



FACT SHEET: Clean Manufacturing Investments in the Inflation Reduction Act

Manufacturing revitalization is essential to address climate change, support and create good union jobs, and advance racial, economic, and environmental justice. With strong public investments, the U.S. can cut industrial emissions—a leading source of climate and air pollution—while building reliable clean energy supply chains that equitably create good jobs.¹ We cannot and need not hitch climate action to overseas production that is often exploitative, polluting, and vulnerable. The Inflation Reduction Act of 2022 (IRA) will be critical for getting this job done.

The law makes historic investments to expand clean energy and electric vehicle (EV) manufacturing, and to transform the industrial sector to reduce emissions and enhance competitiveness. These investments will be a game-changer in boosting clean manufacturing in the U.S.

The more than \$50 billion in clean manufacturing investments in the law will create an estimated 900,000 jobs over the next decade.² The law also includes targeted funding for manufacturers to invest in communities facing coal facility closures due to the energy transition, which could support job creation in these hard-hit communities that powered our nation for generations.

BOOSTING THE SUPPLY OF CLEAN TECHNOLOGY MANUFACTURING

The law makes the largest ever investment in U.S. manufacturing of clean energy technologies, including wind, solar, batteries, electric vehicles, and more. These investments are essential to link climate action with good union jobs, counter the racial and income inequality fed by manufacturing job losses, and build

secure domestic supply chains instead of relying on overseas production that is marred by forced labor, higher levels of pollution, and shipping bottlenecks.³

The Inflation Reduction Act includes more than \$40 billion in tax credits to expand clean technology manufacturing. It also offers significant funding for the Biden administration to use executive action to spur clean manufacturing growth. The law will:

- **Support new clean technology manufacturing facilities with an expanded investment tax credit:** The law includes \$10 billion for the 48C tax credit, which will support the establishment or expansion of manufacturing facilities to produce solar, wind, battery, electric vehicle, energy efficiency, and other clean energy technologies. Of this amount, \$4 billion is reserved for manufacturing investments to boost job growth and economic opportunities in communities facing economic hardship from energy transitions. The 48C expansion will create more than 110,000 good jobs over the next 10 years.⁴
- **Promote solar, wind, and battery manufacturing with a new production tax credit:** The law establishes a new manufacturing production tax credit worth more than \$30 billion to support the expansion of solar, wind, and battery manufacturing and critical minerals processing. While the 48C credit has been effective in encouraging small- and medium-sized investments in many clean technology sectors, these four sectors warrant larger, sustained investments due to a significant lack of domestic manufacturing capacity, stiff global competition, and recent disruptions. Critically, manufacturers in these four sectors have a “direct pay” option that will allow

them to take advantage of the new tax credit for five years without relying on Wall Street financing that is typically unavailable for manufacturing investments. This new tax credit to fill clean technology supply chain gaps will create more than 560,000 good jobs over the next decade.⁵

- **Enable bold executive action to grow clean manufacturing:** The Inflation Reduction Act includes \$500 million for the Defense Production Act—a versatile policy toolbox that the Biden administration has started to use to support manufacturing growth for critical clean energy goods, such as solar panels, heat pumps, and grid efficiency components.⁶ The new funding will enable the administration to purchase goods, extend loans, install new technology, or otherwise support manufacturing in clean energy sectors.

BUILDING CLEAN VEHICLES

The law offers significant investments to strengthen the domestic supply chain for building the clean transportation options of the future. Robust policy to expand domestic clean vehicle manufacturing is essential to protect and create good manufacturing jobs as part of the EV transition.⁷ To that end, the law will:

- **Expand loans for clean vehicle manufacturing:** The law includes \$3 billion in new funding for the Advanced Technology Vehicle Manufacturing (ATVM) program, a longstanding program that disburses loans to facilities that manufacture clean vehicles. The ATVM has a proven record of creating and protecting good U.S. auto manufacturing jobs. A recent program expansion now supports loans to manufacture a broader range of technologies, including medium- and heavy-duty vehicles and their components, airplanes, maritime vessels, and rail technology. The new ATVM investment will help build technology to cut transportation emissions, while creating nearly 50,000 good jobs over the next decade.⁸
- **Offer grants to retool factories for clean vehicle manufacturing:** The law includes \$2 billion for the Domestic Manufacturing Conversion Grants Program, which provides direct grants to recently closed or at-risk auto manufacturing facilities. This funding will support the retooling efforts needed to transform production lines that once built gasoline-powered vehicles so that they build

the clean vehicles of the future. In addition to protecting existing jobs, this investment will create more than 30,000 good jobs over the next 10 years.⁹

