

ST 25-0008-PLR 12/29/2025 MANUFACTURING MACHINERY & EQUIPMENT

This letter discusses the exception to the manufacturing machinery and equipment exemption for the generation or treatment of natural or artificial gas for wholesale or retail sale that is delivered to customers through pipes, pipelines, or mains. 86 Ill. Adm. Code 130.330(k). (This is a PLR).

December 29, 2025

NAME
COMPANY
ADDRESS
EMAIL

Dear NAME:

This letter is in response to your letter dated September 22, 2025, in which you requested information. The Department issues two types of letter rulings. Private Letter Rulings (“PLRs”) are issued by the Department in response to specific taxpayer inquiries concerning the application of a tax statute or rule to a particular fact situation. A PLR is binding on the Department, but only as to the taxpayer who is the subject of the request for ruling and only to the extent the facts recited in the PLR are correct and complete. Persons seeking PLRs must comply with the procedures for PLRs found in the Department’s regulations at 2 Ill. Adm. Code 1200.110. The purpose of a General Information Letter (“GIL”) is to direct taxpayers to Department regulations or other sources of information regarding the topic about which they have inquired. A GIL is not a statement of Department policy and is not binding on the Department. See 2 Ill. Adm. Code 1200.120. You may access our website at <https://tax.illinois.gov/> to review regulations, letter rulings and other types of information relevant to your inquiry.

Review of your request disclosed that all the information described in paragraphs 1 through 8 of Section 1200.110 appears to be contained in your request. This Private Letter Ruling will bind the Department only with respect to COMPANY1, for the issue or issues presented in this ruling, and is subject to the provisions of subsection (e) of Section 1200.110 governing expiration of Private Letter Rulings. Issuance of this ruling is conditioned upon the understanding that neither COMPANY1, nor a related taxpayer is currently under audit or involved in litigation concerning the issues that are the subject of this ruling request. In your letter you have stated and made inquiry as follows:

COMPANY1 (“COMPANY2,” or “Taxpayer”), located at ADDRESS1, currently has one Illinois site under construction in COUNTY, Illinois.

COMPANY2 is not currently under audit by the Illinois Department of Revenue, nor is there any litigation pending with the Department related to the issue presented in this request.

To the best of the knowledge of both COMPANY2 and its representative, COMPANY, the Department has not previously ruled on the same or a similar issue for COMPANY2 or any predecessor entity. Furthermore, neither COMPANY2 nor its representatives have previously submitted the same or a similar issue to the Department and subsequently withdrawn it prior to the issuance of a letter ruling.

Please accept this letter as a formal request for an Opinion of the Tax Commissioner regarding the application of Illinois Sales and Use Tax to the fact pattern described below.

I. BACKGROUND

COMPANY2 develops and operates landfill-based waste-to-renewable energy projects. At its Illinois site in COUNTY, currently under construction, COMPANY2 is engaged in the manufacturing of renewable natural gas (RNG) through a multi-step process. This process begins with the capture of raw landfill gas (methane), which is then cleaned, refined, and upgraded into pipeline-quality RNG. The final product is injected into local natural gas pipelines for transportation use. COMPANY2 constructs and operates this manufacturing facility on leased landfill property, using the landfill gas as a raw material input and producing RNG as the output. This transformation of landfill gas into a marketable fuel product constitutes a manufacturing activity under Illinois law.

The following is the step-by-step RNG manufacturing process at the COMPANY1 facility.

1. Methane Capture

- **Source:** Raw landfill gas (LFG), primarily methane, is collected from the landfill.
- **Equipment:**
 - **LFG Blower:** A 100% capacity blower increases the pressure of the raw LFG from 0.0 psig to 12.5 psig, enabling it to move through the system.

2. Hydrogen Sulfide (H₂S) Removal

- **Purpose:** Removes corrosive and toxic H₂S from the gas stream.
- **Equipment:**
 - **H₂S Removal Vessel:** A 6-foot diameter x 9-foot vessel filled with Darco media. Media is replaced approximately every 12 months.

