Office of Manufacturing and Energy Supply Chains

Proposed Appropriation Language

For Department of Energy expenses including the purchase, construction, and acquisition of plant and capital equipment, and other expenses necessary for manufacturing and energy supply chain activities in carrying out the purposes of the Department of Energy Organization Act (42 U.S.C. 7101 et seq.), including the acquisition or condemnation of any real property or any facility or for plant or facility acquisition, construction, or expansion, $179,490,000 to remain available until expended: Provided, that of such amount, $75,000,000 shall be available for activities under section 303 of the Defense Production Act of 1950 (50 U.S.C. 4533 et seq.): Provided further, That of the amounts provided under this heading, not more than $24,000,000 shall be available until September 30, 2025, for program direction, of which up to $10,000,000 shall be from amounts made available in the previous provision.

P.L. 95-91, "Department of Energy Organization Act" (1977)
P.L. 109-58, "Energy Policy Act of 2005"
P.L. 110-140, "Energy Independence and Security Act of 2007"
P.L. 115-246, "Department of Energy Research and Innovation Act" (2018)
P.L. 116-260, "Consolidated Appropriations Act of 2020" (Section Z: Energy Act of 2020)

Manufacturing and Energy Supply Chains

Overview

The Office of Manufacturing and Energy Supply Chains (MESC), within the Office of the Under Secretary for Infrastructure, is responsible for strengthening and securing manufacturing and energy supply chains needed to modernize the Nation's energy infrastructure and support a clean and equitable energy transition. MESC catalyzes the development of an energy sector industrial base through investments that establish and secure domestic clean energy supply chains and manufacturing, and by engaging with private-sector companies, other Federal agencies, and key stakeholders to collect, analyze, respond to, and share data about energy supply chains to inform future decision making and investment.

The office manages programs that strengthen, and secure energy supply chains needed to modernize the Nation's energy infrastructure and support the clean energy transition. MESC manages a portfolio of programs to catalyze the development of a resilient and sustainable energy sector industrial base (ESIB) through investments that establish and secure domestic clean energy manufacturing supply chains such as: support for scale-up and deployment of new manufacturing infrastructure to fill critical ESIB gaps; support for manufacturing facility upgrades to achieve ESIB decarbonization goals; and the development of world-class national and regional energy sector supply chain modeling, mapping, and analysis tools. In addition, the office manages programs that develop clean domestic manufacturing and workforce capabilities, with an emphasis on opportunities for small and medium enterprises and communities in energy transition. MESC coordinates across all of DOE's programs on manufacturing and supply chain issues, including the Office of Clean Energy Demonstrations, the Advanced Materials and Manufacturing Technologies Office, the Industrial Efficiency and Decarbonization Office, and the Loan Program Office.

MESC provides skilled teams in energy planning; energy security; infrastructure financing; project development; project management; clean energy supply chains; regional economic development; workforce development; state, community, and tribal engagement; and other key areas critical to the success of demonstration and deployment efforts as appropriated through annual appropriations, the Infrastructure Investment and Jobs Act (IIJA), and the Inflation Reduction Act (IRA). The Office engages and works in partnership with a diverse set of stakeholders as it stewards and seeks the greatest benefits from federal funding.

Highlights of the FY 2024 Budget Request

MESC's FY 2024 Budget Request of $179,490,000 supports continued focus on the Industrial Assessment Centers (IAC) and Energy Sector Industrial Base's technical assistance program. In addition, MESC activities will support the Defense Production Act (DPA) and the Global Clean Energy Manufacturing Initiative (GCEMI) that enable domestic energy sector manufacturing and production infrastructure investments to establish new commercial-scale production capabilities for critical devices, components, and/or systems that do not currently exist domestically and that will target early commercialization and bridge the gap between pilot and commercial scales.

- **Facility and Workforce Assistance:** Focuses on supporting existing industrial facilities seeking to boost their competitiveness through efficiency improvements, emissions reduction, and workforce development. The Industrial Assessment Centers (IACs) provide various facilities with a no-cost assessment, including in-depth evaluations conducted by engineering faculty with upper class and graduate students from a participating university. This detailed process analysis will generate specific recommendations with estimates of costs, performance, and payback times.
- **Battery and Critical Materials**: Works to secure US supply chains for advanced batteries and the critical minerals and materials needed for them and for other critical energy technologies, as well as strategies to secure supply chains supported by US allies. MESC activities in this area include efforts to stimulate industry, local governments, and communities to work together to overcome siting and permitting barriers for key domestic mineral resources. The Budget Request includes the Global Clean Energy Manufacturing Initiative (GCEMI), which will support collaborations with international partners to promote cooperation on energy supply chains, including mineral and material resources, material processing, and scaleup, as well as other components of the energy supply chain.

- **Energy Sector Industrial Base**: Develops and advances assessments and strategies for U.S. energy sector supply chains and coordinates strategic investments to expand the strength of the U.S. manufacturing sector. Activities include supply chain modeling, mapping, and analysis tools that are instrumental for assessing vulnerabilities, strengths, and opportunities in U.S. supply chains and aligning and prioritizing investments by MESC and other parts of DOE and the Federal government across all advanced energy technologies. Strategic investments of $75 million - $65 million from ESIB and $10 million from Program Direction – will be made using Defense Production Act (DPA) and other authorities.
- **Program Direction**: Enables MESC to maintain and support a world-class Federal workforce that supports analysis of the U.S. industrial sector as well as strategic investments and technical assistance to support private-sector efforts to boost the security of U.S. supply chains. The FY 2024 Program Direction Request provides resources for program and project management, oversight activities, contract administration, workforce management, IT support, and Headquarters (HQ) and field site non-laboratory facilities and infrastructure. In addition, $10 million of Program Direction will be made available for management of the DPA activities.