DRIVING DEMAND FOR CLEAN TECHNOLOGY MANUFACTURING

While the law invests in the supply of clean manufacturing by directly offering grants, loans, and tax credits to manufacturers, it also will stoke demand for clean manufacturing by attaching domestic production incentives to tax credits for clean electricity and vehicle deployment. These incentives will expand the market for clean, U.S. manufacturing of solar panels, wind turbines, and EVs, and of the aluminum, steel, and other materials that comprise such clean energy goods. The law will:

- **Boost demand for clean electricity manufacturing via new tax incentives:** The law includes four clean electricity tax credits worth more than \$127 billion, each of which establishes—for the first time—a bonus 10% tax credit for projects that use domestically manufactured materials and parts. To qualify for the domestic content bonus, clean electricity developers must use domestically made iron and steel and manufactured components in which U.S. production accounts for roughly half of the value. Non-profit and government entities also must meet these domestic content requirements to take full advantage of a “direct pay” option that makes the tax credits more accessible. The tax credits also include strong labor standards and incentives to invest in low-income and energy transition communities. The tax credits are expected to propel dramatic growth in clean energy deployment, stimulating parallel growth in U.S. manufacturing of clean technology parts and materials.
- **Stimulate demand for clean vehicle manufacturing via an expanded tax credit:** The law includes a more than \$7 billion expansion and update of a tax credit for new clean vehicles, with standards to catalyze North American manufacturing of EVs, fuel cell vehicles, and their components. The credit will reduce the cost of new EVs by up to \$7,500, while incentivizing the establishment of a complete and resilient supply chain for essential EV battery components in North America. It also ensures that the critical minerals that comprise these batteries are not sourced from countries relying on child and forced labor or countries where supply chain

bottlenecks and disruptions threaten the EV transition.

REDUCING INDUSTRIAL EMISSIONS

The industrial sector produces nearly a third of U.S. climate pollution, when accounting for electricity use.¹⁰ It is the only source of U.S. greenhouse gas emissions that is projected to rise in the coming decades.¹¹ Industry is also responsible for toxic air pollution that exposes a quarter million people to elevated cancer risks each year, primarily in Black communities.¹²

To help address industrial pollution, the law establishes and expands investment programs to reduce emissions in energy-intensive industries, such as steel, aluminum, and cement. The law **launches a first-of-its-kind program to propel commercial-scale deployment of emissions-reducing technology** at U.S. manufacturing facilities, **expands a tax credit for industrial transformation projects**, and **lays the groundwork for public purchasing of clean construction materials**.

While the Bipartisan Infrastructure Law makes important investments in research, development, and demonstration projects in certain industrial technologies, the Inflation Reduction Act makes essential investments to broadly deploy emissions-reducing technologies across industrial sectors. Together, these investments could eliminate millions of metric tons of harmful emissions while boosting competitiveness and job creation at U.S. industrial facilities. The law will:

- **Directly invest in emissions-reducing technology at manufacturing facilities:** The law launches a new, nearly \$6 billion program to help

manufacturers carry out emissions-reducing upgrades at steel, aluminum, cement, and other energy-intensive industrial facilities. This program will create nearly 120,000 good jobs over five years and cut nearly 70 million metric tons of annual climate pollution—the equivalent of running over 18,000 wind turbines for a year.¹³

- **Cut industrial emissions through a tax credit:** In addition to providing \$10 billion for the 48C tax credit to spur clean technology manufacturing, as described above, the law makes the tax credit available—for the first time—for manufacturers to install equipment that achieves an at least 20% reduction in climate pollution. The program expansion will cut an estimated 7 million metric tons of annual greenhouse gas emissions—equivalent to the yearly climate pollution emitted by about 1.5 million gasoline-powered vehicles.
- **Support government purchases of low-emissions materials:** The law includes new investments to support the Biden administration’s Buy Clean initiative, which will use the U.S. government’s vast purchasing power to drive demand for low-emissions manufacturing of construction materials. To lay the groundwork for Buy Clean, the law includes \$250 million for grants and technical assistance that will help manufacturers report their emissions in environmental product declarations—a tool to accurately compare the emissions that go into manufactured goods. The law also invests more than \$5 billion for the Department of Transportation and the General Services Administration to support the use of low-carbon materials for public buildings and highways.

