2023

TAX CHANGES

Avalara

A TAX COMPLIANCE GUIDE FOR

ENERGY AND FUEL

Contents

DISCLAIMER

Tax rates, rules, and regulations change frequently. Although we hope you'll find this information helpful, this report is for informational purposes only and does not provide legal or tax advice.

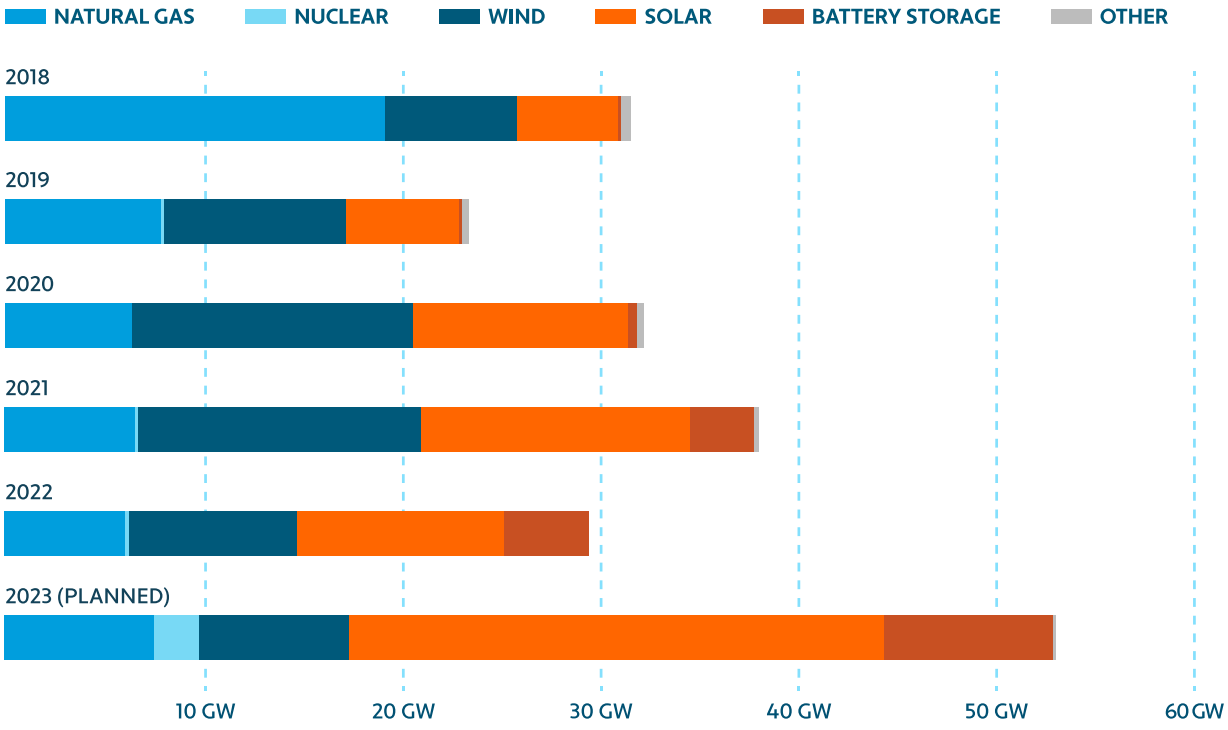
Introduction

The energy sector is in flux.

Worldwide demand for oil is expected to reach record heights in 2023. Though reliance on oil is dwindling among OECD (Organisation for Economic Co-operation and Development) members, it's on the rise elsewhere; non-OECD countries, led by China, account for **90% of the gains**. There's a similar dichotomy on the production front: Some OPEC+ (Organization of the Petroleum Exporting Countries) producers have deeply cut production as non-OPEC+ producers lead world supply growth.

If oil markets are struggling for direction, renewable energy is having a heyday. According to the **International Energy Agency**, global renewable power capacity is expected to jump by one-third in 2023, "the largest absolute increase ever." Solar has become the **leading source of new electricity-generating capacity** in the United States, and **offshore wind energy** is on the rise.

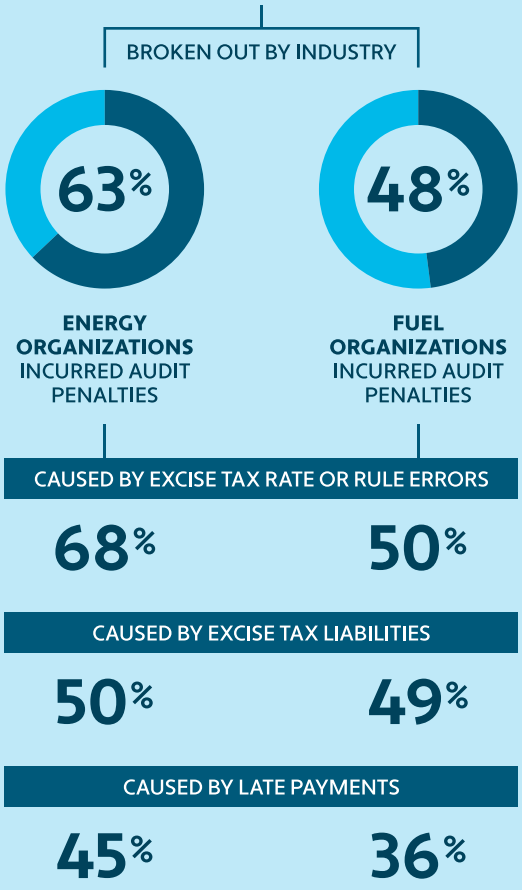
ANNUAL U.S. ELECTRIC-GENERATING CAPACITY ADDITIONS (IN GIGAWATTS)



