



ANALYSIS OF THE INFLATION REDUCTION ACT OF 2022

On August 16, 2022, President Joe Biden signed into law the [Inflation Reduction Act of 2022](#). The package contains several measures of direct interest to public research universities. The bill includes several tax provisions that will accelerate the deployment of clean energy, vehicles, and buildings, and creates grant programs for weather forecasting and research programs; alternative aviation fuel and low emission aviation technology; environmental and climate justice; and neighborhood access and equity. The bill also provides funding for several infrastructure programs through the Department of Energy Offices of Science, Fossil Energy and Carbon Management, Nuclear Energy, and Energy Efficiency and Renewable Energy.

The Inflation Reduction Act is the culmination of several unsuccessful attempts to pass President Biden's three-pronged "Build Back Better" agenda. "Build Back Better" included a supplemental COVID relief package, the American Rescue Plan that was signed into law in March 2021, the American Jobs Plan which would invest in infrastructure, manufacturing, and scientific research; and the American Families Plan, a wide-ranging social policy proposal including education provisions.

In December 2022, the Biden administration released a guidebook to the Inflation Reduction Act's new tax incentives and investments in clean energy and climate action, [Building a Clean Energy Economy](#). The guidebook provides a program-by-program overview of the bill, including details about the funding opportunities and who is eligible to apply. The administration also launched [CleanEnergy.gov](#), which will be updated as new funding announcements and program details are made available.

Title I – Committee on Finance

The reconciliation package includes more than 20 new or modified tax incentives to spur new clean energy technology deployment and investment. The Department of Treasury is responsible for implementing these tax incentives, several of which could be of interest to public universities. The first tax credits highlighted may be of interest to public institutions that currently generate or invest in their own power production. There are also tax incentives that may help public universities looking to replace vehicles on campus or upgrade to electric vehicles. While the following analysis highlights a subset of the tax incentives in the package, others included in the bill may be of interest to some institutions.

Two signature tax credits in the package are the Production Tax Credit (PTC) and Investment Tax Credit (ITC), which have helped encourage clean energy projects across the country. The reconciliation package extends and modifies the existing PTC and ITC for the next two years, and for 2025 and beyond creates new technology-neutral PTC and ITC. In addition, the reconciliation package extends and expands the Advanced Energy Project Credit, providing the Treasury Secretary with new authority to allocate \$10 billion to new advanced energy projects. One other tax credit that may be of interest is the Commercial Clean Vehicles Credit, which can help defray up to 30 percent of the cost of replacing diesel- or gas-powered commercial vehicles with electric vehicles.

To help ensure tax-exempt entities such as public universities can benefit, the credits have been updated so that tax-exempt entities can elect to receive the credits in the form of direct payments. In

the case that an entity may be ineligible for direct payment of credits, the bill allows for these entities to transfer all or a portion of the credit to an unrelated party in exchange for cash. (See IRA, Sec. 13801 for the statutory language.)

