG premium assessments for the spot market, which reflect transactions for immediate delivery.

Volume

Platts assessments reflect bids, offers and trades of any volume.

Location

Platts publishes daily premiums for RNG produced and purchased in North America, including the US, Canada, and Mexico.

Units

Platts publishes its RNG premium assessments in \$/MMBtu.

Platts Carbon Intensity price assessment specifications

The energy landscape is set to change dramatically over the coming years as companies may seek to curb greenhouse gas (GHG) emissions from fossil fuels to meet net-zero ambitions by 2050.

Measuring the carbon intensity of different commodities is one way the market has started to measure GHG emissions from various production types. In the case of crude oil, carbon intensity is used to measure the volume of GHG emissions to be offset; however, it could be considered an additional attribute, similar to API, sulfur or TAN. In the case of refined products, carbon intensity is critical in measuring Scope 2 and Scope 3 emissions.

Crude Carbon Intensity and the Refined Products Carbon Intensity values published by S&P Global Energy Horizons measure the amount of carbon dioxide equivalent emitted per unit of oil. For further information on the S&P Global Energy Horizons' Upstream Crude Carbon Intensity calculations can be found in the links below:

<https://www.spglobal.com/energy/en/products-solutions/carbon-scenarios/emissions-capabilities>

This is then used to calculate a Carbon Intensity Premium, using the daily Platts Carbon Removal Credit Assessment (Platts CRC, ACRC00). This calculation is published to three decimal places. The Platts CRC assessment reflects the price of carbon credits from projects that result in the removal of existing GHG

emissions from the atmosphere and include credits from both the Natural Carbon Capture and Technological Carbon Capture categories.

To learn more about the Platts CRC assessment please visit: <https://www.spglobal.com/content/dam/spglobal/ci/en/documents/platts/en/our-methodology/methodology-specifications/energy-transition/carbon-markets-specifications.pdf>

Crude Oil

S&P Global Energy Horizons' Upstream Crude Carbon Intensity calculations measure the impact of GHG emissions in the lifecycle from production to storage.

Crude Grade Upstream carbon intensity symbols

| Crude Grade | Upstream CI Premium \$/bbl | Currency | UOM |
|----------------|----------------------------|----------|-----|
| Bates | c | | |
| WTI Midland | WXTIC00 | USD | CBL |
| Troll | TXROC00 | USD | CBL |
| Oseberg | OXSEC00 | USD | CBL |
| Ekofisk | EXKOC00 | USD | CBL |
| Forties | FXORC00 | USD | CBL |
| Brent | BXREC00 | USD | CBL |
| Dubai | AGINA00 | USD | CBL |
| Oman | AGINB00 | USD | CBL |
| Al-Shaheen | AGINC00 | USD | CBL |
| Upper Zakum | AGIND00 | USD | CBL |
| Das Blend | AGINE00 | USD | CBL |
| Arab Light | AGINF00 | USD | CBL |
| Saharan Blend | AGING00 | USD | CBL |
| Murban | AGINH00 | USD | CBL |
| Canadon Seco | AMGLB00 | USD | CBL |
| Castilla Blend | AMGLH00 | USD | CBL |
| Cuban Heavy | AMGLI00 | USD | CBL |
| Escalante | AMGLC00 | USD | CBL |
| Galeota Mix | AMGLR00 | USD | CBL |
| Istmo | AMGLP00 | USD | CBL |
| Jubarte | AMGLD00 | USD | CBL |
| Liza | AMGLL00 | USD | CBL |
| Maya | AMGLQ00 | USD | CBL |
| Medanito | AMGLA00 | USD | CBL |
| Merrey 16 | AMGLS00 | USD | CBL |
| Napo | AMGLK00 | USD | CBL |
| Olmecca | AMGLO00 | USD | CBL |
| Oriente | AMGLJ00 | USD | CBL |
| Payara | AMGLM00 | USD | CBL |
| Roncador Heavy | AMGLE00 | USD | CBL |
| Rubiales | AMGLG00 | USD | CBL |
| Tupi | AMGRY00 | USD | CBL |
| Unity Gold | AMGLN00 | USD | CBL |