SOURCE: *EIA*

48%

of energy and fuel organizations surveyed **incurred penalties or interest from audits** over the past year



SOURCE: *Avalara and Aberdeen Strategy & Research*

The transition to renewable energy is spurred by climate change, energy security concerns, and a host of new policies around the globe. In March 2023, the European Parliament and the European Council agreed on an **energy efficiency directive** to reduce final energy consumption by 11.7% by 2030. In the U.S., federal and state green energy tax incentives are encouraging American businesses and individuals to embrace renewable energy, and looming electric vehicle (EV) mandates in a number of states plus generous **tax credits for EVs** are helping to put more low- and zero-emission vehicles on roads.

Changing energy policies impact consumption, and changes in consumption affect tax revenue. The need for new and more stable revenue will lead to new energy tax policies, and that will likely complicate tax compliance for businesses in the industry.

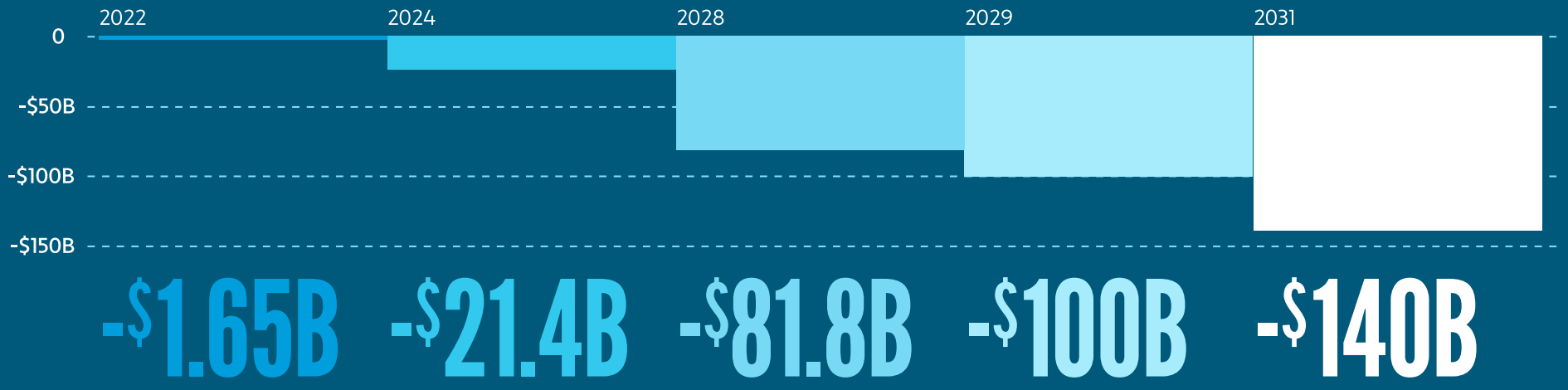
Excise tax compliance is already challenging for businesses in the energy sector because excise tax policies vary by state and are usually based on a variety of factors, including product type, volume, and mode of transport. Due to the complexity, a whopping **48%** of energy and fuel organizations surveyed by Aberdeen Strategy & Research in January 2023 incurred penalties or interest from audits over the past year.

WHAT THE NUMBERS TELL US

Energy and fuel

THE FEDERAL HIGHWAY TRUST FUND COULD BE ABOUT $140 BILLION SHORT BY 2031

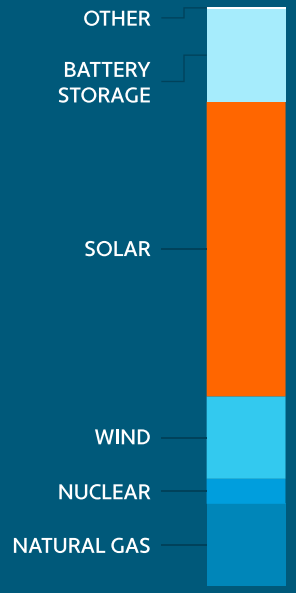
SOURCE: *Congressional Budget Office*



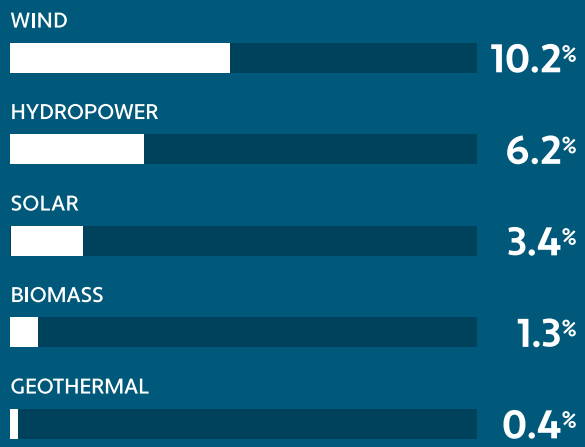
82%

of new, utility-scale generating capacity will be from wind, solar, and battery storage that developers are bringing online in the U.S. in 2023

