Manufacturing Sales Tax Exemptions

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OFFICE OF THE STATE AUDITOR
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This report covers three sales and use tax exemptions that apply to purchases by manufacturers:

- The Machinery Exemption can be claimed for purchases over $500 of machinery, machine tools, and machine parts that are used in manufacturing.
- The Component Parts Exemption applies to manufacturers' purchases of tangible personal property that is incorporated into a final manufactured product.
- The Industrial Energy Exemption treats sales of energy used for industrial and manufacturing purposes as exempt wholesale sales.

The Machinery Exemption appears to have been intended to encourage the purchase of machinery for manufacturing. The Industrial Energy and Component Parts Exemptions ensure that sales tax is only applied to purchases made by final consumers and avoid taxing businesses' inputs used to manufacture products.

We found the following:

- **Although the Machinery Exemption may help reduce manufacturers' costs to a relatively small degree, it is unlikely that the exemption encourages manufacturers to invest in additional machinery, and it is sometimes applied to ineligible machinery.**
- **Although we were unable to determine how many manufacturers are using the Component Parts Exemption, it is likely that the exemption is well-known and commonly claimed by eligible purchasers.**
- **The Industrial Energy Exemption is likely commonly claimed, but some businesses may not be aware of it.**

Policy Considerations

Since the Machinery Exemption is likely not meeting its original presumed purpose of encouraging manufacturers to purchase machinery, the General Assembly may want to assess whether the exemption is serving a different purpose and, if so, amend statute to establish a purpose statement for the exemption. The General Assembly could also consider simplifying the eligibility requirements for the Machinery Exemption.

	Machinery Exemption	Component Parts Exemption	Industrial Energy Exemption
Tax Type:	**Sales and use**	**Sales and use**	**Sales and use**
Expenditure Type:	**Exemption**	**Exemption**	**Exemption**
Statutory Citation:	**Section 39-26-709, C.R.S.**	**Sections 39-26-102(20)(a) and 39-26-713(2)(b)(I) and (2)(e)(I), C.R.S.**	**Sections 39-26-102(21)(a) and 39-26-715(2)(b)(I), C.R.S.**
Year Enacted:	**1979**	**1935**	**1935**
Repeal/Expiration Date:	**None**	**None**	**None**
Revenue Impact:	**Up to $28 million (2021)**	**About $795 million (2021)**	**Up to $104 million (2021)**
Purposes given in statute or enacting legislation? **No**			

Manufacturing Sales Tax Exemptions

Background

This report covers three sales and use tax exemptions that apply to purchases by manufacturers, which we refer to collectively as the Manufacturing Exemptions.

First, the Exemption for Machinery Used in Manufacturing (Machinery Exemption) can be claimed for purchases over $500 of machinery, machine tools, and machine parts that are used in manufacturing. Exhibit 1 summarizes the main requirements for a purchase to qualify for the exemption.

Technical Note

Unless otherwise stated, we use the term "machinery" in this report to refer collectively to machinery, machine tools, and parts of these items that are eligible for the Machinery Exemption.

Exhibit 1
Summary of Eligibility for the Machinery Exemption[1]

(1)	The machinery must be used in Colorado.
(2)	The machinery must be used **directly** in manufacturing, which is defined as the production of a new product that is different from raw or prepared materials. This includes any machinery used from the point at which raw material is moved from inventory to the point at which the raw material has been altered to its completed form, including packaging.
(3)	The machinery must be used **predominantly** in manufacturing. If a machine has any other uses in addition to its manufacturing use, the manufacturing use must be at least 50 percent of all use.
(4)	The machinery must be depreciable and have a useful life of at least 1 year. If the purchaser fully expenses the machinery and recovers the full cost in 1 year, the machinery is not eligible for the exemption.
(5)	The purchase must qualify for the Section 38 federal investment tax credit as it existed prior to the Tax Reform Act of 1986.

Source: Section 39-26-709, C.R.S.; 1 CCR 201-4, Rule 39-26-709; and Department of Revenue taxpayer guidance documents.
[1]The exemption is also available for machinery used to produce electricity "in a facility for which a long-term power purchase agreement was fully executed between February 5, 2001 and November 7, 2006, whether or not such purchases are capitalized or expensed" [Section 39-26-709(1)(a)(IV), C.R.S.]. The Department of Revenue reports that some businesses might still be eligible for the exemption under this provision, but the number is likely to decrease over time.

