



WASTE EMISSIONS CHARGE FOR PETROLEUM AND NATURAL GAS SYSTEMS: FINAL RULE

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EPA Oil and Gas Methane Actions

- The final Waste Emissions Charge (WEC) is a key component of EPA efforts to reduce domestic methane emissions from the oil and natural gas sector.
- In March 2024, EPA issued a [final oil and gas rule](#) under the Clean Air Act to sharply reduce methane emissions and other harmful air pollution from new and existing oil and gas operations.
- In the Inflation Reduction Act (IRA), Congress built a framework of additional measures under the [Methane Emissions Reduction Program](#) – including the Waste Emissions Charge and funding for financial and technical assistance – to complement EPA's final rule and ensure reductions in methane from this sector.
 - EPA finalized a regulation to implement the Waste Emissions Charge (subject of this webinar).
 - As directed by Congress in the IRA, in May 2024, EPA published a [final rule](#) revising subpart W of the Greenhouse Gas Reporting Program to increase the accuracy of reported methane emissions from the oil and natural gas industry. The WEC is calculated primarily with the input of data reported to EPA under subpart W.
 - EPA is partnering with the U.S. Department of Energy to provide more than \$1 billion in [financial and technical assistance](#), to promote the adoption of available and innovative oil and gas technologies— including funds to mitigate emissions at low-producing conventional wells and other oil and gas infrastructure, to support methane monitoring and measurement nationwide, and to provide transparent emissions data to impacted communities.

Overview of Waste Emissions Charge in the IRA

The Inflation Reduction Act provides new authorities under Section 136 of the Clean Air Act to reduce methane emissions

- Establishes a waste emissions charge for methane emissions from applicable facilities that report more than 25,000 metric tons of CO₂ equivalent per year to the Greenhouse Gas Reporting Program (GHGRP) Petroleum and Natural Gas Systems source category (subpart W) and that exceed statutorily-specified waste emissions thresholds.
- Thresholds are calculated using segment-specific methane intensity values set by Congress (e.g., for production, 0.20 percent of natural gas sent to sale from facility).
- Waste emissions charge starts at \$900 per metric ton for 2024 emissions and increases to \$1,200 for 2025 and \$1,500 for 2026 and each year thereafter. The charge only applies to the subset of emissions that exceed the waste emissions thresholds.
- Allows for netting of emissions for WEC-applicable facilities under common ownership or control.
- Includes exemptions for: facilities in compliance with regulations under CAA 111(b) and (d), provided statutorily-dictated conditions are met; emissions caused by unreasonable delay in environmental permitting of gathering or transmission infrastructure; and emissions from wells plugged in the previous year.

Subpart W Final Rule

- In the Inflation Reduction Act, Congress directed EPA to revise subpart W by August 16, 2024, to allow facilities to submit empirical data to ensure emissions are accurately reported.
 - Subpart W emissions and throughput data are the primary inputs to WEC calculations
- On May 14, 2024, EPA finalized changes to subpart W to meet Congress' mandate.
- Most of the revised subpart W requirements go into effect for the 2025 reporting year; several requirements to support WEC implementation go into effect for the 2024 reporting year.
- The final subpart W rule allows reporters to voluntarily use the new empirical data calculation methodologies for the 2024 reporting year.

Revisions Affecting Subpart W Reporting

The final WEC rule package also makes revisions to subpart A of the GHGRP that apply to subpart W facilities.

- Subpart W facilities must report the name(s) and address(es) of each owner or operator of the facility as of December 31 of the reporting year
- Establishes reporting requirements to ensure that the entity responsible for WEC filing/payment is also responsible for the associated subpart W data
- Finalizes previously proposed historic reporting representative requirements to ensure there is a representative responsible for revisions to historic subpart W data

WEC Calculation: Determining Applicability

- Subpart W facilities are subject to the WEC if they meet two criteria:
 1. Facility emits more than 25,000 metric tons of carbon dioxide equivalent per year to subpart W
 2. Facility is in one of nine subpart W industry segments (all except distribution)

| | | |
|--|--|---|
| Onshore Petroleum and Natural Gas Production | Onshore Natural Gas Processing | Underground Natural Gas Storage |
| Offshore Petroleum and Natural Gas Production | Onshore Natural Gas Transmission Compression | Liquified Natural Gas (LNG) Import and Export Equipment |
| Onshore Petroleum and Natural Gas Gathering and Boosting | Onshore Natural Gas Transmission Pipeline | LNG Storage |

- If a facility meets both of these criteria, it is a **WEC applicable facility** and is subject to reporting requirements under the WEC rule, and emissions exceeding WEC thresholds could be subject to charge.