3. Cooling the Gas

- **Purpose:** Reduces temperature to condense moisture and prepare for compression.
- **Equipment:**
 - **Chiller and Heat Exchanger:** Lowers LFG temperature to 45°F.

4. Compression

- **Purpose:** Increases pressure for further processing.
- **Equipment:**
 - **Two Flooded Screw-Type Compressors:** Boost pressure from 4 psig to 205 psig.
 - **LFG-to-Air Cooler:** Cools the compressed gas.
 - **Heat Exchanger:** Further reduces temperature to 60°F.

5. Carbon Dioxide (CO₂) Removal

- **Purpose:** Separates CO₂ to increase methane purity.
- **Equipment:**
 - **Air Liquide Membrane System:** Selectively removes CO₂.
 - **Three Activated Carbon Vessels:** Assist in purification.

6. Nitrogen (N₂) and Oxygen (O₂) Removal

- **Purpose:** Further purifies the gas to meet pipeline specifications.
- **Equipment:**
 - **ARI Pressure Swing Adsorption (PSA) System:** Removes N₂ and O₂.

7. Dehydration

- **Purpose:** Removes remaining moisture from the product gas.
- **Equipment:**
 - **Non-Regenerative Media Dehydration Vessel:** Used during startup and media changeouts.

8. Final Compression

- **Purpose:** Prepares RNG for pipeline injection.
- **Equipment:**
 - **Product Gas Compressor:** Increases pressure to 320 psig.

9. Emissions Control

- **Purpose:** The emissions control stage plays a critical role in the RNG production process by destructing unusable byproducts and ensuring operational flexibility during upset conditions. These control devices help manage off-spec gas streams and other residuals that may arise due to fluctuations in input quality or temporary process imbalances. By safely destroying these byproducts, the system maintains compliance with environmental regulations and protects the integrity of the final RNG product.
- **Equipment:**
 - **Thermal Oxidizer (TOX):** Destroys VOCs (98% efficiency), controls NOx and CO emissions.
 - **Off-Specification Flare:** Burns unusable gas diverted from various stages:
 - After initial chilling
 - Between CO₂ and N₂ removal
 - Final product gas diversion

COMPANY2 has engaged a general contractor for this project and has contracted with them to build a renewable natural gas facility.

COMPANY2 has engaged various other vendors to provide the equipment needed for the process. Such equipment, will be installed by the general contractor.

II. ISSUES

1. Does COMPANY2's operation outlined above qualify for the manufacturing exemption pursuant to ILCS § 120/2-5(14) and ILCS § 120/2-45? If so, at what point in the process does the exempt manufacturing activity begin and end, based on the equipment and steps outlined above?
2. If COMPANY2's operation qualifies as manufacturing, is the equipment used in the process (as outlined above) and any consumables exempt from Illinois sales and use tax under the manufacturing machinery and equipment exemption, including production-related tangible personal property as defined in ILCS § 120/2-45 and related regulations?

III. POSITION

1. COMPANY2's operation qualifies for the manufacturing exemption pursuant to ILCS § 120/2-5(14) and ILCS § 120/2-45 because the process transforms raw landfill methane gas into renewable natural gas (RNG)—a product with a different form, use, and name. This transformation involves a series of chemical and mechanical operations that meet the statutory definition of a “manufacturing process” as outlined in the Discussion section.

The manufacturing process begins at Step 1, when methane is captured and pressurized for processing, and continues through Step 9, where emissions control equipment ensures that only pipeline-quality RNG is delivered. The emissions control stage is integral to the completion of the final product and is therefore part of the last operation in the manufacturing series.

2. Since COMPANY2's operation qualifies for the manufacturing exemption, the equipment used in Steps 1 through 9—each of which contributes to the transformation of landfill methane into renewable natural gas—qualifies for exemption under ILCS § 120/2-5(14) and ILCS § 120/2-45.