Second, the Component Parts Exemption applies to manufacturers' purchases of tangible personal property that is incorporated into a final manufactured product, treating them as wholesale sales that are exempt from Colorado's sales and use tax. For example, purchases of raw materials that become part of a final product—such as wood, fiberglass, and metal used to manufacture skis; or aluminum used to manufacture cans—are covered by the exemption. Containers, labels, and shipping cases are also eligible types of component parts for purposes of this exemption. According to data from the U.S. Census Bureau, there were about 5,100 manufacturing firms in Colorado in 2021, all of which may be eligible for the Component Parts and Machinery Exemptions.

Third, the Energy Used for Industrial and Manufacturing Purposes Exemption (Industrial Energy Exemption) treats sales of energy used for industrial and manufacturing purposes as wholesale sales that are exempt from Colorado's sales and use taxes. Exhibit 2 summarizes the types of energy that are eligible for the exemption and the industrial purposes for which exempt energy can be used.

Exhibit 2
Summary of Eligibility for the Industrial Energy Exemption

Eligible Types of Energy	Eligible Industrial Uses	
• Electricity • Gas • Coal and coke • Fuel oil • Steam[1] • Nuclear fuel[1]	• Processing • Manufacturing • Mining • Refining • Irrigation • Construction	• Telephone and radio communication • Street and railroad transportation services • Gas and electricity production

Source: Section 39-26-102(21)(a), C.R.S., and 1 CCR 201-4, Rule 39-26-102(21).
[1]Nuclear fuel was not used in Colorado as of 2022, the most recent year with data available, and we did not identify any data on the use of steam for energy in Colorado.

Only energy used for industrial purposes is eligible for the Industrial Energy Exemption. For example, energy used to run manufacturing machinery, produce food for consumption in a restaurant, or to light an industrial plant is eligible for the exemption; energy used to provide services, light stores, or operate an office is not eligible. Therefore, a manufacturer may use some energy that is eligible for the exemption, but still be liable for sales tax on the portion of their energy that is not used for industrial purposes. We provide more information on the methods for claiming the exemption in the evaluation results section. According to data from the U.S. Energy Information Administration (EIA), there were about 15,300 industrial consumers of electricity in Colorado in 2021, all of whom may be eligible for this exemption.

While statute does not state a purpose for the Manufacturing Exemptions, based on our review of their operation and legislative history, we considered them to have the following purposes:

- **The Machinery Exemption appears to have been intended to encourage the purchase of machinery for manufacturing.** When the exemption was established in 1979, legislators based eligibility for the Machinery Exemption on whether a given purchase would have been eligible for a federal investment credit, which was enacted in the 1960s to encourage investment in capital assets. This suggests that the exemption was also intended to encourage this type of investment, specifically in machinery. In addition, the exemption may also avoid imposing a tax that could be passed on to consumers in the form of higher prices. Our review of tax policy publications indicates that minimizing the taxation of business-to-business transactions in this way is generally considered to be good tax policy; however, it is unclear whether Colorado's General Assembly had this purpose in mind when enacting the exemption.

- **The Industrial Energy and Component Parts Exemptions ensure that sales tax is only applied to purchases made by final consumers.** Sales of these items are defined in statute as wholesale sales, which are sales that are made to a business for purposes of resale. Wholesale sales are exempt from state sales and use tax under Colorado statute. Such exemptions are intended to ensure that sales tax is only applied once, to purchases made by final consumers, and to avoid "tax pyramiding," an effect that can occur when sales tax is applied to products and the inputs necessary to manufacture them multiple times before the final finished product is sold to the consumer. Tax pyramiding can result in hidden taxes being passed on to consumers in the form of higher prices and can put businesses that sell products with longer supply and distribution chains at a relative disadvantage.

We developed the following performance measures in order to evaluate the Manufacturing Exemptions:

1. To what extent does the Machinery Exemption encourage manufacturers to purchase machinery used for manufacturing?

2. To what extent do the Industrial Energy and Component Parts Exemptions prevent the imposition of sales tax on inputs necessary for manufacturing and, in the case of the Industrial Energy Exemption, on energy used for industrial and manufacturing purposes?