WEC Calculation: Waste Emissions Threshold

The Waste Emissions Charge is only applicable to the methane emissions that exceed the waste emissions threshold

- The waste emissions threshold for each facility is calculated directly in metric tons of methane:
 - Waste emissions threshold (mt) = Reported throughput (Mscf) x segment-specific intensity specified in statute (% of throughput) x density of CH₄ (0.0192 mt/Mscf)
- Calculation yields the metric tons of methane equivalent to the segment-specific methane intensity based on the facility's unique throughput (i.e., the mass equivalent of the volume of methane that is equal to the methane intensity value)
- Approach does not require any information on the density or constituents of natural gas throughput.
- For production facilities without natural gas sales, the oil intensity metric is applied to calculate the waste emissions threshold:
 - Waste emissions threshold (mt) = Reported throughput (bbl) x (10 (mt) / 1,000,000 (bbl))

| Industry Segment | Industry Segment-Specific Methane Intensity |
|--|--|
| Onshore petroleum and natural gas production | 0.20 percent of natural gas sent to sale from facility; or 10 metric tons of methane per million barrels of oil sent to sale from facility, if facility sends no natural gas to sale |
| Offshore petroleum and natural gas production | |
| Onshore petroleum and natural gas gathering and boosting | 0.05 percent of natural gas sent to sale from or through facility |
| Onshore natural gas processing | |
| Onshore natural gas transmission compression | |
| Onshore natural gas transmission pipeline | 0.11 percent of natural gas sent to sale from or through facility |
| Underground natural gas storage | |
| LNG import and export equipment | |
| LNG storage | 0.05 percent of natural gas sent to sale from or through facility |

WEC Calculation: WEC Applicable Emissions

- To determine if a facility's methane emissions exceed its waste emissions threshold, the waste emissions threshold is subtracted from **facility methane emissions**, the methane reported under subpart W. This results in **facility applicable emissions**, which are positive if emissions exceed the waste emissions threshold and negative if emissions are below the waste emissions threshold.
 - Facility Applicable Emissions (mt) = Facility Methane Emissions (mt) – Waste Emissions Threshold (mt)
- If a WEC applicable facility has emissions eligible for the unreasonable delay exemption, regulatory compliance exemption, or plugged well exemption, those emissions are subtracted from facility applicable emissions to calculate **WEC applicable emissions**. WEC applicable emissions are the final amount of facility methane emissions above or below the waste emissions threshold.
 - WEC Applicable Emissions (mt) = Facility Applicable Emissions – Eligible Exempt Emissions (mt)
- For facilities without any eligible exempt emissions, facility applicable emissions would equal WEC applicable emissions.
- The lowest possible WEC applicable emissions value for a facility with exemptions is zero; exempted emissions cannot generate negative WEC applicable emissions.

WEC Calculation: Netting and WEC Obligation

- The final rule allows netting at the parent company level. Netting is a two-step process:
 1. WEC applicable emissions from all of a WEC obligated party's WEC applicable facilities are summed to calculate **net WEC emissions**.
 2. For WEC obligated parties with the same parent company, WEC obligated parties with negative net WEC emissions may transfer those negative emissions to WEC obligated parties with positive net WEC emissions.
- If a WEC obligated party's **net emissions after transfers** are positive, this value is multiplied by the annual \$/metric ton value to calculate the total WEC owed (e.g., \$900/metric ton for 2024), or **the WEC obligation**. If net emissions after transfers are less than or equal to zero, the owner or operator does not have a WEC obligation.
- Only negative net WEC emissions may be transferred; a WEC obligated party with negative net WEC emissions can never owe a charge and a WEC obligated party with positive net WEC emissions can never see its charge increase as a result of netting.
- Because subpart W facilities that do not report more than 25,000 mt CO₂e under subpart W are not WEC applicable facilities, these facilities are not eligible to participate in netting.

Regulated Entity and Netting Entity

- The **WEC obligated party**, or the entity responsible for any charge, is the facility owner or operator as of December 31, as reported under both the WEC rule and subpart W.
- Emissions may be netted at the parent-company level, between WEC obligated parties with the same parent company.