SOURCE: *EIA*



About 22% of utility-scale electricity in the U.S. was generated from renewable energy sources in 2022

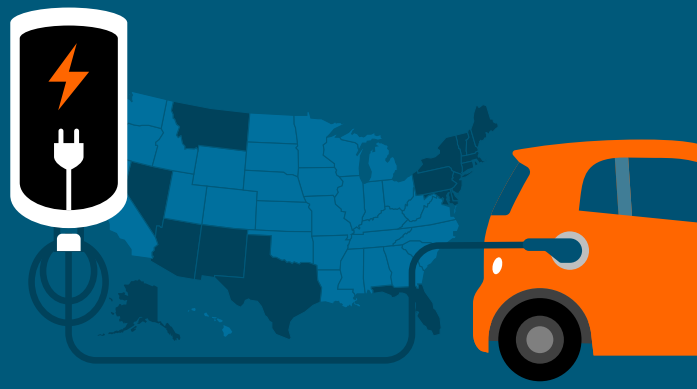


SOURCE: *EIA*

32

states have registration fees for plug-in electric vehicles, 19 for plug-in hybrid vehicles

SOURCE: *NCSL*



Funding the Superfund

You've probably seen a Superfund site because there's one in every state. In fact, most states have far more than one. You'll find them in the darndest places, like next to beachfront parks.

A **Superfund site** is an area where hazardous or toxic waste was dumped, left out in the open, or handled improperly in some other way. Sometimes the identity of the party responsible for creating the mess is clear, and in that case, they can be held accountable. More frequently, hazardous sites involve numerous entities and a lot of finger-pointing. When there's no viable responsible party, cleanup falls to the Environmental Protection Agency (EPA).

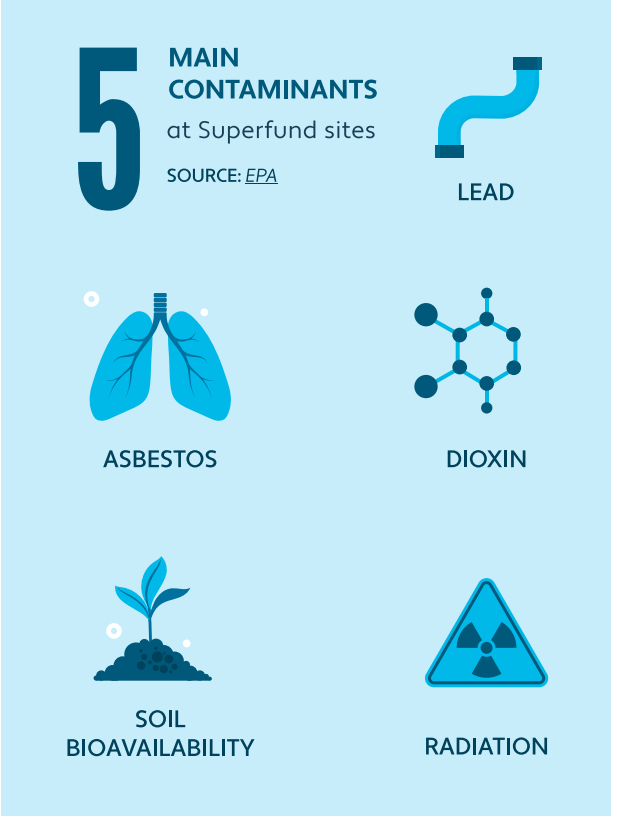
If there's money for the EPA to work with, it's because of the Superfund – more formally known as the Comprehensive Environmental Response, Compensation, and Liability Act (**CERCLA**). Established in 1980 but allowed to lapse in 1995, the Superfund was **resurrected** with a tax on chemicals in 2021. It's now receiving additional funding from the **Inflation Reduction Act of 2022**, which reinstated a tax on crude oil and petroleum products.

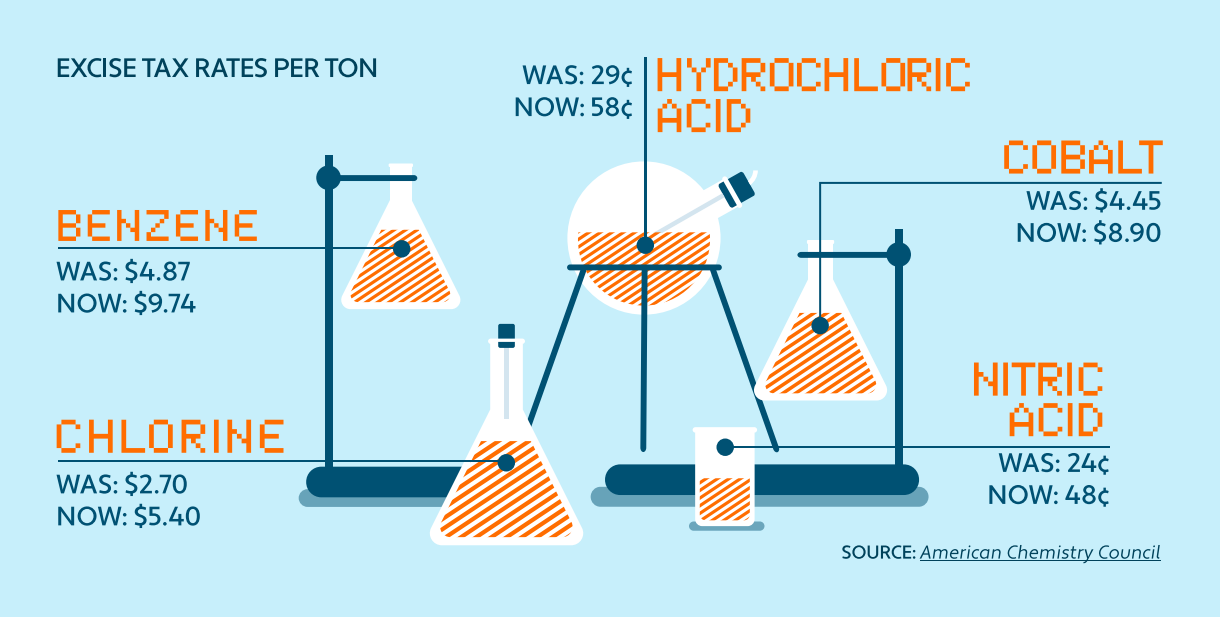
Not everyone is happy the Superfund is back.