Evaluation Results

Although the Machinery Exemption may help reduce manufacturers' costs to a relatively small degree, it is unlikely that the exemption encourages manufacturers to invest in additional machinery. Additionally, the exemption is sometimes applied to ineligible machinery. In our last evaluation of this exemption, published in January 2021, we found that the Machinery Exemption is well-known among manufacturers, routinely applied by machinery vendors, and may help Colorado to stay competitive when compared with other states with a similar exemption. Out of the 44 other states plus the District of Columbia that levy sales tax, only 8 do not offer any type of exemption for machinery, with 34 offering a full exemption and 3 providing a partial exemption.

We estimate that the Machinery Exemption reduced state revenue by between $3.9 million and $28 million in 2021 and provided a corresponding tax benefit to manufacturers. Because it appears that machinery vendors may not consistently report this exemption, we could not provide a precise estimate of its revenue impact. Specifically, the exemption is itemized on the Department of Revenue's (Department) sales tax return, meaning it has its own reporting line, and Department data indicate that the exemption reduced state revenue by about $3.9 million in 2021. This amount would correspond to about $133 million in machinery sales in the state. However, we compared the amount claimed to data from the U.S. Census Bureau Annual Survey of Manufactures (ASM), which indicates that manufacturers in Colorado purchased closer to $964 million in machinery in 2021, in which case the exemption would reduce state revenue by about $28 million if all purchasers received it. Thus, it seems the exemption is likely underreported on the Department's sales tax return. Although we were unable to determine why this is the case, it is likely that some exempt purchases of machinery are being reported on other lines of the Department's sales tax return, such as the wholesales line or the line for other exempt sales. Although this would not impact the amount of tax the State collects, it prevents the Department from collecting complete data on the exemption. Additionally, manufacturers that purchase exempt machinery from another state and bring it into Colorado are not required to report the amount exempt from use tax under this exemption. The exemption also may not be claimed by all eligible taxpayers, although we were unable to determine the extent to which this may be the case.

Although the exemption seems to be widely used, a 2.9 percent sales tax exemption may not provide a significant incentive for manufacturers to purchase additional machinery. Manufacturers we contacted reported that sales and use taxes are one factor among many that manufacturers consider when making investment decisions, so the exemption is most likely to have an impact in cases when a purchase is almost, but not quite, financially viable. Additionally, in some areas of Colorado, there are no corresponding local sales tax exemptions to help reduce the cost of the purchase, which reduces the effectiveness of the State's exemption as an incentive. Our previous report found that most purchases of manufacturing equipment in Colorado are subject to local sales taxes because home rule and statutory municipalities—both of which have the option to tax or exempt purchases of machinery—commonly elect to tax these purchases. According to the Tax Foundation, Colorado has the third highest average local sales tax rate in the United States, at about 4.9 percent.

Additionally, vendors frequently apply the exemption to ineligible machinery. As discussed, the exemption is only available for machinery purchases that would have qualified for the federal investment tax credit in Section 38 of the Internal Revenue Code of 1954 as it existed just prior to the Tax Reform Act of 1986. According to the Department, "[t]he statute's reliance on a federal law repealed more than 30 years ago is problematic. Copies of the federal law from that time are not readily available and, even if taxpayers and tax practitioners can find them, the text is voluminous and complex." For example, among other things, the federal investment credit:

- Was limited to $25,000 plus 85 percent of the taxpayer's net federal income tax liability that exceeded $25,000. This limitation varied for married couples filing separately, controlled groups, and estates and trusts.

- Was not permitted for certain types of property, such as certain boilers fueled primarily by petroleum and natural gas.

- Was limited to $150,000 of used property.