Exemption: Plugged Wells

- Exempts emissions from wells permanently shut-in and plugged in accordance with all applicable closure requirements.
 - Wells in the onshore production, offshore production, and **underground storage** industry segment are eligible for the exemption
- Exempted emissions were expanded to include all emissions attributed to the wellhead (e.g., for onshore production this includes leaks, liquids unloading, workovers, **associated gas, well testing, drilling mud degassing**).
- Two criteria must be met for emissions to be exempted:
 1. Total facility methane emissions must exceed the waste emissions threshold
 2. The well was permanently shut-in and plugged in the reporting year in accordance with all applicable closure requirements
- Final subpart W rule includes reporting elements that go into effect for the 2024 reporting year to facilitate implementation of the plugged well exemption for 2024 emissions.

Exemption: Unreasonable Delay in Environmental Permitting

- Applicable to emissions in the onshore and offshore production segments that result from unreasonable delay, as determined by the Administrator, in environmental permitting of gathering or transmission infrastructure necessary for offtake of increased volume as a result of methane emissions mitigation implementation.
- There are 4 criteria that must be met for emissions to be exempted:
 1. Total facility methane emissions must exceed the waste emissions threshold
 2. The production facility seeking the exemption must not have contributed to the delay in permitting
 3. Eligible exempted emissions are those from flaring, onsite gas use, and on or offsite injection, if those emissions would not have occurred without the delay in permitting
 4. A period of 36 months must have passed from the time a permit application was determined to be technically complete by the permitting authority

Exemption: Regulatory Compliance

Exempts certain WEC applicable facilities whose emissions exceed the waste emissions thresholds if they are in compliance with Oil & Gas sector NSPS/EG methane emissions requirements.

- Congress requires two Administrator determinations before the exemption becomes available:
 - Methane emissions standards and plans pursuant to CAA § 111(b) and (d) “have been approved and are in effect in all states with respect to the applicable facilities.”
 - Compliance with the final CAA § 111 NSPS 0000b and EG 0000c requirements “will result in equivalent or greater emissions reductions as would be achieved” by the November 2021 NSPS/EG proposal, had that proposal been finalized and implemented.
- Both determinations will be made at a state-by-state level through a single administrative action after a given state’s plan pursuant to CAA § 111(d) is approved and in effect.
- After both determinations have been made, the exemption becomes available on a state-by-state level when all NSPS 0000b and 0000c-implementing plan requirements are fully implemented (i.e., based on the final compliance date for a 0000b/c facility in the state).
- Exemption will be available to any WEC applicable facility (i.e., subpart W facility) that contains a CAA section 111(b) or (d) facility.
- WEC applicable emissions for facilities that qualify for the regulatory compliance exemption for the entire year are zero, and facilities with WEC applicable emissions less than or equal to zero are not eligible for the exemption.

Exemption: Regulatory Compliance

Defining compliance for exemption eligibility

- Any deviations from 0000b/c monitoring, emissions limits, operational limits, or work practice standards result in ineligibility
 - Based on self-reported deviations that will be included in 0000b/c annual compliance reports
- Any adjudicated violations (including reporting/recordkeeping) result in ineligibility

Duration of time for which a WEC Applicable Facility loses exemption

- Exemption eligibility assessed on a quarterly basis; emissions from quarter(s) with any 0000b/c noncompliance are not eligible for the exemption

Portion of a WEC Applicable Facility that loses exemption

- Entire facility loses exemption for certain industry segments: processing, transmission compression, and underground storage. In these segments, a facility is a single discrete site
- For facilities defined at the basin level (onshore production and gathering and boosting segments), only the “site” (e.g., well pad, gathering station) with noncompliance loses exemption

Reporting and Payments

- WEC obligated parties are required to **submit a WEC filing by August 31** covering the previous reporting year (i.e., calendar year).
 - Facility owner or operator as of December 31 of the reporting year is the WEC obligated party and responsible for any WEC for the entire reporting year
 - Under certain transaction scenarios that occur after December 31 but before the WEC filing, purchasers may become the WEC obligated party
 - WEC obligated parties must complete an annual certificate of representation (COR) at least 60 days before the annual WEC filing deadline. The annual COR requirements include information related to netting and are necessary to ensure correct netting relationships are established prior to the WEC filing
- The WEC filing includes subpart W data required for WEC calculations (e.g., methane emissions and natural gas throughput), as well as information on facilities under common ownership and control and any applicable exemptions.
- Any **WEC obligation must be paid at the time of the WEC filing.**
- Any final data **resubmissions for the purposes of revising WEC data and WEC obligations are due by December 15** for the previous reporting year.
 - Additional payments or refunds would be made, as applicable
 - Under specific circumstances, such as resolution of the verification process or submission of new 0000b/c reports, resubmissions are allowed after December 15
- WEC filings will go through an EPA verification process, similar to the existing process for subpart W reports. WEC data, including underlying subpart W data, that contain unresolved verification flags after December 15 may be subject to third-party auditing.