This includes:

- Machinery and equipment used directly in the manufacturing process;
- Production-related tangible personal property, which is used primarily (i.e., over 50% of the time) in manufacturing or in activities that are integral to the manufacturing process; and
- Consumables, such as media used in hydrogen sulfide removal vessels and activated carbon used in gas purification, which are depleted or consumed during the manufacturing process and are necessary to produce the final product.

These items are essential to the transformation of raw landfill gas into pipeline-quality RNG and are therefore considered part of the manufacturing process under Illinois law and Department of Revenue guidance.

After conducting a review, COMPANY2 and its Representative have determined that there are no known authorities contrary to the taxpayer's views. To the best of our knowledge, and based on diligent research, we were unable to locate any legal, regulatory, or administrative authority that conflicts with the position presented in this request.

IV. DISCUSSION

Illinois imposes a sales tax upon every person who sells at retail or distributes tangible personal property in Illinois, rents of furnished taxable things or services, stores for use or consumption in Illinois any item of tangible personal property in Illinois or leases or rents such property in Illinois. Generally, "tangible personal property" means personal property that can be seen, weighed, measured, felt, or touched, or that is in any other manner perceptible to the senses.¹

The sales tax is levied upon every person who engages in the business of selling at retail or distributing tangible personal property in Illinois. A "sale at retail" means any transfer of the ownership of or title to tangible personal property to a purchaser, for the purpose of use or consumption, and not for the purpose of resale in any form as tangible personal property to the extent not first subject to a use for which it was purchased, for a valuable consideration, provided that the property purchased is deemed to be purchased for the purpose of resale, despite first being used, to the extent to which it is resold as an ingredient of an intentionally produced product or byproduct of manufacturing. Transactions whereby the possession of the property is transferred but the seller retains the title as security for payment of the selling price shall be deemed to be sales.^{2,3}

Manufacturing

Sales of tangible personal property are exempt where the purpose of the purchaser is to use the "machinery and equipment" primarily in a manufacturing operation to produce tangible personal property for sale.⁴

For purposes of this exemption, "machinery and equipment" includes, but is not limited to, any of the following:

¹ Black's Law Dictionary, 2nd Ed.

² ILCS § 120/2

³ Ill. Admin. Code 130.201

⁴ ILCS § 120/2-5

- Machinery is generally major mechanical machines or major components of such machines contributing to a manufacturing or assembling process
- Equipment is generally any independent device or tool separate from any machinery but essential to an integrated manufacturing or assembly process;
- Including computers used primarily in a manufacturer's computer assisted design, computer assisted manufacturing (CAD/CAM) system; or
- any subunit or assembly comprising a component of any machinery or auxiliary, adjunct or attachment parts of machinery, such as tools, dies, jigs, fixtures, patterns and molds; or any parts which require periodic replacement in the course of normal operation;
- Equipment generally shall not include hand tools, solvents, water, acids, oil, and similar consumables that interact with the product and that are an integral part of the manufacturing operation.⁵

“Manufacturing process” means the production of an article of tangible personal property, whether the article is a finished product or an article for use in the process of manufacturing or assembling a different article of tangible personal property, by a procedure commonly regarded as manufacturing, processing, fabricating, or refining that changes some existing material into a material with a different form, use, or name. The manufacturing process shall be deemed to commence with the first operation or stage of production in the series, and shall not be deemed to end until the completion of the final product in the last operation or stage of production in the series.⁶

The manufacturing and assembling machinery and equipment exemption includes production related tangible personal property.

“Production related tangible personal property” means all tangible personal property that is used or consumed by the purchaser in a manufacturing facility in which a manufacturing process takes place and includes, without limitation:

1. Tangible personal property purchased by a manufacturer for incorporation into real estate within a manufacturing facility for use in a production related process, or tangible personal property purchased by a construction contractor for incorporation into real estate within a manufacturing facility for use in a production related process.