Title I – Committee on Finance		
Production Tax Credit for Electricity from Renewables (IRA, Sec. 13101)	Modifies and extends existing tax credit for production of electricity from renewable sources through 2023 and 2024; after that time, the credits will sunset, transitioning to technology-neutral, emissions-based credits (see Sec. 13701 below). Qualifying sources include facilities that generate electricity from wind, biomass, geothermal, solar, small irrigation, landfill and trash, hydropower, and marine and hydrokinetic renewable energy. This tax credit is eligible for direct pay and transferability.	Pgs. 9-13
Investment Tax Credit for Energy Property (IRA, Sec. 13102)	Modifies and extends existing tax credit for investments in renewable energy projects through 2023 and 2024; after that time, the credits will sunset, transitioning to technology-neutral, emissions-based credits (see Sec. 13702(h) below). Qualifying investments include fuel cell, solar, geothermal, small wind, energy storage, biogas, microgrid controllers, and combined heat and power properties. This tax credit is eligible for direct pay and transferability.	Pgs. 9-12, 14
Clean Electricity Production Tax Credit (IRA, Sec. 13701)	Provides a technology-neutral tax credit for production of clean electricity for facilities with greenhouse gas emission rates not greater than zero. Replaces the production tax credit for electricity generated from renewable sources (extended in Section 13201 through 2024). This tax credit is eligible for direct pay and transferability.	Pgs. 9-12, 17-18
Clean Energy Investment Tax Credit (IRA, Sec. 13702h)	Provides a technology-neutral tax credit for investment in facilities that generate clean electricity with a greenhouse gas emissions rate that is not greater than zero, as well as qualified energy storage technologies. Replaces the investment tax credit for facilities generating electricity from renewable sources (extended in Section 13202 through 2024). This tax credit is eligible for direct pay and transferability.	Pgs. 9-12, 19-20
Advanced Energy Project Credit (IRA, Sec. 13501)	\$10 billion to the Secretary of Treasury for projects that (1) re-equip, expand, or establish an industrial or manufacturing facility for the production or recycling of a range of renewable energy and energy efficiency equipment, carbon capture equipment, and advanced vehicles; (2) re-equip an industrial or manufacturing facility with equipment designed to reduce greenhouse gas emissions by at least 20 percent; or (3) re-equip, expand, or establish an industrial facility for the processing, refining, or recycling of critical materials. This tax credit is eligible for direct pay and transferability.	Pgs. 25-28
Credit for Qualified Commercial Clean Vehicles	Provides a tax credit for purchasers of qualified commercial clean vehicles to defray up to 30 percent of the cost of replacing	Pgs. 45-47, 51

(IRA, Sec. 13403)	diesel- or gas-powered commercial vehicles with electric vehicles. A commercial vehicle owner choosing to replace an existing vehicle with a cleaner but not fully electric alternative is eligible for a credit of up to 15 percent. This tax credit is eligible for direct pay and transferability.	
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Title IV – Committee on Commerce, Science, and Transportation

The reconciliation package provides funding to encourage climate resilience among coastal communities. The National Oceanic and Atmospheric Administration (NOAA) received \$2.6 billion to provide funding contracts, grants, cooperative agreements, or technical assistance for conservation, restoration, and protection of coastal and marine habitats and resources to allow communities to prepare for climate change conditions. Institutions of higher education are eligible entities for this program.

NOAA also received \$150 million to accelerate advances and improvements in weather forecasting and research programs, \$50 million to fund competitive grants on climate research, and \$190 million to develop high-performance computing and processing for weather research and processing.

Additionally, the bill created the Alternative Fuel and Low-Emissions Aviation Technology program through the Department of Transportation. The \$297 million program will fund a competitive grant process for advances in aviation fuel and low-emission aviation technologies. There is a 25 percent cost share in most cases, and institutions of higher education are listed as eligible entities for these grants.

Title IV – Committee on Commerce, Science, and Transportation		
Investing in Coastal Communities and Climate Resilience (IRA, Sec. 40001)	\$2.6 billion for the National Oceanic and Atmospheric Administration (NOAA) to provide funding contracts, grants, cooperative agreements, or technical assistance to coastal states and others for the conservation, restoration, and protection of coastal and marine habitats and resources, including fisheries, to enable coastal communities to prepare for extreme storms and other changing climate conditions, and for projects that support natural resources that sustain coastal and marine resource dependent communities. Higher education institutions are listed as an eligible entity.	Pgs. 146, 163
Oceanic and Atmospheric Research and Forecasting for Weather and Climate (IRA, Sec. 40004a)	\$150 million for the National Oceanic and Atmospheric Administration (NOAA) to accelerate advances and improvements in weather, coasts, ocean and climate research, observation systems, modeling, forecasting, assessments.	Pgs. 176-177
Research Grants and Science Information (IRA, Sec. 40004b)	\$50 million for NOAA competitive grants to fund climate research as it relates to weather, ocean, coastal, and atmospheric processes and conditions, and impacts to marine species and coastal habitat.	Pgs. 176-177