Crude Grade Upstream carbon intensity symbols

| Crude Grade | Upstream CI Premium \$/bbl | Currency | UOM |
|-----------------------------------|----------------------------|----------|-----|
| Bates | c | | |
| Vasconia | AMGLF00 | USD | CBL |
| Alaskan North Slope | AMGRA00 | USD | CBL |
| Bakken | AMGRC00 | USD | CBL |
| Eagle Ford | AMGRB00 | USD | CBL |
| Mixed Sweet Blend | AMGRG00 | USD | CBL |
| West Texas Intermediate (Cushing) | AMGRE00 | USD | CBL |
| West Texas Intermediate (MEH) | AMGRD00 | USD | CBL |
| Wyoming Sweet | AMGRF00 | USD | CBL |

Crude Upstream and Midstream carbon intensity symbols

| Crude Field | Upstream CI KgC02e/boe | Upstream CI Premium \$/boe | Transport Route | Transport CI Premium \$/bbl | Currency | UOM |
|----------------------|------------------------|----------------------------|-----------------------------|-----------------------------|----------|-----|
| Bates: | U | c | | c | | |
| Alpine | ALPIC40 | ALPIC00 | Alaska to West Coast | ALPIC10 | USD | CBL |
| Alvheim | ALVHC40 | ALVHC00 | Alvheim to Havre | ALVHC10 | USD | CBL |
| Anadarko | ANADC40 | ANADC00 | Oklahoma to Gulfcoast | ANADC10 | USD | CBL |
| Appomattox | APPOC40 | APPOC00 | Appomattox to Changxing | APPOC10 | USD | CBL |
| Atlantis | ATLAC40 | ATLAC00 | Atlantis to Qingdao | ATLAC10 | USD | CBL |
| Auger | AUGEC40 | AUGEC00 | Auger to Qingdao | AUGEC10 | USD | CBL |
| Bakken | BAKNC40 | BAKNC00 | Beaumont to Rotterdam | BAKNC10 | USD | CBL |
| Bakken-Canada | BAKKC40 | BAKKC00 | Canada to Midwest | BAKKC10 | USD | CBL |
| Big-Foot | BIGMC40 | BIGMC00 | Bigfoot to Daesan | BIGCC10 | USD | CBL |
| Buzzard | BZRDC40 | BZRDC00 | Houndpoint to Rotterdam | BZRDC10 | USD | CBL |
| CA-Coast | CAMCC40 | CAMCC00 | Kern to SoCal | CAMCC10 | USD | CBL |
| Cantarell | CNTLC40 | CNTLC00 | Cantarell to Bilbao | CNTLC10 | USD | CBL |
| Captain | CAPTC40 | CAPTC00 | Captain to Hamburg | CAPTC10 | USD | CBL |
| Cardium Shale | CARDC40 | CARDC00 | Cardium to Canada | CARDC10 | USD | CBL |
| Catcher | CATCC40 | CATCC00 | Catcher to Rotterdam | CATCC10 | USD | CBL |
| Chinook | CHINC40 | CHINC00 | Chinook to Changxing | CHINC10 | USD | CBL |
| Clair | CLAIC40 | CLAIC00 | Claire to Stanlow | CLAIC10 | USD | CBL |
| Cold-Lake | CDLKC40 | CDLKC00 | Canada - US Midwest | CDLKC10 | USD | CBL |
| CVE Christina Lake | CVECC40 | CVECC00 | Canada to Midwest | CVECC10 | USD | CBL |
| Denver-Julesburg | DENVC40 | DENVC00 | Denver to Gulfcoast | DENVC10 | USD | CBL |
| Devils-Tower | DEVIC40 | DEVIC00 | Devils to Daesan | DEVIC10 | USD | CBL |
| Eagle Ford | EGFDC40 | EGFDC00 | Houston to Qingdao | EGFDC10 | USD | CBL |
| Edvard-Grieg | EDVAC40 | EDVAC00 | Edvard-Grieg to Sarroch | EDVAC10 | USD | CBL |
| Ekofisk | EKFSC40 | EKFSC00 | Teesside to Rotterdam | EKFSC10 | USD | CBL |
| Europa | EUROC40 | EUROC00 | Europa to Daesan | EUROC10 | USD | CBL |
| Firebag | FIREC40 | FIREC00 | Canada to Midwest | FIREC10 | USD | CBL |
| Foster Creek | FOSTC40 | FOSTC00 | Canada to Gulfcoast | FOSTC10 | USD | CBL |
| Ghawar | GHWRC40 | GHWRC00 | Ras Tanura to Qingdao | GHWRC10 | USD | CBL |
| Girassol | GRSLC40 | GRSLC00 | Girassol to Qingdao | GRSLC10 | USD | CBL |
| Golden-Eagle | GOLDC40 | GOLDC00 | Golden-Eagle to Grangemouth | GOLDC10 | USD | CBL |
| Goliat | GOLIC40 | GOLIC00 | Goliat to Rotterdam | GOLIC10 | USD | CBL |
| Grane | GRANC40 | GRANC00 | Sture to Immingham | GRANC10 | USD | CBL |
| Great-White | GREAC40 | GREAC00 | Great-White to Changxing | GREAC10 | USD | CBL |
| Gulf-Coast-Louisiana | GULFC40 | GULFC00 | Lousiana to Texas | GULFC10 | USD | CBL |