WEC and Subpart W Data Coordination

In addition to being the primary input to the WEC calculations, the subpart W data is critical for establishing the relationships between WEC applicable facilities and WEC obligated parties, and WEC obligated parties and parent companies.

To ensure accurate WEC calculations and netting functionality, subpart W facilities must be **consistent** and use **identical** spellings for facility owners or operators and parent companies in their subpart W report.

- Because subpart W facilities with the same owner/operator may have different designated representatives and may report independent of one another, historically facilities have been inconsistent in reporting the owner/operator on the COR and the parent company in the annual report
- For example, the same company may be spelled several different ways across different subpart W CORs or reports: Onshore Production Company, LLC; Onshore Prod Co, LLC; Onshore Production Co LLC

2024 facility owner/operator and parent company data included in the subpart W reports due by March 31, 2025, will be used by EPA to create the universe of possible relationships for the WEC COR registration and WEC filing. Accurate and consistent subpart W data for these reporting elements will facilitate WEC implementation.

WEC Calculation Example

| Industry Segment | Subpart W Total GHG (mt CO2e) | Facility Subpart W Methane (mt) | Throughput (Mscf) | Segment Methane Intensity Threshold | Exempt Emissions (mt) |
|--------------------|-------------------------------|---------------------------------|-------------------|-------------------------------------|-----------------------|
| Onshore Production | 165,000 | 3,000 | 60,000,000 | 0.2% | 40 |

Waste emissions threshold = throughput x segment methane intensity x density of CH_4

Waste emissions threshold = 60,000,000 Mscf x 0.002 x 0.0192 mt/Mscf

Waste emissions threshold = 2,304 mt CH_4

Facility applicable emissions = facility subpart W methane emissions – waste emissions threshold

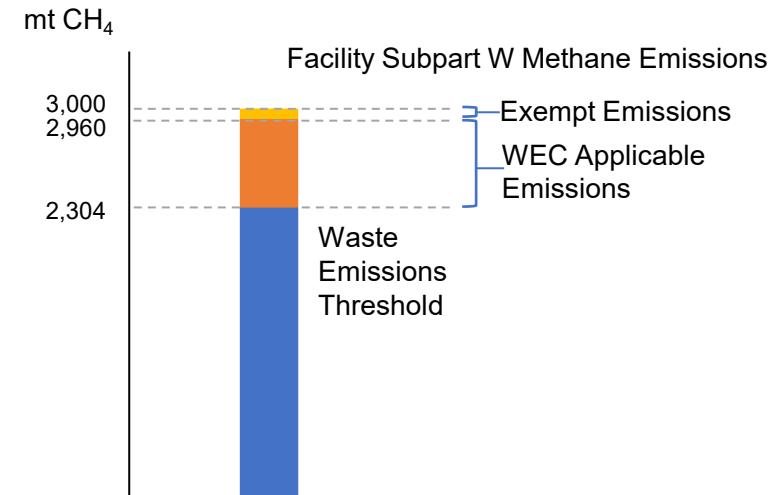
Facility applicable emissions = 3,000 mt CH_4 – 2,304 mt CH_4

Facility applicable emissions = 696 mt CH_4

WEC applicable emissions = facility applicable emissions – exempt emissions

WEC applicable emissions = 696 mt CH_4 – 40 mt CH_4

WEC applicable emissions = 656 mt CH_4



WEC obligation = net WEC emissions after transfers* x annual \$/mt charge

WEC obligation = 656 mt CH_4 x \$900/mt

WEC obligation = \$590,400

*In this example, the WEC obligated party has a single facility and no common parent companies and there is no netting. WEC applicable emissions from the single facility are therefore equal to the WEC obligated party's net WEC emissions and net WEC emissions after transfers

Netting Example – Net WEC Emissions

WEC Obligated Party A

| Facility | WEC Applicable Emissions |
|--------------------------|--------------------------|
| Onshore Production 1 | 1,400 |
| Onshore Production 2 | -350 |
| Onshore Production 3 | 600 |
| G&B 1 | 750 |
| G&B 2 | -200 |
| Net WEC Emissions | 2,200 |