Since eligibility for Colorado's Machinery Exemption is dependent in part on eligibility for this federal investment credit, all of these qualifications also apply to the Machinery Exemption (as well as to the Enterprise Zone Machinery Exemption, another exemption for machinery that references the Machinery Exemption eligibility and is available in certain economically distressed areas of the state). The exemption is typically applied at the point of sale by machinery vendors, who are unlikely to be aware of some of these requirements or be able to determine, for example, whether a given purchase of machinery would have resulted in the purchaser's federal investment credit exceeding the allowable cap. According to the Department, "[v]endors frequently do not apply this exemption correctly, do not have sufficient documentation, or do not exercise due diligence in verifying that a sale is exempt." We provide some options for the General Assembly to address this issue in the Policy Considerations section below.

If a vendor does not apply the exemption to a machinery purchase, the purchaser may submit a claim to the Department for a refund. However, the Department reported that purchasers frequently submit ineligible claims for the exemption. In these instances, "[t]he Department encounters claims for property that does not qualify for the [exemption]. For example, the…exemption is often claimed for items that are not machines, machine tools, or machine adjuncts or attachment[s] or for items that are not used directly and predominantly in manufacturing tangible personal property."

It is likely that the Component Parts Exemption is well-known and commonly claimed by eligible purchasers. We reached out to 37 stakeholders about the Component Parts Exemption, and the two stakeholders who responded indicated that manufacturers are generally aware of and claim the exemption. Additionally, all states and the District of Columbia that have a sales tax provide an exemption or a reduced tax rate for component parts. Therefore, businesses that operate in other states in addition to Colorado are probably familiar with these types of exemptions. We were unable to determine how many manufacturers are using the Component Parts Exemption because it is not itemized on the Department's sales tax return, so the Department could not provide data on its use. However, ASM data indicates that Colorado manufacturers spent about $27.4 billion on components and packaging in 2021. We multiplied this by the state sales tax rate of 2.9 percent to estimate that the Component Parts Exemption may have reduced state revenue by about $795 million in 2021.

The Industrial Energy Exemption is likely commonly claimed, but some businesses may not be aware of it. In our previous report on the exemption, published in July 2019, stakeholders reported that the Industrial Energy Exemption is important to businesses in a variety of industries and is particularly impactful in industries that use more energy as an input, that operate with lower profit margins, or in which products are sold at fixed market prices. We also found that both industrial businesses and restaurants are generally aware of and claim this exemption. However, during our previous evaluation of this exemption, stakeholders indicated that smaller businesses may not be aware of the exemption, and one industrial business who spoke with us this year had not heard of the exemption.

We estimate that the Industrial Energy Exemption reduced state revenue by about $104 million in 2021. To prepare our estimate, we used the EIA's State Energy Data System data to determine that the industrial sector—including manufacturing, mining, construction, and other industries eligible for the exemption—and the electricity generation sector spent approximately $3.5 billion on energy sources in Colorado in 2021, which would result in $104 million being exempt from sales tax. Because data on eligible versus non-eligible uses was not available, our estimate assumes that all energy used by the industrial sector was eligible. However, the actual amount is likely somewhat lower than our estimate because not all gas and electric energy used by industrial facilities is eligible for the exemption, and some eligible taxpayers may not claim the exemption. The Department could not provide the total number of claims or amount claimed by taxpayers for exempt coal, fuel oil, or most gas and electricity because, with the exception of amounts claimed by restaurants, the exemption is not itemized on the Department's sales tax return. Department data indicates that about 2,800 restaurants claimed the exemption for gas and electricity in 2021 for a total of $1.4 million.

The method to claim the exemption varies by the taxpayer's industry and how much of the energy use is exempt. Exhibit 3 provides the methods for claiming the exemption and the estimated amount claimed through each method.