OK, no one would say they want toxic sites to flourish, or that putting $21 billion toward cleanup is bad. It's just that $21 billion can't be pulled out of the air. To replenish the Superfund:

- New **excise taxes on chemicals** went into effect on July 1, 2022
- New excise taxes on crude oil and petroleum products took effect January 1, 2023

And indeed, complying with new Superfund tax requirements is proving challenging. A January 2023 survey by Aberdeen Strategy & Research found that 42% of organizations in the energy and fuel sector were **unsure of how to handle the adoption of the Superfund**.





TAXING 42 CHEMICALS, 100+ SUBSTANCES

As of July 1, 2022, federal excise tax applies to the sale or use of 42 different chemicals and more than **100 different substances** – products containing at least 20% or more (by weight or value) of one of the 42 taxable chemicals. The delta between the highest and lowest product tax rates is considerable, from $1.49 per ton (ammonium nitrate) to $23.65 per ton (methyl isobutyl ketone). The **IRS** offers more details.

These are commonly used chemicals and substances. "You probably have a half dozen items on your desk with benzene or propylene in them," says Avalara Senior Director of Product Solution Engineers, Bubba Lange. "The fruit you eat was probably ripened using ethylene."

Because the chemicals and substances are taxed at different rates, businesses must identify how much of each chemical and substance a product or product material contains. Tax is assessed on each chemical's weight, value, or volume, so a product containing five different chemicals or substances could be taxed at five different rates. As a result, the taxes can be a nightmare for businesses to manage. You can learn more in this **on-demand webinar**.

Fortunately, taxpayers that underpay Superfund chemical taxes may be able to avoid penalties if they can show such failure was due to "reasonable cause" rather than willful neglect. In March 2023, the **IRS extended this penalty relief** through the fourth quarter of 2023.

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TAXABLE SUBSTANCES (TAX RATE PER TON)

1,3-butylene glycol ($7.28) 1,4 butanediol ($4.68) 1,5,9-cyclododecatriene ($9.74) 2-ethyl hexanol ($7.16) 2-ethylhexyl acrylate ($7.34) acetone ($20.06) acetylene black ($10.52) acrylic acid resins ($5.65) methacrylic acid resins ($14.94) acrylonitrile ($9.38) adipic acid ($6.13) adiponitrile ($8.57) allyl chloride ($10.38) alpha-methylstyrene ($9.93) ammonium nitrate ($1.49) aniline ($9.40) benzaldehyde ($8.47) benzoic acid ($7.31) bisphenol-A ($10.23) butanol ($6.31) butyl acrylate ($6.84) butyl benzyl phthalate ($12.15) carbon tetrachloride ($10.62) chlorinated polyethylene ($10.25) chloroform ($10.51) chromic acid ($4.37) cumene ($9.74) cyclododecanol ($9.05) cyclohexane ($10.02) decabromodiphenyl oxide ($17.99) di-2 ethyl hexyl phthalate ($7.37) diethanolamine ($6.01) diglycidyl ether of bisphenol-A ($13.86) diisopropanolamine ($12.76) dimethyl terephthalate ($5.91) dimethyl-2, 6-naphthalene dicarboxylate ($6.81) di-n-hexyl adipate ($8.23) diphenyl oxide ($13.73) diphenylamine ($10.28) epichlorohydrin ($12.89) ethyl acrylate ($4.09) ethyl alcohol for nonbeverage use ($5.94) ethyl chloride ($4.52) ethyl methyl ketone ($7.60) ethyl benzene ($9.74) ethylene dibromide ($9.03) ethylene dichloride ($6.62) ethylene glycol ($4.38) ethylene oxide ($6.23) ferrochrome ov 3 pct. carbon ($4.83) ferrochromium nov 3 pct ($4.83) hexabromocyclododecane ($9.11) hexamethylenediamine ($8.93) isobutyl acetate ($4.47) Isophthalic acid ($6.23) isopropyl acetate ($4.54) Isopropyl alcohol ($6.82) linear alpha olefins ($9.74) maleic anhydride ($5.75) melamine ($4.28)