WEC Obligated Party B

| Facility | WEC Applicable Emissions |
|--------------------------|--------------------------|
| Offshore 1 | 100 |
| Offshore 2 | -200 |
| Offshore 3 | 50 |
| Net WEC Emissions | -50 |

WEC Obligated Party C

| Facility | WEC Applicable Emissions |
|--------------------------|--------------------------|
| Processing 1 | -1,500 |
| Processing 2 | -300 |
| Net WEC Emissions | -1,800 |

Netting Example – Net WEC Emissions After Transfers

WEC obligated parties with negative net WEC emissions may transfer those negative emissions to WEC obligated parties with the same parent company.

In this example, WEC Obligated Parties B and C transfer their negative net WEC emissions to WEC Obligated Party A. As a result, WEC Obligated Party A's net WEC emissions drop from 2,200 metric tons to a net WEC emissions after transfers value of 350 tons. In this example, parent company netting allows WEC Obligated Party A to reduce its WEC obligation by \$1,665,000 (from \$1,980,000 to \$315,000).

WEC Obligated Party A

| | |
|--|--------------------------------|
| Net WEC Emissions | 2,200 |
| Received from B | -50 |
| Received from C | -1,800 |
| Net WEC Emissions After Transfers | 350 |
| WEC Obligation | $350 \times \$900 = \$315,000$ |

WEC Obligated Party B

| | |
|--|------------------------|
| Net WEC Emissions | -50 |
| Transferred to A | -50 |
| Net WEC Emissions After Transfers | 0 |
| WEC Obligation | $0 \times \$900 = \0 |

WEC Obligated Party C

| | |
|--|------------------------|
| Net WEC Emissions | -1,800 |
| Transferred to A | -1,800 |
| Net WEC Emissions After Transfers | 0 |
| WEC Obligation | $0 \times \$900 = \0 |

EPA Oil and Natural Gas Sector Methane Anticipated Timeline

| | | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 |
|--|---|--|--|--|--|---|--|---|
| CAA Section 111(b) and (d) rules | New Source Pollution Standards (commenced construction/ modification after 12/2022) | | Final Rule: March 8 NSPS effective date: May 7 | | | | | |
| | Emissions Guidelines (commenced construction on or before 12/2022) | | Final Rule: March 8 | | State plans due 2 years after final rule publication (March 9, 2026) | EPA acts on state plans mid-2027 (12 months once determined complete) | EPA issues federal plan(s) if necessary (mid-2028) | Sources must be in compliance (36 months after state plans submitted) |
| Greenhouse Gas Reporting Program Subpart W | | Proposed Rule: Aug. 2023 | Final Rule: May 14 | Effective on January 1 | | | | |
| Waste Emissions Charge | | | Proposed Rule: January 26 Final Rule: November 18 Unreasonable delay and plugged well exemptions implemented | First collection of WEC (for 2024 reporting year) on September 2 | | | | |
| EPA & DOE Financial and Technical Assistance | | \$350M Conditional Awards to 14 states to support industry efforts to cut methane from low-producing wells (Dec. 2023) | Remaining funds awarded for Oil and Gas Methane Monitoring and Mitigation (Fall 2024) | Technical Assistance | | | | |

Production & Processing

1. Onshore Petroleum & Natural Gas Production
2. Offshore Petroleum & Natural Gas Production
3. Petroleum Refining
4. Gathering and Boosting
5. Gas Processing Plant
6. Natural Gas Liquids (NGL) Supply