Exhibit 3
Methods of Claiming the Industrial Energy Exemption

Claim Method	Type of Energy	Information Provided to Department of Revenue	2021 Estimated Revenue Impact *Percentage of Total*
1. Utility Company Method Businesses that use at least 75 percent of their energy for exempt purposes must file an affidavit with their utility company, which then applies the exemption to all of the business' energy use. The business is then required to remit sales tax on the non-exempt portion of their energy use to the Department.	Electricity and gas purchased by the industrial sector	Businesses are not required to submit supporting documentation establishing the percentage of their exemption to either the utility company or the Department. When remitting sales tax on the non-exempt portion of their energy use, there is no separate line for reporting these purchases, so the number of taxpayers and amount remitted to the State is not known.	$50 million[1] *48%*
2. Refund Method Businesses that use less than 75 percent of their energy for exempt purposes must submit a claim for refund to the Department.	Primarily electricity and gas, but could be used for coal and fuel oil	Businesses submit a claim for refund form to the Department and provide supporting documentation that establishes the percentage of their exemption. Department staff review this documentation before granting the refund.	At most $250,000 (2019[2]) *Less than 0.5%*
3. Restaurant Method Restaurants must file for the exemption using a separate form.	Electricity and gas used by restaurants	In addition to filing information with the Department on a separate form, restaurants report the amount of their exemption on a separate line of the sales tax return.	$1.4 million *1%*
4. Point of Sale Method Coal and fuel oil that are sold directly to industrial consumers[3], as well as all energy sold to electricity producers, are exempt from sales tax at the time of purchase.	Coal and fuel oil, as well as gas purchased by electricity producers	These sales are not reported to the Department on a separate line of the sales tax return.	$53 million *51%*
Total Revenue Impact			**$104 million**

Source: Office of the State Auditor analysis of U.S. Energy Information Administration data, Department of Revenue data and forms, and input from Department of Revenue staff.

[1]This may overestimate the actual revenue impact of the utility company method of claiming the exemption because we were unable to quantify the extent that industrial businesses use less than 100 percent of their energy for eligible uses and are remitting sales tax on the nonexempt portion to the Department.

[2]This is the most recent year with data available for the refund method of claiming the exemption.

[3]All coal and fuel oil sold to industrial businesses are typically fully exempt from sales tax because these sources of energy are exclusively used for exempt purposes by industrial users. The exemption is applied at the time of sale.

The Manufacturing Exemptions have a significant impact on state revenue and are a common feature of most states' sales tax systems. Exhibit 4 summarizes the Manufacturing Exemptions' impact on state revenue in 2021, and Exhibit 5 shows the number of states with exemptions similar to the Manufacturing Exemptions.

Exhibit 4
Estimated Impact of the Manufacturing Exemptions on State Revenue, 2021

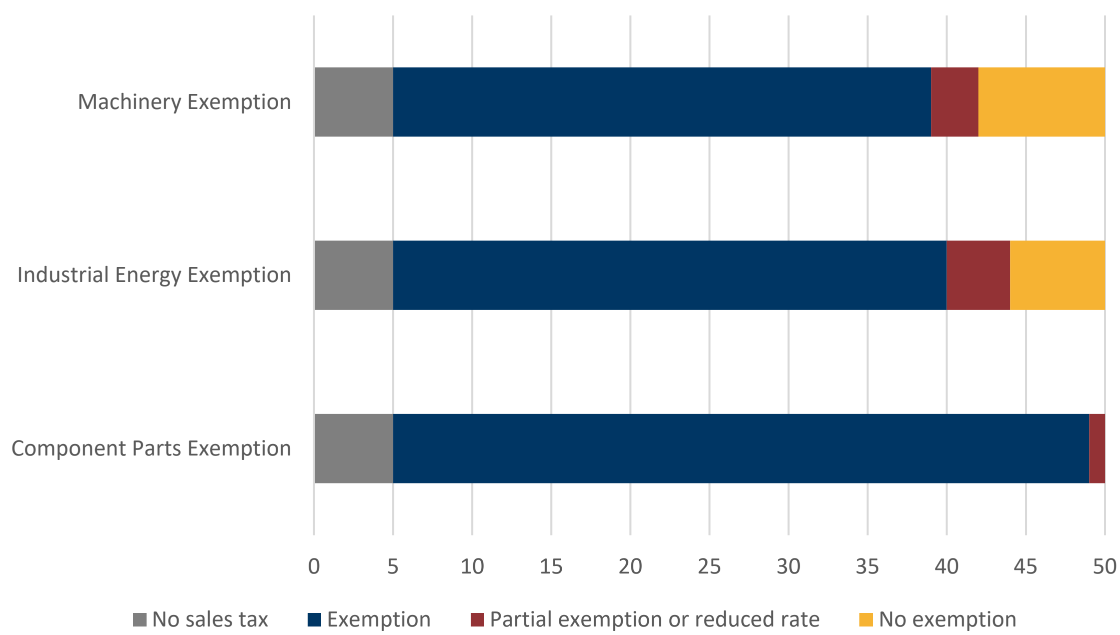
Machinery Exemption[1]	Up to $28 million
Industrial Energy Exemption[2]	Up to $104 million
Component Parts Exemption	About $795 million
Total for All Manufacturing Exemptions	**Up to $927 million**

Source: Colorado Office of the State Auditor analysis of data from the Department of Revenue, the U.S. Census Bureau Annual Survey of Manufactures (ASM), and the U.S. Energy Information Administration State Energy Data System.

