

FAQs for Survey Forms EIA-800, EIA-810 & EIA-820

Essentials

What is the Form EIA-800?

The Energy Information Administration (EIA) Form EIA-800, “Weekly Refinery Report,” is used to collect data on the operations of petroleum refineries.

What is the Form EIA-810?

The Energy Information Administration (EIA) Form EIA-810, “Monthly Refinery Report,” is used to collect data on the operations of all petroleum refineries located in the 50 States, District of Columbia, Puerto Rico, the Virgin Islands, Guam, and other U.S. possessions.

What is the Form EIA-820?

The Energy Information Administration (EIA) Form EIA-820, “Annual Refinery Report,” is used to collect data on current and projected capacities of all operable petroleum refineries located in the 50 States, District of Columbia, Puerto Rico, the Virgin Islands, Guam, and other U.S. possessions.

Is reporting data on Forms EIA-800, EIA-810, and EIA-820 mandatory?

For those companies identified as respondents, yes, reporting is mandatory based on Title 15 U.S.C. §772(b), as amended.

Why does my company have to submit its data to EIA?

The Form EIA-800 is used to collect data on the operations of petroleum refineries, Form EIA-810 and EIA-820 are used to collect data on the operations and capacities of all petroleum refineries located in the 50 States, District of Columbia, Puerto Rico, the Virgin Islands, Guam, and other U.S. possessions. Data from these surveys inform policy and business decisions, and the data promote efficient markets by providing transparency to petroleum and biofuel supplies. Use of this data by academic researchers, educators, news media, and the general public promotes understanding of energy and its interaction with the economy and the environment.

How does EIA identify companies that must respond to the EIA-800?

Operators of petroleum refineries and non-refinery operators of distillation, reforming, cracking, coking, hydrotreating and similar processes are selected into the EIA weekly sample according to a procedure that assures coverage of 90 percent of each information element.

How does EIA identify companies that must respond to the EIA-810?

Operators of all operating and idle petroleum refineries and non-refinery operators of distillation, reforming, cracking, coking, hydrotreating and similar processes located in the 50 States, District of Columbia, Puerto Rico, the Virgin Islands, Guam, and other U.S. possessions are required to report.

How does EIA identify companies that must respond to the EIA-820?

Operators of all operating and idle petroleum refineries and non-refinery operators of distillation, reforming, cracking, coking, hydrotreating and similar processes located in the 50 States, District of Columbia, Puerto Rico, the Virgin Islands, Guam, and other U.S. possessions are required to report. In addition, Form EIA-820 must be completed by new refineries under construction and refineries shut down during the previous year.

What will the information collected be used for?

EIA uses this survey data in statistical reports including, but not limited to, the Weekly Petroleum Status Report (WPSR), Petroleum Supply Monthly (PSM), and the Monthly Energy Review (MER). EIA uses this survey data to support analysis and projection work with results reported in the Short Term Energy Outlook (STEO), Annual Energy Outlook (AEO), and other reports. EIA makes reports available at <https://www.eia.gov/>.

Form Questions

EIA-820

If our company submits on the EIA-820, does the EIA-810 replace the need to submit the EIA-820?

No. You should continue to submit the EIA-820 report.

Is natural gas feedstock for hydrogen production included when reporting natural gas quantity used as fuel (code 105)?

Exclude natural gas feedstock for hydrogen production under code 105 on EIA-820. Report only the quantity of natural gas consumed as fuel at the refinery. Report natural gas used for hydrogen production under code 107.

EIA-810

If our company submits on the EIA-810, does the EIA-800 replace the need to submit the EIA-810?

No. You should continue to submit the EIA-810 report

Where is hydrogen reported?

Report receipts and inputs of hydrogen as "Hydrogen" (code 091). Quantities reported by refiners on code 091 include hydrogen produced from hydrogen plants located at refineries and hydrogen purchased from third-party suppliers.

Reformers also provide hydrogen to refineries, but hydrogen produced from reformers must be excluded from code 091 in order to avoid double counting inputs. Hydrogen input from refinery reformer units is counted indirectly as input of crude oil or unfinished oils.