Computing Capacity and Research for Weather, Oceans, and Climate (IRA, Sec. 40005)	\$190 million for NOAA high-performance computing, data processing capacity, data management, and storage assets for weather research and forecasting.	Pgs. 176, 178
Alternative Fuel and Low-Emissions Aviation Technology Program (IRA, Sec. 40007)	\$290 million for the Department of Transportation to establish a competitive grant program to produce, transport, blend, or store sustainable aviation fuel, or develop, demonstrate, or apply low-emission aviation technologies. Universities are listed as eligible entities for these grants. There is a 25% cost share in most cases.	Pgs. 56, 64-65

Title V – Committee on Energy and Natural Resources

The bill provides funding for several infrastructure programs through the Department of Energy Office of Science, the Office of Fossil Energy and Carbon Management, the Office of Nuclear Energy, and the Office of Energy Efficiency and Renewable Energy.

Title V – Committee on Energy and Natural Resources		
National Laboratory Infrastructure - Office of Science (IRA, Sec. 50172a)	\$1.5 billion for (1) for science laboratory infrastructure; (2) for high energy physics construction and equipment; (3) for fusion energy science construction and equipment; (4) for nuclear physics construction equipment; (5) for advanced scientific computing research facilities; (6) for basic energy sciences projects; and (7) to carry out activities for isotope research and development facilities.	Pgs. 76-77
National Laboratory Infrastructure - Office of Fossil Energy and Carbon Management (IRA, Sec. 50172b)	\$150 million for infrastructure and general plant projects	Pgs. 76, 78
National Laboratory Infrastructure - Office of Nuclear Energy (IRA, Sec. 50172c)	\$150 million for infrastructure and general plant projects	Pgs. 76, 79
National Laboratory Infrastructure Office of Energy Efficiency and Renewable Energy (IRA, Sec. 50172d)	\$150 million for infrastructure and general plant projects	Pgs. 76, 80

Title VI – Committee on Environment and Public Works

The Inflation Reduction Act of 2022 provides \$3 billion for environmental and climate justice block grants through the Environmental Protection Agency. The grants provide funding to disadvantaged communities for pollution monitoring, prevention, and remediation projects; mitigating climate and health risks from urban heat islands, extreme heat, wood heater emissions, and wildfire events; climate resiliency and adaptation; reducing indoor toxics and indoor air pollution; or facilitating engagement of disadvantaged communities in environmental public policy processes. Higher education institutions are listed as eligible partners for these grants.

The bill would also provide \$1.893 billion through the Department of Transportation to fund neighborhood access and equity grants. The grants would allow communities to improve walkability, safety, and affordable transportation access, mitigate or remediate negative impacts on the human or natural environment in a disadvantaged or underserved community, and for planning and capacity building activities in disadvantaged or underserved communities. Higher education institutions are listed as eligible for these grants.

Title VI – Committee on Environment and Public Works		
Environmental and Climate Justice Block Grants (IRA, Sec. 60201)	\$3 billion for Environmental Protection Agency to administer grants to disadvantaged communities for community-led air and other pollution monitoring, prevention, and remediation projects; mitigating climate and health risks from urban heat islands, extreme heat, wood heater emissions, and wildfire events; climate resiliency and adaptation; reducing indoor toxics and indoor air pollution; or facilitating engagement of disadvantaged communities environmental public policy processes. Higher education institutions are listed as eligible partners for these grants.	Pgs. 83, 85
Neighborhood Access and Equity Grant Program (IRA, Sec. 60501)	\$3.2 billion for Department of Transportation (Federal Highway Administration) to fund a “Neighborhood access and equity grant program” to improve walkability, safety, and affordable transportation access, mitigate or remediate negative impacts on the human or natural environment in a disadvantaged or underserved community, and for planning and capacity building activities in disadvantaged or underserved communities. Higher education institutions are listed as eligible partners for these grants.	Pgs. 83, 87