Crude Upstream and Midstream carbon intensity symbols

| Crude Field | Upstream CI KgC02e/boe | Upstream CI Premium \$/boe | Transport Route | Transport CI Premium \$/bbl | Currency | UOM |
|--------------------|------------------------|----------------------------|-----------------------------|-----------------------------|----------|-----|
| Bates: | U | c | | c | | |
| Gullfaks | GULLC40 | GULLC00 | Gullfaks to Brofjorden | GULLC10 | USD | CBL |
| Hebron | HEBRC40 | HEBRC00 | Hebron to Canada | HEBRC10 | USD | CBL |
| Heidrun | HEIDC40 | HEIDC00 | Heidrun to Rotterdam | HEIDC10 | USD | CBL |
| Hibernia | HIBEC40 | HIBEC00 | Hibernia to Canada | HIBEC10 | USD | CBL |
| Horn-Mountain | HORNC40 | HORNC00 | Horn-Mountain to Qingdao | HORNC10 | USD | CBL |
| Ivar-Aasen | IVARC40 | IVARC00 | Ivar-Aasen to Rotterdam | IVARC10 | USD | CBL |
| Jack | JAKKC40 | JAKKC00 | Jack to Qingdao | JAKKC10 | USD | CBL |
| Jackfish | JACKC40 | JACKC00 | Canada to Midwest | JACKC10 | USD | CBL |
| John Sverdrup | JSVRC40 | JSVRC00 | Mongstad to Rotterdam | JSVRC10 | USD | CBL |
| Julia | JULIC40 | JULIC00 | Julia to Daesan | JULIC10 | USD | CBL |
| Kirby Lake | KIRBC40 | KIRBC00 | Canada to Midwest | KIRBC10 | USD | CBL |
| Kirkuk | KIRKC40 | KIRKC00 | Ceyhan to Rotterdam | KIRKC10 | USD | CBL |
| Kraken | KRAKC40 | KRAKC00 | Kraken to Rotterdam | KRAKC10 | USD | CBL |
| Kuparuk-River | KUPAC40 | KUPAC00 | Alaska to US West Coast | KUPAC10 | USD | CBL |
| Leo | LEOMC40 | LEOMC00 | Leo to Daesan Coast | LEOCC10 | USD | CBL |
| Long Lake | LONGC40 | LONGC00 | Canada to Midwest | LONGC10 | USD | CBL |
| Lucius | LUCSC40 | LUCSC00 | Lucius to Qingdao | LUCSC10 | USD | CBL |
| MacKay River | MCKAC40 | MCKAC00 | Canada to Rockies | MCKAC10 | USD | CBL |
| Mad-Dog | MADAC40 | MADAC00 | Mad-Dog to Changxing | MADAC10 | USD | CBL |
| Mariner | MARIC40 | MARIC00 | Mariner to Pascagoula | MARIC10 | USD | CBL |
| Mars-Ursa | MRURC40 | MRURC00 | Mars to Qingdao | MRURC10 | USD | CBL |
| MEG Christina Lake | MEGCC40 | MEGCC00 | Canada to Gulfcoast | MEGCC10 | USD | CBL |
| Montney Shale | MONTC40 | MONTC00 | Montney to to | MONTC10 | USD | CBL |
| Oseberg | OSEBC40 | OSEBC00 | Sture to Rotterdam | OSEBC10 | USD | CBL |
| Permian-Delaware | PRDLC40 | PRDLC00 | Corpus Christi to Rotterdam | PRDLC10 | USD | CBL |
| Permian-Midland | PRMDC40 | PRMDC00 | Corpus Christi to Rotterdam | PRMDC10 | USD | CBL |
| Permian-Other | PERMC40 | PERMC00 | Corpus to Qingdao | PERMC10 | USD | CBL |
| Powder-River | POWDC40 | POWDC00 | Wyoming to Gulfcoast | POWDC10 | USD | CBL |
| Primrose/Wolf Lake | PRMWC40 | PRMWC00 | Canada to Midwest | PRMWC10 | USD | CBL |
| Prudhoe-Bay | PRUDC40 | PRUDC00 | Alaska to West Coast | PRUDC10 | USD | CBL |
| Salina | SALIC40 | SALIC00 | Kansas to Gulfcoast | SALIC10 | USD | CBL |
| San-Joaquin | SANMC40 | SANMC00 | San-Joaquin to Socal | SANAC10 | USD | CBL |
| Schiehallion | SCHIC40 | SCHIC00 | Schiellhallion to Rotterdam | SCHIC10 | USD | CBL |
| Schrader-Bluff | SCHRC40 | SCHRC00 | Alaska to US West Coast | SCHRC10 | USD | CBL |