⁵ Ill. Admin. Code 130.330

⁶ ILCS § 120/2-45

2. Supplies and consumables used in a manufacturing facility including fuels, coolants, solvents, oils, lubricants, and adhesives, hand tools, protective apparel, and fire and safety equipment used or consumed within a manufacturing facility
3. Tangible personal property that is used or consumed in activities such as research and development, preproduction material handling, receiving, quality control, inventory control, storage, staging, and packaging for shipping and transportation purposes.⁷

The exemption does not include machinery and equipment used in (i) the generation of electricity for wholesale or retail sale; (ii) the generation or treatment of natural or artificial gas for wholesale or retail sale that is delivered to customers through pipes, pipelines, or mains; or (iii) the treatment of water for wholesale or retail sale that is delivered to customers through pipes, pipelines, or mains.

V. CONCLUSION

We respectfully request that the Illinois Department of Revenue find that COMPANY2's purchases for the operation of its Illinois site are exempt from Illinois sales and use tax pursuant to ILCS § 120/2-5(14) and ILCS § 120/2-45.

Illinois law provides an exemption from sales and use tax for machinery and equipment used primarily and directly in manufacturing (when used by a manufacturer as defined by statute), as well as for certain consumable items that are essential to the manufacturing process. COMPANY2's process of collecting landfill methane and converting it into renewable natural gas constitutes a manufacturing activity under Illinois law, as it transforms raw material into a product with a different form, use, and name.

Accordingly, the machinery, equipment, and consumables used directly in this manufacturing process should qualify for exemption from Illinois sales and use tax.

If this ruling request does not provide sufficient information to support our conclusions, we respectfully request an opportunity to meet with the Department to discuss the matter further. Likewise, if the Department disagrees with our conclusions, we respectfully request that the Department contact us prior to issuing a ruling.

⁷ ILCS § 120/2-45

Under penalties of perjury, I declare that I have examined this request, including the accompanying documents, and to the best of my knowledge and belief, the facts presented in support of the requested ruling are true, correct, and complete.

DEPARTMENT'S RESPONSE:

The Retailers' Occupation Tax Act imposes a tax upon persons engaged in this State in the business of selling tangible personal property at retail to purchasers for use or consumption. See 86 Ill. Adm. Code 130.101. Use Tax is imposed on the privilege of using, in this State, any kind of tangible personal property that is purchased anywhere at retail from a retailer. See 86 Ill. Adm. Code 150.101. These taxes comprise what is commonly known as "sales tax" in Illinois.

Retailers' Occupation Tax, however, does not apply to sales of machinery and equipment used primarily (over 50% of the time) in the manufacturing or assembling of tangible personal property for wholesale or retail sale or lease. See 86 Ill. Adm. Code 130.330. The manufacturing process is the production of articles of tangible personal property or assembling different articles of tangible personal property by procedures commonly regarded as manufacturing, processing, fabricating, or refining, which changes some existing material or materials into a material with a different form, use, or name. These changes must result from the process in question and be substantial and significant. See 86 Ill. Adm. Code 130.330(b)(1).

Machinery means major mechanical machines or major components of such machines contributing to a manufacturing or assembling process. See 35 ILCS 120/2-45(3). Equipment means independent devices or tools separate from any machinery but essential to an integrated manufacturing or assembly process, including computers used primarily in a manufacturer's computer assisted design, computer assisted manufacturing (CAD/CAM) system; any subunit or assembly comprising a component of any machinery or auxiliary, adjunct, or attachment parts of machinery, such as tools, dies, jigs, fixtures, patterns, and molds; and any parts that require periodic replacement in the course of normal operation. See 35 ILCS 120/2-45(4); 86 Ill. Adm. Code 130.330(c)(2). Equipment also includes chemicals or chemicals acting as catalysts if the chemicals or chemicals acting as catalysts effect a direct and immediate change upon a product being manufactured or assembled for wholesale or retail sale or lease. See 35 ILCS 120/2-45(4); 86 Ill. Adm. Code 130.330(d). The exemption also includes machinery and equipment used in the general maintenance or repair of exempt machinery and equipment or for in-house manufacture of exempt machinery and equipment. See 35 ILCS 120/2-45; 86 Ill. Adm. Code 130.330(c)(1).