Where are feedstock inputs for hydrogen production reported?

Feedstock inputs for hydrogen production are not reported on the EIA-810. See the question "How should I report still gas and naphtha on the EIA-810 when these products are used as hydrogen plant feedstock?" for further information.

How should I report still gas and naphtha when these products are used as hydrogen plant feedstock?

Report still gas (code 045), special naphtha (code 051), and unfinished oil, naphtha and lighter (code 820) as shipments to a hydrogen plant when these products are used as hydrogen feedstock. Report any feedstock return streams from a hydrogen plant as receipts from the hydrogen plant and inputs at the refinery.

It is important to maintain consistent product classification of feedstock shipments to a hydrogen plant and receipts of any feedstock return streams. For example, if special naphtha (code 051) will be used as hydrogen plant feedstock and there will be a return stream of hydrogen feedstock to the refinery, then feedstock shipments to the hydrogen plant, feedstock receipts from the hydrogen plant, and inputs to the refinery must all be reported on code 051. Inconsistent product classification will result if, for example, the feedstock shipment were reported as special naphtha (code 051), and the return stream were reported as unfinished oil, naphtha and lighter (code 820).

The above discussion applies only to feedstock for hydrogen production. See the question "On the EIA-810 survey, where is hydrogen reported?" for information on reporting hydrogen from hydrogen plants and third-party suppliers.

How do I convert standard cubic feet of hydrogen (code 091) to barrels?

The conversion factor is 19,426 standard cubic feet per barrel of fuel oil equivalent. So, when you divide the number of standard cubic feet of hydrogen by 19,426, your result will be in barrels.

Normal butane and isobutane each have 2 lines available for reporting, one labeled NGPL and one labeled LRG. How do I determine where on Form EIA-810 to report these products?

Normal Butane -NGPL (code 249) and Isobutane -NGPL (code 247) are products of natural gas processing plants and are usually called natural gas plant liquids (NGPL). Natural gas plant liquids originate at natural gas processing plants where the ethane and heavier hydrocarbons are separated from natural gas. Normal butane, isobutane, and pentanes plus are often received and input at refineries for blending and for use in certain refining processes such as alkylation. Ethane and propane from natural gas processing plants are not normally input to refinery process units or blending operations and because historically no refiners have reported input of NGPL ethane or propane on Form EIA-810 these products have been eliminated from the form.

Liquefied Refinery Gases (LRG) are products of refinery processing (distillation, cracking, etc.) of crude oil and unfinished oils and include the following product codes:

- 641 for ethane
- 631 for ethylene
- 642 for propane
- 632 for propylene
- 643 for normal butane
- 633 for butylene
- 644 for isobutane, and
- 634 for isobutylene

Olefin components (ethylene, propylene, normal butylene, isobutylene) are created from cracking processes that take place at refineries and chemical plants.

Sometimes it is unknown whether the butane or isobutane is NGPL or LRG. Also, products of natural gas processing plants are often commingled with liquefied refinery gases in storage. For this reason, we combined the NGPL, LRG and Olefins and created a product code for the total. These include:

- 108 for ethane/ethylene
- 246 for propane/propylene
- 244 for butane/butylene
- 245 for isobutane/isobutylene

Report the total beginning and ending stocks, receipts, inputs, production, shipments and use and loss for each of the four product categories above. In addition, report inputs and production for each of the components separately. When the source of the butane and isobutane is unknown, report inputs as NGPL (codes 247 and 249).

Fractionating plants used for separating mixed NGPL products are considered outside of refineries for purposes of EIA-810 reporting. This is true even when a fractionation plant is physically located within a refinery. Exclude input of mixed NGPL products and production of fractionated NGPL products from EIA-810 reporting. Operators of fractionation plants report inventory on Form EIA-816 "Monthly Natural Gas Liquids Report".

The definition of still gas in the EIA glossary identifies principle constituents as methane, ethane, ethylene, normal butane, butylene, propane, propylene, etc." The products listed include several that are listed elsewhere under separate product codes as liquefied refinery gases. How do I determine whether to report a product as liquefied refinery gas or still gas?