Crude Upstream and Midstream carbon intensity symbols

| Crude Field | Upstream CI KgC02e/boe | Upstream CI Premium \$/boe | Transport Route | Transport CI Premium \$/bbl | Currency | UOM |
|------------------|------------------------|----------------------------|---------------------------|-----------------------------|----------|-----|
| Bates: | U | c | | c | | |
| SCOOP-STACK | SC00C40 | SC00C00 | Oklahoma to Gulfcoast | SC00C10 | USD | CBL |
| Shenzi | SHENC40 | SHENC00 | Shenzi to Daesan | SHENC10 | USD | CBL |
| Snorre | SNORC40 | SNORC00 | Snorre to Statfjord | SNORC10 | USD | CBL |
| Statfjord | STATC40 | STATC00 | Statfjord to Rotterdam | STATC10 | USD | CBL |
| Stones | STONC40 | STONC00 | Stones to Daesan | STONC10 | USD | CBL |
| Sunrise | SUNRC40 | SUNRC00 | Canada to Midwest | SUNRC10 | USD | CBL |
| Surmont | SURMC40 | SURMC00 | Canada to Gulfcoast | SURMC10 | USD | CBL |
| Tahiti | TAHIC40 | TAHIC00 | Tahiti to Yeosu | TAHIC10 | USD | CBL |
| Tengiz | TNGZC40 | TNGZC00 | Novo to Rotterdam | TNGZC10 | USD | CBL |
| Thunder-Horse | THUNC40 | THUNC00 | Thunder-Horse to Qingdao | THUNC10 | USD | CBL |
| Troll | TROLC40 | TROLC00 | Mongstad to Rotterdam | TROLC10 | USD | CBL |
| Tupi | TUPIC40 | TUPIC00 | Rio to Qingdao CI | TUPIC10 | USD | CBL |
| Uinta | UINTC40 | UINTC00 | Northeast to Gulfcoast | UINTC10 | USD | CBL |
| Utica | UTICC40 | UTICC00 | Northeast to Gulfcoast | UTICC10 | USD | CBL |
| Valhall | VALHC40 | VALHC00 | Valhall to Rotterdam | VALHC10 | USD | CBL |
| Viking Shale | VIKIC40 | VIKIC00 | Canada to Midwest | VIKIC10 | USD | CBL |
| Agbami | AGBAC40 | AGBAC00 | Agbami to Paradip | AGBAC10 | USD | CBL |
| Azeri | AZERC40 | AZERC00 | Ceyhan to Sarroch | AZERC10 | USD | CBL |
| Bombay High | MUMBC40 | MUMBC00 | Bombay High to Qingdao | MUMBC10 | USD | CBL |
| Bonga | BONGC40 | BONGC00 | Bonga to Rotterdam | BONGC10 | USD | CBL |
| Bozhong | BOZHC40 | BOZHC00 | Bohai Pengbo to Singapore | BOZHC10 | USD | CBL |
| Burgan | BURGC40 | BURGC00 | Mina to Ulsan | BURGC10 | USD | CBL |
| Cusiana | CUSIC40 | CUSIC00 | Tolu to Houston | CUSIC10 | USD | CBL |
| Dukhan | DUKHC40 | DUKHC00 | Mesaieed to Singapore | DUKHC10 | USD | CBL |
| Fateh | FATEC40 | FATEC00 | Fateh to Kiire | FATEC10 | USD | CBL |
| Marun | MARUC40 | MARUC00 | Kharg Island to Qingdao | MARUC10 | USD | CBL |
| Murban | MURBC40 | MURBC00 | Fujairah to Chiba | MURBC10 | USD | CBL |
| Orinoco Oil Belt | ORINC40 | ORINC00 | Jose to Sikka | ORINC10 | USD | CBL |
| Rumaila | RUMAC40 | RUMAC00 | Al Basrah to Sikka | RUMAC10 | USD | CBL |
| Sacha | SACHC40 | SACHC00 | Esmeraldas to Long Beach | SACHC10 | USD | CBL |
| Safaniya | SAFAC40 | SAFAC00 | Ras Tanura to Changxing | SAFAC10 | USD | CBL |
| Samotlor | SAMOC40 | SAMOC00 | Primorsk to Rotterdam | SAMOC10 | USD | CBL |
| Waha | WAHAC40 | WAHAC00 | Zawia to Augusta | WAHAC10 | USD | CBL |
| West Qurna | WESTC40 | WESTC00 | Al Basrah to Sikka | WESTC10 | USD | CBL |