More Than 900,00 Good Jobs From Clean Manufacturing Investments

Clean Manufacturing Investment	Jobs Created over 10 Years
Clean Manufacturing Investment Tax Credit (48C)	115,000
Solar, Wind, and Battery Production Tax Credit (45X)	561,000
Defense Production Act Funding for Clean Manufacturing	5,000
Clean Vehicle Manufacturing Loans and Grants	79,000
Industrial Emissions Reduction Investments	120,000
Investments to Support Buy Clean	56,000
Total Jobs Created over 10 Years	936,000

ENDNOTES

1 BlueGreen Alliance, *Why Do We Need to Onshore Manufacturing of Clean Energy Goods?*, June 2022 . Available online: https://www.bluegreenalliance.org/wp-content/uploads/2022/06/MFG-Clean-Energy-Goods-Fact-Sheet-2022_FINAL_61522_.pdf

2 University of Massachusetts Amherst, Job Creation Estimates Through Proposed Inflation Reduction Act, August 2022. Available online: https://peri.umass.edu/publication/item/download/1023_96ca94f322a4e02eea0b7748ffe5d723. All job creation estimates include jobs that will be created by both the public investments in the Inflation Reduction Act and the private investments that the law will stimulate. See the PERI report for the specific leverage ratios. The estimates include direct jobs—created as a direct result of the investments, indirect jobs—created elsewhere in the supply chain as a result of increased business demand for materials and services, and induced jobs—created as a result of increased spending by workers who benefit from the direct and indirect jobs. In the job creation estimates cited here, each “job” represents an increase in demand for employment sufficient to employ an individual person full-time for one year.

3 BlueGreen Alliance, *Why Do We Need to Onshore Manufacturing of Clean Energy Goods?*, June 2022 . Available online: https://www.bluegreenalliance.org/wp-content/uploads/2022/06/MFG-Clean-Energy-Goods-Fact-Sheet-2022_FINAL_61522_.pdf

4 University of Massachusetts Amherst, Job Creation Estimates Through Proposed Inflation Reduction Act, August 2022. Available online: https://peri.umass.edu/publication/item/download/1023_96ca94f322a4e02eea0b7748ffe5d723.

5 Ibid.

6 BlueGreen Alliance, “The Defense Production Act: A Tool to Spur Clean Manufacturing,” June 2022. Available online: <https://www.bluegreenalliance.org/resources/the-defense-production-act-a-toolbox-to-spur-clean-manufacturing/>

7 Economic Policy Institute, The stakes for workers in how policymakers manage the coming shift to all-electric vehicles, September 2021. Available online: <https://www.epi.org/publication/ev-policy-workers/>

8 University of Massachusetts Amherst, Job Creation Estimates Through Proposed Inflation Reduction Act, August 2022. Available online: https://peri.umass.edu/publication/item/download/1023_96ca94f322a4e02eea0b7748ffe5d723

9 Ibid.

10 U.S. Environmental Protection Agency, Industry Sector Emissions. Available online: <https://www.epa.gov/ghgemissions/sources-greenhouse-gas-emissions#industry>

11 U.S. Energy Information Agency, CO2 Emissions. Available online: <https://www.eia.gov/outlooks/aeo/pdf/08%20AEO2021%20Emissions.pdf>

12 ProPublica, “Poison in the Air.” Available online: <https://www.propublica.org/article/toxmap-poison-in-the-air>

13 All emissions reduction estimates come from the BlueGreen Alliance’s internal analysis. University of Massachusetts Amherst, Job Creation Estimates Through Proposed Inflation Reduction Act, August 2022. Available online: https://peri.umass.edu/publication/item/download/1023_96ca94f322a4e02eea0b7748ffe5d723