Still gas, (product code 045) reported on the EIA-810 survey, includes methane as well as products otherwise identified on the form as liquefied refinery gases (LRG). The product codes for liquefied refinery gases are:

- 641 for ethane
- 631 for ethylene
- 642 for propane
- 632 for propylene
- 643 for normal butane
- 633 for butylene
- 644 for isobutane, and
- 634 for isobutylene

Volumes must be reported as either still gas or LRG, but not both.

The usual difference between still gas and LRG is that liquefied refinery gases are fractionated or at least identified as separate products based on chemical analysis, while still gas is unfractionated. LRG products may be used as refinery fuel, or they may be shipped outside the refinery for use as fuel or input for chemical plants. Still gas is normally used as refinery fuel, though still gas may also be shipped to fractionators, chemical plants or hydrogen plants.

Reports on the EIA-810 survey for refineries where still gas is used only as fuel typically show production equal to fuel use and loss with zero receipts, inputs, and shipments. Still gas may be shipped to petrochemical or hydrogen plants, where plant operators extract parts of the still gas stream needed for their operations. The remainder of the still gas may be returned to the producing refinery. The return

stream is reported on code 045 in the "receipt" and "input" columns, and then under "production" and "fuel use and loss" when it enters the refinery fuel system. It is often the case that known quantities are still gas receipts, shipments, and fuel use and loss. In this case, input is assumed equal to receipts. Production is the balancing item for the line such that (receipts - inputs + production - shipments - fuel use and loss = 0).

Report still gas by individual natural gas liquids and refinery olefins product components (ethane, propane, normal butane, isobutane, natural gasoline, ethylene, propylene, normal butylene, isobutylene) based on chemical analysis when still gas is fractionated into products whether fractionation happens at the refinery or at a facility downstream of the refinery and the composition of the still gas stream is known or can be estimated from prior fractionation reports. Report still gas products other than natural gas liquids and refinery olefins (e.g. methane), and unfractionated natural gas liquids and refinery olefins products on the still gas line (code 045).

Where do I report sulfur, and how do I convert short tons of sulfur to barrels?

Report sulfur under "Miscellaneous Products, non-fuel use" (code 097). The conversion factor is 3.17 barrels per short ton. So, when you multiply the number of short tons by 3.17, your result will be in barrels.

Where do I report carbon black feedstock?

Report carbon black feedstock under Petrochemical Feedstocks: other oils greater than or equal to 401 degrees End-point (code 824).

Concerning Product Codes 820 through 850 - How can I calculate the net input or net production for these products?

Product codes 820 - 850 are the four breakouts of product code 812 (Unfinished Oils). You should report either the (net) input or (net) production for each of these four unfinished oil breakouts. One way to determine the net input or net production of product codes 820 - 850 is to use the calculation shown below. Your ability to use this method depends on whether you are able to measure the beginning and ending inventory level, receipts, shipments, and fuel use & loss volumes for each of the four unfinished oil breakouts. This calculation derives either a net input value or net production value and is based on the material balance equation where: Beginning stocks plus receipts, minus input, plus production, minus shipments, minus fuel use & losses, equal ending stocks.

Calculation

By individual product code (820 thru 850), add the beginning of the month's stocks to receipts received (from outside the refinery). Take this sum and subtract shipments, fuel use & losses, and end of month stocks volumes. The calculated result will be either a positive or negative number. If the calculated quantity is a negative number (as is in example 1 below), report the quantity as a positive number under the "Production" column. If the calculated quantity is a positive number, report the quantity as a positive number under the "Input" column. For example:

Example 1

If, during Jan 2005, you had the following information available for product code 820 "Naphthas and Lighter":

- Beginning Stocks (BS) were "105"
- Receipts were "50"
- Shipments were "35"
- Fuel Use and Losses were "0"
- Ending Stocks (ES) were "200"

You would make the following calculation:

- BS 105
- Receipts +50
- Shipments -35
- ES 200
- Equals 80

In this example, you should report a positive "80" under the "Production" column for product code 820. During the month, the refinery produced more of product code 820 than was input.