Crude Upstream and Midstream carbon intensity symbols

| Crude Field | Upstream CI KgC02e/boe | Upstream CI Premium \$/boe | Transport Route | Transport CI Premium \$/bbl | Currency | UOM |
|----------------|------------------------|----------------------------|--------------------------|-----------------------------|----------|-----|
| Bates: | U | c | | c | | |
| Zubair | ZUBAC40 | ZUBAC00 | Al Basrah to Sikka | ZUBAC10 | USD | CBL |
| Zuluf | ZULUC40 | ZULUC00 | Ras Tanura to Changxing | ZULUC10 | USD | CBL |
| Alwyn North | ALWYC40 | ALWYC00 | Sullom Voe to Rotterdam | ALWYC10 | USD | CBL |
| Arbroath | ARBRC40 | ARBRC00 | Houndpoint to Rotterdam | ARBRC10 | USD | CBL |
| Auk | AUKCC40 | AUKCD00 | Teeside to Rotterdam | AUKCC10 | USD | CBL |
| Brae | BRAEC40 | BRAEC00 | Houndpoint to Rotterdam | BRAEC10 | USD | CBL |
| Brage | BRAGC40 | BRAGC00 | Sture to Brofjorden | BRAGC10 | USD | CBL |
| Bruce | BRUCC40 | BRUCC00 | Houndpoint to Rotterdam | BRUCC10 | USD | CBL |
| Clyde | CLYDC40 | CLYDC00 | Teeside to Rotterdam | CLYDC10 | USD | CBL |
| Cormorant | CORMC40 | CORMC00 | Sullom Voe to Rotterdam | CORMC10 | USD | CBL |
| Embla | EMBLC40 | EMBLC00 | Teeside to Rotterdam | EMBLC10 | USD | CBL |
| Everest | EVERC40 | EVERC00 | Houndpoint to Rotterdam | EVERC10 | USD | CBL |
| Forties | FORTC40 | FORTC00 | Houndpoint to Rotterdam | FORTC10 | USD | CBL |
| Fram | FRAMC40 | FRAMC00 | Mongstad to Rotterdam | FORTD10 | USD | CBL |
| Gannet | GANNC40 | GANNC00 | Teeside to Rotterdam | GANNC10 | USD | CBL |
| Joanne | JOANC40 | JOANC00 | Teeside to Rotterdam | JOANC10 | USD | CBL |
| Judy | JUDYC40 | JUDYC00 | Teeside to Rotterdam | JUDYC10 | USD | CBL |
| Magnus | MAGNC40 | MAGNC00 | Sullom Voe to Rotterdam | MAGNC10 | USD | CBL |
| Nelson | NELSC40 | NELSC00 | Houndpoint to Rotterdam | NELSC10 | USD | CBL |
| Ninian | NINIC40 | NINIC00 | Sullom Voe to Rotterdam | NINIC10 | USD | CBL |
| Scott | SCOTC40 | SCOTC00 | Houndpoint to Rotterdam | SCOTC10 | USD | CBL |
| Tiffany | TIFFC40 | TIFFC00 | Houndpoint to Rotterdam | TIFFC10 | USD | CBL |
| Toni | TONIC40 | TONIC00 | Houndpoint to Rotterdam | TONIC10 | USD | CBL |
| Ula | ULACC40 | ULACC00 | Teeside to Rotterdam | ULACC10 | USD | CBL |
| Falah | AMRGN40 | AMRGA00 | Falah to Kiire | ASITA10 | USD | CBL |
| Rashid | AMRGO40 | AMRGB00 | Mina to Kiire | ASITB10 | USD | CBL |
| Upper Zakum | AMRGP40 | AMRGC00 | Zirku to Zhoushan | ASITC10 | USD | CBL |
| Lower Zakum | AMRGQ40 | AMRGD00 | Zirku to Sikka | ASITD10 | USD | CBL |
| Al-Shaheen | AMRGR40 | AMRGE00 | Al-Shaheen to Singapore | ASITE10 | USD | CBL |
| Oman Basin | AMRGS40 | AMRGF00 | Salalah to Tranmere | ASITF10 | USD | CBL |
| Hassi Messaoud | AMRGT40 | AMRGG00 | Skikda to Tranmere | ASITG10 | USD | CBL |
| Khurais | AMRGU40 | AMRGH00 | Ras Tanura to Ain Sukhna | ASITH10 | USD | CBL |
| Abu Hadriya | AMRGV40 | AMRGI00 | Ras Tanura to Ain Sukhna | ASITI10 | USD | CBL |
| Umm Shaif | AMRGW40 | AMRGJ00 | Zirku to Sikka | ASITJ10 | USD | CBL |