Production related tangible personal property is included in the exemption. Production related tangible personal property means all tangible personal property used or

consumed in a production related process by a manufacturer in a manufacturing facility in which a manufacturing process takes place, as well as all tangible personal property that is used or consumed in research and development regardless of use within or without a manufacturing facility. See 35 ILCS 120/2-45(5); 86 Ill. Adm. Code 130.330(h). This includes supplies and consumables used in a manufacturing process in a manufacturing facility, including some chemicals that do not make a direct and immediate change or act as a catalyst, such as fuels, coolants, solvents, oils, lubricants, and adhesives. See 86 Ill. Adm. Code 130.330(h)(2)(B).

The exemption does not include machinery and equipment used in the generation of electricity for wholesale or retail sale; the generation or treatment of natural or artificial gas for wholesale or retail sale that is delivered to customers through pipes, pipelines, or mains; or the treatment of water for wholesale or retail sale that is delivered to customers through pipes, pipelines, or mains. See 35 ILCS 120/2-5(14), 2-45; 86 Ill. Adm. Code 130.330(k).

Per the U.S. Environmental Protection Agency and the U.S. Department of Energy, renewable natural gas (RNG) is a term of art used to describe gas obtained from biological sources (biogas) and treated for use as a fuel source in place of fossil natural gas,⁸ and is pipeline-quality gas that is fully interchangeable with conventional natural gas.⁹ It is our understanding that COMPANY2 captures its biogas at the same site that it treats it, the COMPANY1 landfill in COUNTY, Illinois, and then treats that gas by, through a series of steps, removing impurities, cooling the gas, compressing the gas, and destroying byproducts, ending up with pipeline-quality RNG. Likewise, fossil natural gas is treated using similar processes in order to make it into pipeline-quality natural gas.¹⁰ Each of the steps described in COMPANY2's process, separately and as a whole, amount to treatment of natural or artificial gas under a plain reading of the exception to the manufacturing machinery and equipment exemption.

It is also our understanding that upon completing treatment, COMPANY2 injects the finished RNG into local natural gas pipelines for transportation use. This satisfies the remaining prong of the exception to the exemption, for the gas to be delivered for wholesale or retail sale to customers through pipes, pipelines or mains. Therefore, the Department finds that COMPANY2's operation as described does not qualify for the manufacturing machinery and equipment exemption, and any machinery, equipment, and other tangible personal property purchased for use in the operation would not be exempt from Retailers' Occupation Tax or Use Tax under the exemption.

⁸ <https://www.epa.gov/lmop/renewable-natural-gas> (last visited December 12, 2025).

⁹ [https://afdc.energy.gov/fuels/natural-gas-renewable#:~:text=Renewable%20natural%20gas%20\(RNG\)%20is,to%20a%20higher%20purity%20standard](https://afdc.energy.gov/fuels/natural-gas-renewable#:~:text=Renewable%20natural%20gas%20(RNG)%20is,to%20a%20higher%20purity%20standard) (last visited December 12, 2025).

¹⁰ <https://www.eia.gov/energyexplained/natural-gas/> (last visited December 12, 2025).

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The factual representations upon which this ruling is based are subject to review by the Department during the course of any audit, investigation, or hearing and this ruling shall bind the Department only if the factual representations recited in this ruling are correct and complete. This Private Letter Ruling is revoked and will cease to bind the Department 10 years after the date of this letter under the provisions of 2 Ill. Adm. Code 1200.110(e) or earlier if there is a pertinent change in statutory law, case law, rules or in the factual representations recited in this ruling.

I hope this information is helpful. If you have further questions concerning this Private Letter Ruling, you may contact me at (217) 782-7055. If you have further questions related to the Illinois sales tax laws, please visit our website at <https://tax.illinois.gov/> or contact the Department's Taxpayer Information Division at (800) 732-8866.

Very truly yours,

Samuel J. Moore
Chairman, Private Letter Ruling Committee

SJM:EJM:slc