AND MORE

SOURCE: *IRS*

TAXING CRUDE OIL, PETROLEUM PRODUCTS

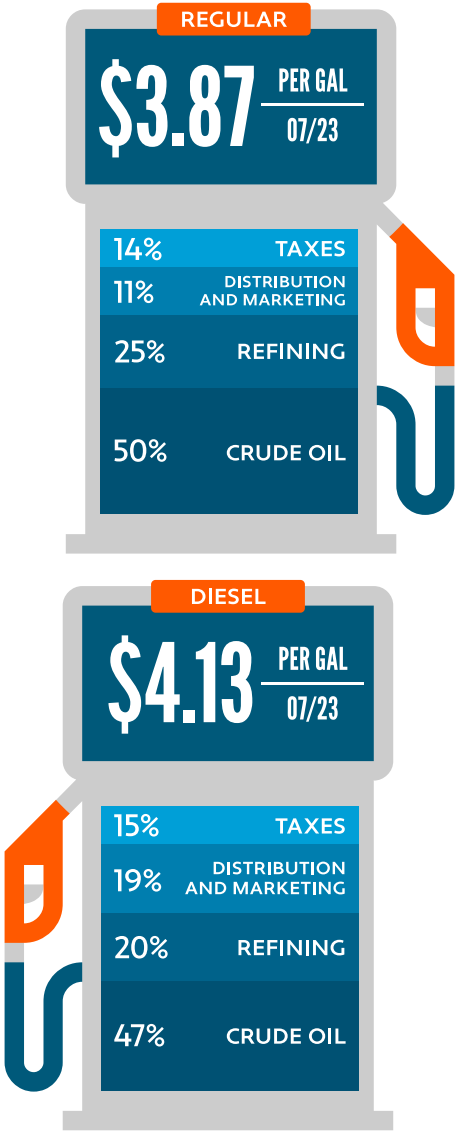
The Hazardous Substance Superfund tax on domestic crude oil and imported petroleum products went back into effect January 1, 2023, after lying dormant since 1995. Currently set to expire at the end of 2032, it's expected to raise about $11.7 billion during its 10-year life span.

The rate will be adjusted annually for inflation but will start at 16.4 cents per barrel; when last in effect in 1995, it was 9.7 cents per barrel. The tax is typically paid by refineries that receive crude oil or the entity using or importing a petroleum product. This is just another item on a growing list of tax obligations that businesses in the energy sector need to track and manage.

And how will that affect consumer prices? Well, due to refining margins, 16.4 cents per barrel is equal to 39 cents per gallon, which translates to an increase of roughly 2 cents per gallon in retail gas prices because crude oil is only about half the cost of retail gasoline. The **Tax Foundation** believes the revised tax on crude oil will have "small economic costs" and raise only "a small amount of revenue."

According to Bubba Lange, however, the revived tax on crude oil could have a significant impact on the cost of fuel. And **rising fuel costs** typically contribute to an increase in electric vehicle sales.

WHAT WE PAY FOR IN A GALLON



SOURCE: *EIA*

The once and future electric car

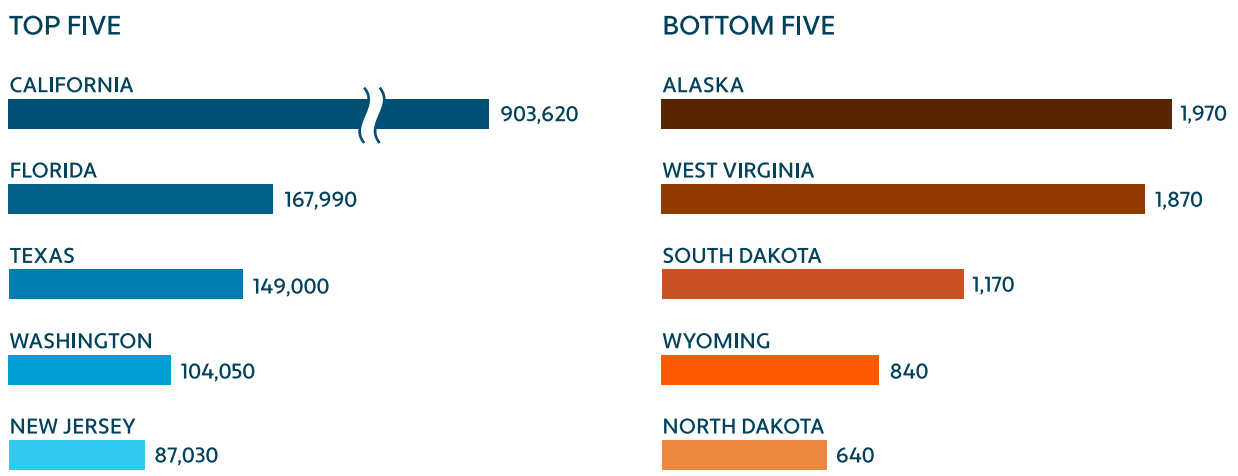
It's time to beef up the electricity grid.

Electric vehicles (EVs) accounted for about **one-third** of all vehicles on the road in the early 1900s. Yet the size of the country, limited range of EVs, and the lack of electricity outside of cities became serious impediments to sales as the United States grew. Due to those factors and the discovery of low-cost crude oil in Texas, electric cars took a back seat to their gas-guzzling counterparts by 1935.

Renewed interest in electric vehicles emerged during the fuel crisis of the 1970s and has been slowly growing ever since. Now, EVs could be on the cusp of a new golden age: Battery EV registrations in the U.S. jumped **72%** year over year, to about 7% of the total auto market, during the first four months of 2023. More than half of the vehicles on American roads could be electric by **2050**.