Crude Upstream and Midstream carbon intensity symbols

| Crude Field | Upstream CI KgC02e/boe | Upstream CI Premium \$/boe | Transport Route | Transport CI Premium \$/bbl | Currency | UOM |
|-----------------------|------------------------|----------------------------|---|-----------------------------|----------|-----|
| Bates: | U | c | | c | | |
| Nasr | AMRGX40 | AMRGK00 | Zirku to Sikka | ASITK10 | USD | CBL |
| El Bunduq | AMRGY40 | AMRGL00 | Zirku to Sikka | ASITL10 | USD | CBL |
| Abu Al Bukhoosh | AMRGZ40 | AMRGM00 | Zirku to Sikka | ASITM10 | USD | CBL |
| Canadon Seco | AMGNK40 | AMGMN00 | Comodoro Rivadavia to Long Beach | AMGPH10 | USD | CBL |
| El Medanito | AMGNJ40 | AMGMM00 | Bahia Blanca to Cherry Point | AMGPG10 | USD | CBL |
| Escalante | AMGNL40 | AMGMO00 | Comodoro Rivadavia to Long Beach | AMGPI10 | USD | CBL |
| Jubarte | AMGNM40 | AMGMP00 | Madre de Deus to Singapore | AMGPJ10 | USD | CBL |
| Roncador | AMGNN40 | AMGMQ00 | Madre de Deus to Galveston | AMGPK10 | USD | CBL |
| Castilla (Norte Este) | AMGNQ40 | AMGMT00 | Covenas Terminal to Jieyang | AMGPN10 | USD | CBL |
| Cupiagua | AMGNO40 | AMGMR00 | Covenas Terminal to Sikka | AMGPL10 | USD | CBL |
| Rubiales | AMGNP40 | AMGMS00 | Covenas Terminal to Jieyang | AMGPM10 | USD | CBL |
| Varadero | AMGNR40 | AMGMU00 | Mariel to Antwerp | AMGPO10 | USD | CBL |
| Cuyabeno | AMGNT40 | AMGMW00 | Balao to Houston | AMGPQ10 | USD | CBL |
| Ishpingo | AMGNU40 | AMGMX00 | Balao to Panama Canal | AMGPR10 | USD | CBL |
| Jivino-Napo | AMGNV40 | AMGMY00 | Balao to Panama Canal | AMGPS10 | USD | CBL |
| Shushufindi-Aguarico | AMGNS40 | AMGMV00 | Balao to Galveston | AMGPP10 | USD | CBL |
| Liza 1 | AMGNW40 | AMGMZ00 | FPSO Liza Destiny to Rotterdam | AMGPT10 | USD | CBL |
| Liza 2 | AMGPF40 | AMGNI00 | FPSO Liza Unity to Chiriqui Grande Terminal | AMGQC10 | USD | CBL |
| Payara | AMGNX40 | AMGNA00 | FPSO Prosperity to Chiriqui Grande Terminal | AMGPU10 | USD | CBL |
| Abkatun | AMGPA40 | AMGND00 | Mexico STS to Daesan | AMGPX10 | USD | CBL |
| Chuc | AMGPB40 | AMGNE00 | Coatzacoalcos to Cartagena | AMGPY10 | USD | CBL |
| Pol | AMGPC40 | AMGNF00 | Mexico STS to Yokkaichi | AMGPZ10 | USD | CBL |
| Tsimin | AMGNZ40 | AMGNC00 | Dos Bocas to Corpus Christi | AMGPW10 | USD | CBL |
| Xux | AMGNY40 | AMGNB00 | Dos Bocas to Milazzo Anchorages | AMGPV10 | USD | CBL |
| Galeota (Trintes) | AMGPD40 | AMGNG00 | Galeota Point to Callao | AMGQA10 | USD | CBL |
| Santa Barbara | AMGPE40 | AMGNH00 | Jose Terminal to Singapore | AMQGB10 | USD | CBL |