Once you have calculated the net input or net production for each of the four breakouts (codes 820, 830,840, and 850), just sum the net inputs and net production and report the resulting sums on the unfinished oils total line (code 812).

How are different types of naphtha cargoes classified for reporting purposes?

Naphtha that will be used as reformer feed is classified as unfinished oils, naphtha and lighter (code 820). Naphtha intended for gasoline blending is classified as motor gasoline blending components. If the naphtha is intended for gasoline blending but it's not already blended to form RBOB (code 118), CBOB (code 139), or GTAB (code 117), then it is classified as All Other Motor Gasoline Blending Components (code 138).

Naphtha classified as unfinished oil or motor gasoline blending components must have an associated processing facility when it is reported as being imported. The processing facility is either a refinery or a blending terminal where the naphtha will be processed or blended to produce finished gasoline or other finished products.

In addition to unfinished oils and motor gasoline blending components, naphtha may fall into one of two additional product categories depending on intended end use. One product is special naphtha (code 051). Special naphtha is the classification to use for naphtha that is intended for use as solvent. Another possible classification for naphtha is petrochemical feedstock (code 822). This would be the correct product classification for naphtha intended for cracking into olefins.

EIA-800

What do I include in Product Code 001?

The total inputs line on Form EIA-800 should include the following:

- Inputs of Crude Oil
- Inputs of Natural Gas Plant Liquids
- Inputs of Hydrogen
- Inputs of Other Hydrocarbons

- Inputs of Renewable Fuels (Including fuel ethanol)
- Net Inputs of Unfinished Oils
- Net Inputs of Motor Gasoline Blending Components (codes 117, 118, 138, 139)
- Net Inputs of Aviation Gasoline Blending Components (code 112 on Form EIA 810)

Refineries will typically report negative net reruns of RBOB and CBOB (codes 118 and 139) because these are shipped out of the refineries to terminals where they are blended with fuel ethanol. Gasoline Treated as Blendstock (GTAB, code 117) or All Other Motor Gasoline Blending Components (code 138) could be shipped out of a refinery for blending elsewhere in which case the net reruns would be negative (production greater than inputs). If a refinery received GTAB or All Other Motor Gasoline Blending Components from another facility, then net reruns would be positive (inputs greater than production). A refinery that neither receives nor ships significant volumes motor gasoline blending components would generally have a rough balance of inputs and production with small volumes of net reruns resulting mostly from changes in inventory. In the balanced case, a refinery would have either positive or negative net reruns in any given week depending on the inventory situation.

Naturally, there are circumstances, such as a shut down of crude oil processing, where a refinery that normally has a rough balance of input and production for all other motor gasoline blending components might show significant net inputs from inventory. After returning to normal crude processing, the same refinery would likely show large negative net reruns (i.e. net production) of motor gasoline blending components as inventory was replenished.

Total input may be less than crude oil input and gross input to atmospheric crude oil distillation in cases where production of unfinished oils and/or gasoline blending components exceed input.

Product Code 050 - Only crude oil charged to the crude tower that goes to fuels units, not chemical units? Does that mean that we need to back off any i.e. naphtha that was used to charge chemical units and add back in the chemicals that were blended?

The instructions concerning inputs for making finished petrochemicals are intended to exclude any inputs (crude oil or otherwise) that went into the production of petrochemicals where the chemical products would not be reported on Form EIA 810 "Monthly Refinery Report". For example, suppose you were running crude oil and producing naphtha for petrochemical feedstock use (code 822 on Form EIA 810). You would report inputs of crude oil for producing petrochemical feedstocks. However, you would not report inputs of the naphtha chemical feedstocks when they were cracked into ethylene at a nearby chemical plant because the ethylene would not be reported as production on your refinery report. In general, every input reported has to have a corresponding production in order to make the processing gain/loss balance out correctly on the monthly EIA-810 survey. Naturally, your weekly reports on Form EIA-800 will never really balance because not all of your production can be reported since we only ask for selected "major" products.