This works out well in more ways than one because in little more than a decade, residents of some states may not be able to purchase a new nonelectric vehicle.

ELECTRIC VEHICLE REGISTRATIONS BY STATE AS OF DECEMBER 31, 2022



SOURCE: *AFDC*

MORE ELECTRIC VEHICLES ARE COMING, WHETHER WE'RE READY OR NOT

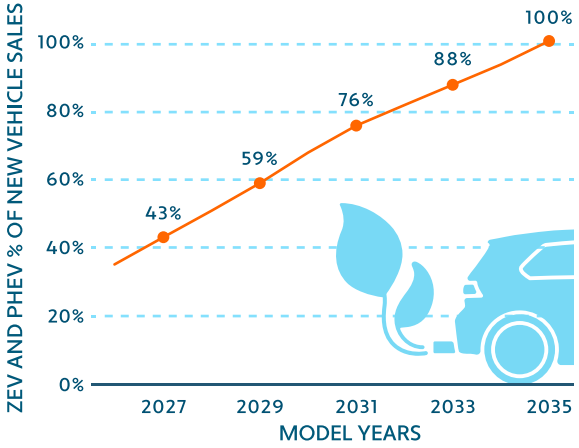
President Biden wants half of the vehicles sold in the country to be electric by **2030**. To support that goal, the Inflation Reduction Act adds and expands tax credits for new and used EVs and creates incentives to electrify heavy-duty vehicles like school buses. The EPA supports these initiatives too: In April 2023, it proposed **new standards for light-duty and medium-duty vehicles** starting with model year 2027.

States are also pushing to electrify the American auto sector. All new passenger vehicles sold in California are to be **zero emissions by 2035 under Advanced Clean Cars II regulations**. Currently available advanced vehicle technologies, including battery-electric, hydrogen fuel cell electric, and plug-in hybrid electric-vehicles (PHEV), will also be relied on to meet air quality and climate change emissions standards under the new regulations. The state must meet ambitious goals between now and then:

- 35% zero-emission vehicle (ZEV) sales by 2026
- 68% ZEV sales by 2030
- 100% ZEV sales by 2035

Following California's lead, **Maryland**, **Massachusetts**, **New Jersey**, **New York**, **Oregon**, and **Washington** plan to enforce the Advanced Clean Cars II rule and prohibit sales of new passenger car and light truck gasoline vehicles by 2035. Other states are moving in that direction too, though less quickly.

ADVANCED CLEAN CARS II ANNUAL ZERO-EMISSION VEHICLE REQUIREMENT



SOURCE: *California Air Resources Board*

Of course, switching to a country that primarily uses electric cars won't be as easy as flicking a switch.

THE ENERGY ELEPHANT IN THE ROOM

The United States has yet to eliminate one of the main obstacles to widespread EV adoption: a nationwide charging system that will enable EV drivers to get from point A to point B no matter how far that distance is.

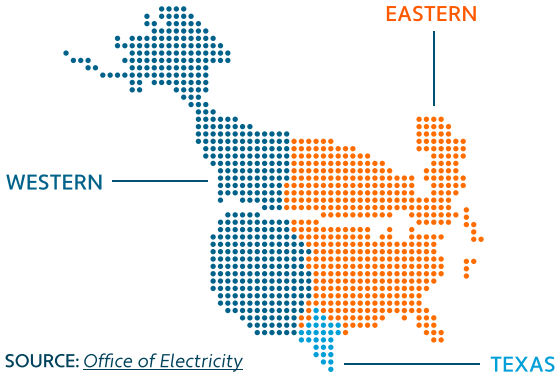
Even if EV charging stations were neatly spaced throughout the country, and they're not, some states would have a hard time reliably powering them.

California has had trouble meeting current electrical demand. The state "teetered on the edge of **rolling blackouts**" in September 2022, and state officials predict drought, extreme heat, and wildfires will "**threaten the reliability** of California's electrical grid" for the next five summers. And California isn't alone: In February 2021, roughly 4 million Texans lost power when a winter storm "**broke the grid**."

There seems to be movement toward a solution. **Solar and wind technologies** in the U.S. are on track to increase by about 40% in 2023, underpinned by existing tax incentives. There will likely be additional gains after 2024, when the Inflation Reduction Act will show its full effect.

But **generating** enough electricity isn't the only issue; with just three **electricity grids** in this country, storing and distributing electricity could be tough. Unlike fossil fuels, electricity can't be stored in a barrel and shipped to where it's needed: For now, at least, electricity has to be generated on the grid where it's used.