Shipping assumptions

The carbon intensity premiums reflect the respective cost to offset the emissions from upstream production of each crude field, as well as the additional midstream carbon intensity cost to deliver each type of crude to specific refinery regions, as highlighted below. Depending on the carbon intensity of each crude and the carbon intensity of

the route, the calculation is a \$/b assessment that measures how much it would cost to use a removals voluntary carbon credit to compensate for the associated GHG emissions from the production of the crude as well as the route in question. The higher the carbon intensity, the larger the carbon intensity premium will be to account for the price of carbon removal. This is a calculated carbon intensity premium based on Platts CRC.

Refined products carbon intensity symbols

| Refined product | CI Premium \$/bbl | Region | Currency | UOM |
|-------------------------------------|-------------------|----------------|----------|-----|
| Bates: | c | | | |
| Gasoil 10ppm FOB Singapore Cargo | ALCEH00 | Southeast Asia | USD | CBL |
| Gasoline Unl 92 FOB Singapore Cargo | ALCEJ00 | Southeast Asia | USD | CBL |
| Jet Kero FOB Singapore Cargo | ALCEL00 | Southeast Asia | USD | CBL |

| Refined product | CI Premium \$/gal | Region | | |
|------------------------------------|-------------------|---------------|-----|-----|
| Bates: | c | | | |
| Gasoline CBOB USGC Prompt Pipeline | ALCEN00 | US Gulf Coast | USD | CBG |
| Jet Kero 54 USGC Prompt Pipeline | ALCEP00 | US Gulf Coast | USD | CBG |
| ULSD USGC Prompt Pipeline | ALCER00 | US Gulf Coast | USD | CBG |

| Refined product | CI Premium \$/mt | Region | | |
|-------------------------------------|------------------|------------------|-----|-----|
| Bates: | c | | | |
| Gasoline Eurobob (E5) FOB NWE Barge | ALCEB00 | Northwest Europe | USD | CBT |
| Jet FOB NWE Barge | ALCED00 | Northwest Europe | USD | CBT |
| ULSD 10ppm FOB NWE Barge | ALCEF00 | Northwest Europe | USD | CBT |

Refined Products

The carbon intensity premiums reflect the respective cost to offset the emissions from the production of key transportation fuels- gasoline, diesel, and jet, in the main geographical demand regions – US Gulf Coast, North-West Europe, and South-East Asia.

North America Gas Carbon Intensity

| Location | Carbon Intensity Cost (\$/MMBtu) |
|------------------------|----------------------------------|
| Chicago city-gates | ACCAA00 |
| AECO-C | ACCAB00 |
| Dawn Ontario | ACCAC00 |
| Eastern Gas South | ACCAD00 |
| Waha | ACCAE00 |
| NGPL Midcontinent | ACCAG00 |
| Kern River, Opal plant | ACCAH00 |
| PG&E Malin | ACCAJ00 |
| Algonquin City-Gates | ACCAM00 |
| Henry Hub | ACCAF00 |
| Houston Ship Channel | ACCAK00 |
| SoCal Gas | ACCAI00 |
| Transco Zone 6 Non-NY | ACCAL00 |

US Methane Intensity

More information on the S&P Global Energy Horizons' US Methane Intensity data calculated by the S&P Global Energy Horizons team can be found here:

North America Gas Carbon Intensity Assessments

Platts publishes daily natural gas carbon accounted costs from 22 representative production basins in North America.