Gross inputs reported on code 990 are used for calculating the utilization rate of your atmospheric crude oil distillation unit. The 990 inputs should include all the barrels of crude oil and other petroleum (unfinished oils etc.) input to your atmospheric crude unit. Since this number is only used for calculating the crude unit utilization rate, it also includes barrels that go through the unit more than one time during the reporting period. This is because every barrel counts against capacity for utilization purposes no matter how many times it goes through the unit. This is different from crude oil inputs because the crude oil input number is only telling us how much crude oil was used to produce the various product outputs from the refinery. The crude oil may be processed more than once in the various units, but in

the case of crude inputs we just want to know how much was input to the refinery and not every time it went through a unit.

In general, gross inputs are expected to be greater than crude inputs because gross inputs include things other than crude oil as well as any re-runs of the same barrels through the atmospheric crude unit. However, some refineries run crude oil directly to their vacuum distillation or other units. In this case, there would be crude oil that never goes through the atmospheric crude unit. If enough crude oil bypassed the atmospheric crude unit then it would be possible for crude inputs to exceed gross inputs to atmospheric crude units. Obviously, gross inputs on code 990 also are quite different from total inputs.

Submission

What are the reporting deadlines?

Form EIA-800 must be received by the EIA by 5 p.m. Eastern Time on the Monday following the end of the report period (e.g., the Form EIA-800 covering the week ending January 6, 2023 must be received by 5 p.m. Eastern Time January 9, 2023).

Form EIA-810 must be received by EIA by the 20th calendar day following the end of the report period (e.g., the Form EIA-810 covering the January report period must be received by February 20).

Form EIA-820 must be received by the EIA by February 15th of the designated report year.

How do I submit the form?

EIA has the secure file transmission (HTTPS) for companies to use when sending these forms to EIA. Secure transmission is an industry standard method to send information over the internet using encrypted processes. Access the EIA secure transmission site at:
<https://signon.eia.doe.gov/upload/noticeoog.jsp>

What time period should the data represent?

The Form EIA-800 weekly report period begins at 7:01 a.m. Eastern Standard Time (EST) on Friday and ends at 7:00 a.m. EST on the following Friday.

The Form EIA-810 monthly report period begins at 12:01 a.m. EST on the first day of the month and ends midnight of the last day of the month.

The Form EIA-820 annual report period begins on January 1 of the report year and ends December 31 of the report year.

Is the form still due even if the due date is a Federal holiday?

For Form EIA-800, if Monday happens to be a Federal holiday, your EIA-800 form must be filed by 5 p.m. on the first business day after that holiday, typically Tuesday. Note that the data you report should still just represent the 7-day reporting period beginning at 7:01 a.m. (Eastern Time) on Friday and ending at 7:00 a.m. (Eastern Time) on the following Friday.

For Form EIA-810, if the 20th calendar day following the end of the report period happens to be a Federal holiday, ...

For Form EIA-820, if the February 15th of the designated report year happens to be a Federal holiday, ...

Who do I contact if I need assistance submitting the form?

Call the EIA Survey Support Team at 1-855-EIA-4USA (1-855-342-4872) or email to eia4usa@eia.gov.

Resubmission

Am I required to submit revised data?

A resubmission is required whenever an error greater than 5 percent of a previously reported value is discovered by a respondent or if requested by the EIA. EIA reserves the right to request resubmissions as part of the data quality review process.

How do I correct data after I have already submitted the form?

Resubmit the form by Secure File Transfer according to the form instructions. Enter "X" in the resubmission box if you are correcting information previously reported. Enter only those data cells which are affected by the changes. You are not required to file a complete form when you resubmit. Report any unusual aspects of your reporting month's operations in the Comments section below Part 3.

Contact EIA

Who do I contact if I have technical questions on completing the form?

Call the EIA Survey Support Team at 1-855-EIA-4USA (1-855-342-4872) or email to eia4usa@eia.gov.

I have questions about the form. How do I request help?

If you have any questions about this U.S. Energy Information Administration (EIA) survey after reading the instructions, please contact the EIA Survey Support Team Contact Center at 1-855-EIA-4USA (1-855-342-4872) or send an email to eia4usa@eia.gov.