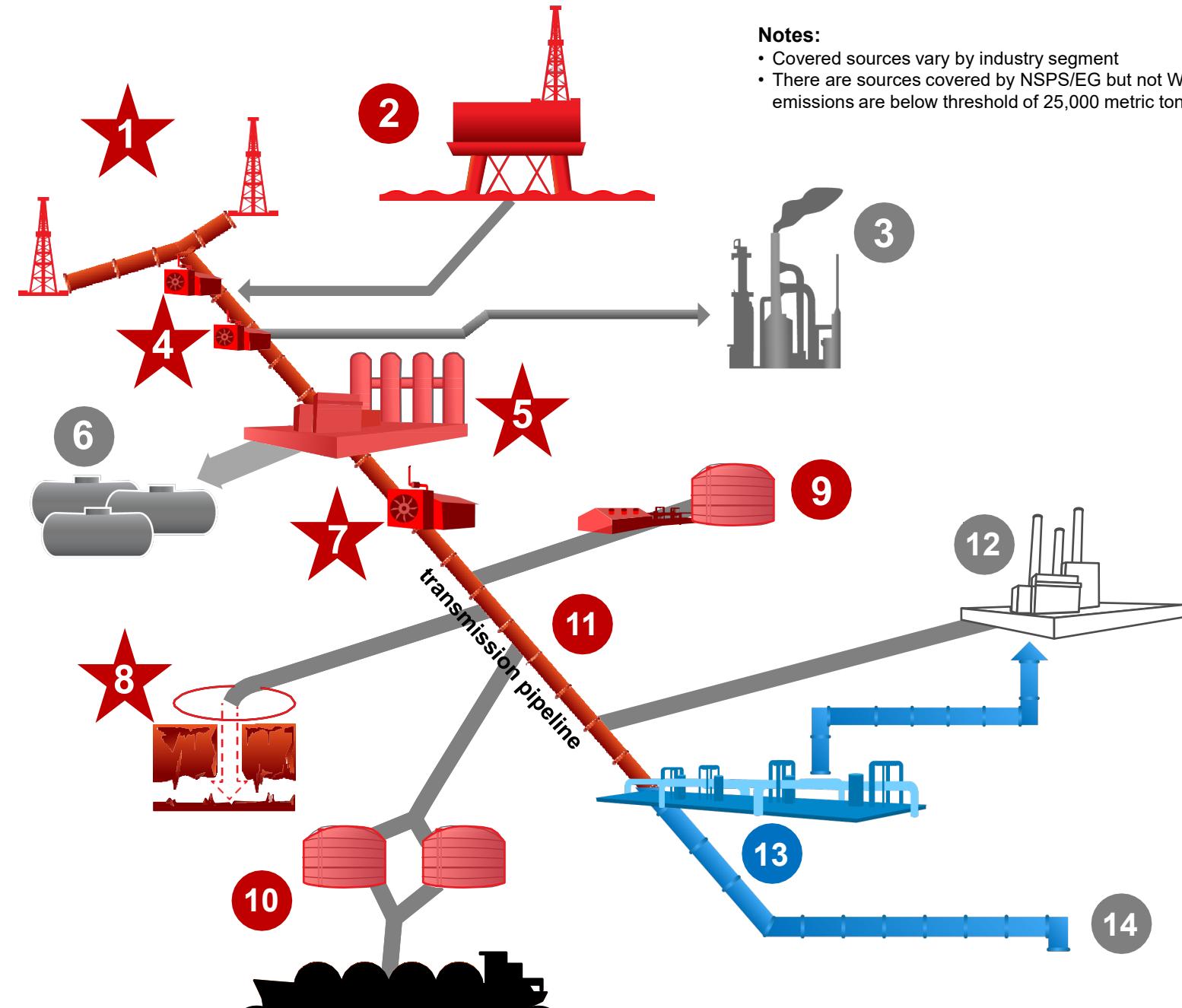
Natural Gas Transmission & Storage

7. Transmission Compressor Stations
8. Underground Storage
9. Liquified Natural Gas (LNG) Storage
10. LNG Import-Export Equipment
11. Natural Gas Transmission Pipeline

Distribution

12. Large End Users
13. Natural Gas Distribution
14. Natural Gas & Petroleum Supply to Small End Users

- GHGRP Subpart W industry segments subject to Waste Emissions Charge
- GHGRP Subpart W industry segments not subject to Waste Emissions Charge
- ★ Industry segments subject to final NSPS OOOOb and EG OOOOc



Notes:

- Covered sources vary by industry segment
- There are sources covered by NSPS/EG but not WEC where facility emissions are below threshold of 25,000 metric tons CO₂e

Questions & Answers

Resources:

- WEC webpage: <https://www.epa.gov/inflation-reduction-act/waste-emissions-charge>
- WEC final rule: <https://www.govinfo.gov/content/pkg/FR-2024-11-18/pdf/2024-26643.pdf>
- WEC fact sheet: https://www.epa.gov/system/files/documents/2024-11/wec-final-fact-sheet_11-2024.pdf
- WEC applicability and calculation graphic: https://www.epa.gov/system/files/documents/2024-11/wec-final-applicability-diagram_11-2024.pdf