Further Information on the S&P Global Energy Horizons carbon accounted costs can be found here:

<https://www.spglobal.com/energy/en/products-solutions/carbon-scenarios/emissions-capabilities>

Frequency of publication

Carbon intensity costs are published on a daily cadence.

Location

Platts is publishing assessments for the following locations:

- AECO-C
- Chicago City-Gates
- Dawn
- PG&E Malin
- Eastern Gas, South
- Waha

- Kern River, Opal plant
- NGPL Midcontinent
- Algonquin City-Gates
- Henry Hub
- Houston Ship Channel
- SoCal Gas
- Transco Zone 6 Non-NY

Units

The carbon-accounted cost of natural gas at these locations is published daily in \$/MMBtu, using Platts CRC as an input.

Related Markets

LNG

Platts publishes a number of Carbon Accounted LNG assessments. The specifications for these assessments can be found in the Global LNG methodology guide here:

<https://www.spglobal.com/content/dam/spglobal/ci/en/documents/platts/en/our-methodology/methodology-specifications/lng/lng-specifications.pdf>

Metals

Platts publishes a number of Low Carbon Metals assessments. Please refer to the following guides:

<https://www.spglobal.com/content/dam/spglobal/ci/en/documents/platts/en/our-methodology/methodology-specifications/metals/nonferrous-specifications.pdf>

<https://www.spglobal.com/content/dam/spglobal/ci/en/documents/platts/en/our-methodology/methodology-specifications/metals/iron-ore-specifications.pdf>

<https://www.spglobal.com/content/dam/spglobal/ci/en/documents/platts/en/our-methodology/methodology-specifications/metals/steel-ferrous-specifications.pdf>

Fertilizers

Platts publishes a number of Low Carbon Fertilizer assessments. The specifications for these assessments can be found in the Fertecon methodology guide here:

https://www.spglobal.com/content/dam/spglobal/ci/en/documents/platts/en/our-methodology/methodology-specifications/minerals-fertilizers/fertecon_specifications.pdf

Chemicals

Platts publishes a number of Low Carbon chemical assessments. Please refer to the following guides:

<https://www.spglobal.com/content/dam/spglobal/ci/en/documents/platts/en/our-methodology/methodology-specifications/chemicals/chemicals-americas-specifications.pdf>

<https://www.spglobal.com/content/dam/spglobal/ci/en/documents/platts/en/our-methodology/methodology-specifications/chemicals/chemicals-europe-specifications.pdf>

<https://www.spglobal.com/content/dam/spglobal/ci/en/documents/platts/en/our-methodology/methodology-specifications/chemicals/chemicals-asia-pacific-specifications.pdf>

Freight

Platts publishes a number of Carbon-Inclusive freight assessments. The specifications for these assessments can be found in the Global Freight methodology guide here:

<https://www.spglobal.com/content/dam/spglobal/ci/en/documents/platts/en/our-methodology/methodology-specifications/shipping/freight-specifications.pdf>

Revision history

December 2025: Calculation methodology for S&P Global Energy Horizons intensity data removed. EUB, UK certified waste and specification updates added to European biomethane. Platts conducted an annual review of this guide and made grammatical changes and edits to language throughout for greater clarity.

August 2025: Platts discontinued Methane Performance Certificate and Methane Intensity Premium assessments.

April 2025: Platts added 27 additional Crude Carbon Intensities calculated in gCO₂e/MJ and kgCO₂e/bbl by the S&P Global Commodity Insights analytics team. Platts added new units in gCO₂e/MJ for the existing 41 Crude Carbon Intensities which are calculated by the S&P Global Commodity Insights analytics team. Platts removed Producer Certified Gas.

November 2024: Platts created the Carbon Intensity and Low Carbon Markets Specifications Guide which followed the merging of the Low Carbon Gas, Carbon Intensity, and Methane Performance Certificate methodology guides. Platts also added reference to other low-carbon market assessments and their respective methodology guides. Platts clarified the roll calendar for methane intensity premium as of November 2024. Platts clarified the publishing schedule for carbon intensity calculations which feed into the Crude Carbon Intensity Premiums.