[1] ASM data on capital expenditures for equipment may include some sales that are not eligible for the Machinery Exemption, such as purchases of office equipment and purchases of $500 or less. Therefore, this estimate may overstate the impact of this exemption to some extent.

[2] The industrial and electricity generation sectors consumed about $3.5 billion in energy in 2021. However, for industrial consumers, only the portion of electricity and gas used for manufacturing or industrial processes is eligible for the exemption. Our estimate calculates the maximum possible revenue impact by assuming that 100 percent of the electricity and gas used by the industrial sector was eligible for the exemption.

Exhibit 5
Manufacturing Exemptions in Other States[1]



Source: Colorado Office of the State Auditor analysis of data from Bloomberg Law and other states' statutes.

[1]This exhibit includes the 44 other states with a sales tax, along with the District of Columbia, and the five states that do not impose a sales tax. Colorado is not included.

Policy Considerations

The General Assembly may want to assess the Machinery Exemption and amend statute to define its purpose. Neither the exemption's enacting legislation nor statute establishes a purpose statement for the Machinery Exemption, but the fact that legislators designed the exemption's eligibility to be dependent on a federal credit specifically intended to encourage investment suggests that the original purpose of the exemption was to encourage investment in manufacturing machinery. As discussed, we found that the exemption, which provides a 2.9 percent reduction in the cost to purchase eligible machinery, is unlikely to be large enough to motivate manufacturers to purchase additional machinery in most cases.

However, the exemption likely serves other purposes that the General Assembly may deem to be worthwhile, such as avoiding the imposition of a tax that could be passed on to consumers in the form of higher prices. Taxing business-to-business transactions can result in tax pyramiding, in which sales taxes are applied multiple times before a product is sold, and sales taxes from earlier transactions can end up being built into the final price of the product. The extent to which taxes are passed on to the consumer in this manner depends on a variety of factors. For example, manufacturers that produce products with longer supply chains and multiple manufacturing stages may have more business-to-business sales transactions during the production process. These manufacturers would face a higher increase in production costs if their business-to-business sales were taxed and, thus, may be more likely to pass these costs on to consumers. However, manufacturers in highly competitive markets or that manufacture products for which consumer demand is more price-sensitive may have less ability to pass sales tax costs on to consumers and might instead accept reduced profits or look for other ways to reduce production costs. Therefore, different manufacturers would likely respond in different ways to any increase in costs that result from imposing sales tax on business-to-business transactions.

Finally, the exemption may allow Colorado to stay competitive with other states, since the majority of states have a similar exemption. Specifically, we found that 34 other states provide an exemption for manufacturing machinery, and an additional 5 states do not impose state sales tax.

The General Assembly could consider simplifying the eligibility requirements for the Machinery Exemption. As previously discussed, the qualification requirements for the Machinery Exemption are unnecessarily complex as a result of Colorado statute's reference to the federal investment credit in Section 38 of the Internal Revenue Code of 1954, and this exemption is frequently applied incorrectly. If the General Assembly decides to simplify eligibility requirements for this exemption, the simplest approach would be to remove the statutory reference to Section 38 of the Internal Revenue Code of 1954. Other states with a similar exemption take a variety of approaches in determining eligibility for their respective exemptions, but in most states, the exemption is available only for machinery that is directly and primarily (or exclusively) used to manufacture tangible personal property that is new and different from the original inputs. Colorado's statutes already stipulate that purchased machinery meet these requirements irrespective of the reference to Section 38 of the Internal Revenue Code of 1954, so if the General Assembly decides to take action on this policy consideration, simply removing the reference to the Internal Revenue Code may be sufficient.

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