NORTH AMERICAN INTERCONNECTIONS

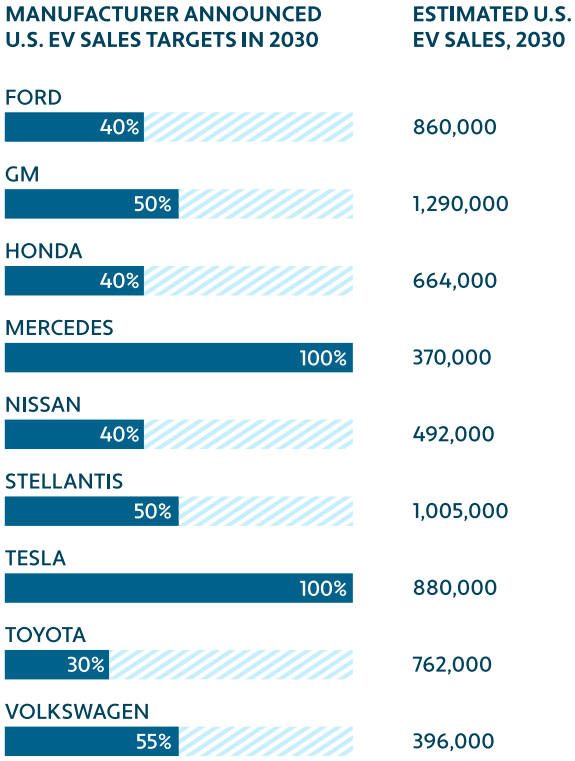


SOURCE: *Office of Electricity*

A perfect storm of energy tax revenue

With automakers already producing more **fuel-efficient** automobiles, and seven states en route to banning sales of new nonelectric vehicles, gas tax revenue is expected to decline. In fact, it's already down in some states.

That's a big deal. According to **The Pew Charitable Trusts**, fuel taxes account for nearly 40% of state transportation funds, and "much of that could vanish in the coming decades." The Congressional Budget Office predicts the federal Highway Trust Fund will be about **$140 billion** short by 2031.



SOURCE: *Edison Electric Institute*

TAXING MILES TRAVELED

Recognizing this, states are already on the hunt for other possible sources of revenue. **Iowa began taxing electricity at public EV charging stations** on July 1, 2023; **Hawaii** and **Washington** are exploring a fee or tax on miles driven (also called vehicle miles traveled, or VMT). Some drivers in **Oregon** and **California** are already paying for the miles they drive, having volunteered to do so.

Many economists are in favor of a VMT tax, but as the **Tax Foundation** notes, "developing an equitable and effective VMT tax will be no small feat." It will take time for a VMT tax to get off the ground. Political and public buy-in will be essential, notes Transportation Program Director Douglas Shinkle of the **National Conference of State Legislatures**.

COLORADO RETAIL DELIVERY FEES

	PER SALE
Community Access Retail Delivery Fee	$0.07
Clean Fleet Retail Delivery Fee	$0.06
Clean Transit Retail Delivery Fee	$0.03
General Retail Delivery Fee	$0.09
Bridge and Tunnel Retail Delivery Fee	$0.03
Air Pollution Mitigation Retail Delivery Fee	$0.01
Total Retail Delivery Fee	**$0.28**

SOURCE: *Colorado Department of Revenue*

TAXING DELIVERIES BY MOTOR VEHICLE

Going another direction, **Colorado implemented a retail delivery fee** on deliveries of taxable goods made via motor vehicle in the state. The retail delivery fee took effect July 1, 2022, jumped by a penny on July 1, 2023, and is expected to generate **$18.8** million in fiscal year 2023–24. Minnesota liked the idea so much it's instituting a **retail delivery fee** of its own starting July 1, 2024. **Retail delivery fees were proposed in New York** as well, but none were enacted.

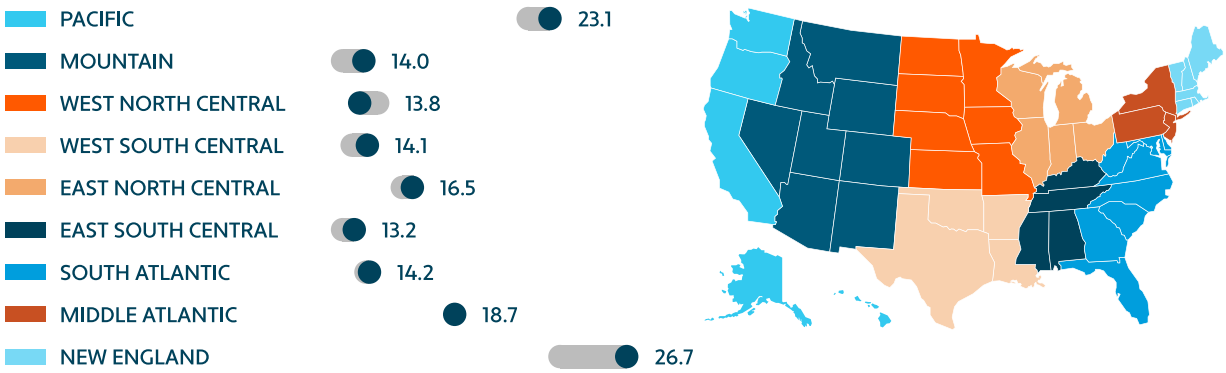
States can also boost revenue for transportation maintenance and projects through **new fees on passenger rides** by transportation network companies like Uber, and through **fees on EV registrations**, as in Colorado.

So states aren't without options. But as Bubba Lange explains, it will take time for the country to transition from its reliance on motor fuel taxes to alternative sources of revenue. In the meantime, we could face a perfect storm with the **cost of electricity increasing** but fuel taxes not decreasing. Indeed, in addition to its gas taxes, **Illinois** already has an electricity excise tax, an energy assistance charge, a renewable energy charge, and an energy transition assistance charge.

Mounting energy needs mixed with calls for clean energy are already generating interest in solar and wind power, as well as **fuel cell, hydrogen**, and **nuclear** options. Where there's industry growth, taxes are sure to follow.

U.S. AVERAGE RESIDENTIAL ELECTRICITY PRICES, SUMMER (JUNE–AUGUST) 2022–2023

Nominal cents per kilowatthour | Summer 2022 average | Summer 2023 average



SOURCE: *EIA*

Other issues likely to affect the energy industry in 2023

THE GLOBAL ENERGY CRISIS COULD HAVE A SILVER LINING

Russia's invasion of Ukraine triggered a global energy crisis that's prompting a "wholesale reorientation of global energy trade," according to the **International Energy Agency** (IEA). The IEA says the crisis is "causing profound and long-lasting changes that have the potential to hasten the transition to a more sustainable and secure energy system."

For example, due to increased electric vehicle adoption, the growth of biofuels, and an overall improvement in fuel economy, the IEA expects the **use of oil for transport fuels** to go into decline after 2026. Meanwhile, the shift to a clean energy economy "is picking up pace." **High energy prices** are "making clean energy technologies more cost competitive."

STATES CRACKING DOWN ON BIG OIL COULD CREATE MORE TAXES AND REGULATIONS

California is working to "**hold Big Oil accountable**." In 2022, the state passed a law requiring oil companies to report certain information regarding petroleum sales. In 2023, it authorized a windfall profits cap on oil refiners and the creation of an independent watchdog to **root out price gouging by oil companies**. Since other states often follow where California leads, could this mark the start of a Big Oil squeeze? If so, the industry could soon face more regulatory or tax burdens.

FEDERAL GREEN ENERGY TAX INCENTIVES COULD WITHER

The green energy tax incentives established under the Inflation Reduction Act of 2022 aim to spark a clean-energy manufacturing boon in the United States. And indeed, **47 new battery, solar panel, and wind turbine plants** have been announced since it was passed. But such incentives won't offset rising material costs or guarantee there will be skilled workers to fill every new manufacturing

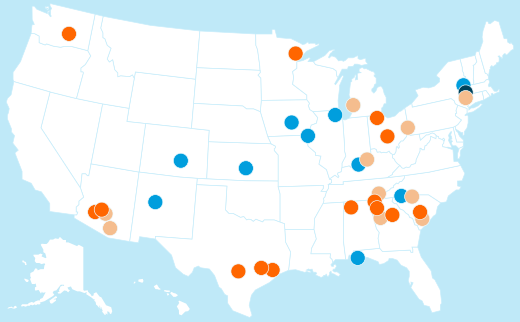
job. Some manufacturers say **rising costs are eating up the purported benefits**. The Tax Foundation says the green energy tax credits have become "**too costly to continue**."

STATE GREEN TAX INCENTIVES COULD BLOSSOM

Meanwhile, some states are moving forward with their own plans. For example, Washington is allowing qualified personal property used exclusively for the generation or storage of renewable energy to be **exempt from property taxes** levied for any state purpose.

At least **22 states have adopted zero greenhouse gas goals** or 100% renewable energy goals for either their power sector or their whole economy. Rhode Island has one of the most ambitious timelines, having committed to powering itself with 100% renewable energy by 2033. Minnesota is requiring the state's utilities to get 100% of their electricity from carbon-free energy sources by 2040. Tax incentives will almost certainly play a part in helping some of these states reach such lofty goals.

47 NEW CLEAN ENERGY MANUFACTURING FACILITIES ANNOUNCED SINCE AUG. 2022

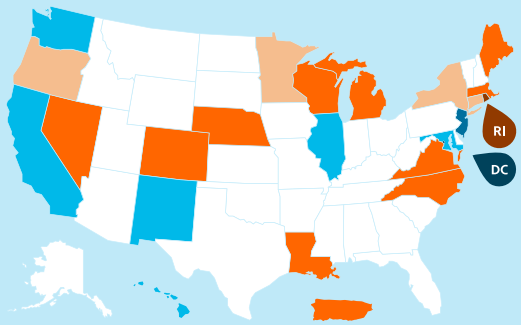


ENERGY STORAGE
SOLAR
WIND
OFFSHORE WIND

11 additional facilities have not yet announced locations (1 energy storage, 10 solar)

SOURCE: *American Clean Power*

100% CLEAN ENERGY STATES AND YEARS OF ULTIMATE GOALS



2032 2033 2035 2040 2045 2050

SOURCE: *CESA*

LEARN MORE

Understanding the latest developments in energy can help businesses in the industry make strategic decisions. Explore what's happening in other industries, and with tax compliance in general, by visiting our website:

AVALARA.COM

Looking ahead

It's impossible to cover every excise tax change in one report, so we aimed to spotlight the biggest headlines impacting the tax landscape … and your business. Learn more about how leading energy and fuel organizations are tackling tax compliance in our webinar, **Overcoming tax challenges in energy and fuel**.

FOR MORE RESOURCES:

- Stop by the **Avalara Tax Desk** for breaking tax news
- Read about VAT changes in the **EU and U.K.**
- Check out the **Avalara resource center** for extensive tax compliance content
- Learn how tax changes mentioned in this report may affect your obligations with a free **sales tax risk assessment**

Or give us a call at **877-352-4646**. Avalara is committed to ensuring tax compliance doesn't interfere with the growth or success of your business. Discover how automating tax compliance helps businesses track and comply with ever-changing tax laws around the world.