Manufacturing and Energy Supply Chains
($K)

	FY 2022 Enacted[1]	FY 2023 Enacted	FY 2024 Request	FY 2024 Request vs FY 2023 Enacted
Manufacturing and Energy Supply Chains				
Facility and Workforce Assistance	15,000	16,000	15,490	-510
Battery and Critical Materials	N/A	0	75,000	75,000
Energy Sector Industrial Base	N/A	2,000	65,000	63,000
Program Direction	909	1,000	24,000	23,000
Total, Manufacturing and Energy Supply Chains[2]	**15,909**	**19,000**	**179,490**	**160,490**

[1] FY 2022 funds were enacted under the Energy Efficiency and Renewable Energy's Advanced Manufacturing Office. Now known as the Advanced Materials and Manufacturing and the Industrial Efficiency and Decarbonization Offices.

[2] In FY 2024 Request, total DPA funding is $75 million, which includes $65 million for Energy Sector Industrial Base and $10 million for Program Direction.

Explanation of Changes

Facility and Workforce Assistance: (-$510,000) Focus efforts to continue funding for the Industrial Assessment Centers (IAC) program to develop skilled workforce and support manufacturers, including in disadvantaged communities, energy communities, and areas with high industrial emissions.

Battery and Critical Materials: (+$75,000,000) Establish assistance activities for grants for pilot/demonstration scale projects to establish domestic manufacturing in critical ESIB segments of the supply chain and for community and locality critical minerals sourcing. Establish the Manufacturing Accelerator Network to support meaningful collaborations with international partners through the Global Clean Energy Manufacturing Initiative.

Energy Sector Industrial Base (ESIB): (+$63,000,000) Continue to build on current technical assistance programs focused regional energy sector supply chain challenges. Add explicit support to develop holistic supply chain modeling and analysis tools for integrated cross-sector energy supply chain diagnostics and insights as well as manufacturing infrastructure investments that provide financial assistance grants to establish new domestic component, device, or system manufacturing in critical ESIB segments of the supply chain. Enable domestic energy sector manufacturing and production infrastructure investments to establish new commercial-scale production capabilities for critical devices, components, and/or systems that do not currently exist domestically that will target early commercialization and bridge the gap between pilot and commercial scales.

Program Direction: (+$23,000,000) Meet estimated staffing needs, including DPA and GCEMI activities, of the office to execute expected roles and responsibilities. The increase in budget will support strengthening MESC's overall performance, organization, budget, operations, human capital, and project management as the office continues to grow in support of its mission.

Manufacturing and Energy Supply Chains
Facility and Workforce Assistance

The Facility and Workforce Assistance subprogram deploys data and expertise from across the Department of Energy, including technologies developed under the guidance of the Advanced Materials and Manufacturing and the Industrial Efficiency and Decarbonization Offices in the Office of Energy Efficiency and Renewable Energy and modeling and analysis conducted by the Energy Sector Industrial Base Subprogram in MESC, to bolster the Nation's manufacturing base and advance industrial decarbonization technologies.

The subprogram targets federal investments to establish, expand, and reequip manufacturing facilities with a focus on resolving supply chain gaps and optimizing energy efficiency and environmental performance through the implementation of smart manufacturing, energy management, sustainable manufacturing, waste management, resiliency planning, and industrial decarbonization technologies. In expanding and re-equipping the energy sector industrial base, expertise is also devoted to development of skilled domestic workforce development and creating pathways of opportunity for American workers, particularly in energy and disadvantaged communities.

DOE's Industrial Assessment Centers (IAC) Program has offered assessments to domestic manufacturers since 1976. The Program trains the next generation of an energy-savvy workforce by providing on-site, practical experience applying engineering, environmental, and technological expertise. IACs conducts no-cost assessments for small- and medium-sized domestic manufacturers to identify opportunities to save energy, improve productivity, and reduce waste and water use. The Program's data management practices provide public visibility into opportunities available for individual manufacturing facilities and the sector more broadly. Publicly available data includes information on facilities assessed (size, industry, energy usage, etc.) and details of resulting recommendations (type, energy, and dollar savings etc.).

Manufacturing and Energy Supply Chains
Activities and Explanation of Changes

FY 2023 Enacted	FY 2024 Request	Explanation of Changes FY 2024 Request vs FY 2023 Enacted
Facility and Workforce Assistance $16,000,000	$15,490,000	-$510,000
• Provide assessments to manufacturers on energy and water efficiency, waste reduction, and energy management processes. • Fund competitively selected partnerships between universities, and the private sector that emphasize student-led projects to develop new tools and processes that address energy management and manufacturing challenges. • Train the clean energy innovators and manufacturing energy management workforce of the future.	• Continue the IAC program's work with four-year universities to develop skilled workforce and support manufacturers, including disadvantaged communities, energy communities, and areas with high industrial emissions. • Continue technical assistance for the implementation of smart manufacturing, resiliency planning, energy management, sustainable manufacturing, waste management, and other efficiency projects and practices recommended through the IAC program. • Continue diversity efforts targeting non-traditional engineering students for workforce training opportunities. • Deploy expanded assessment approach that focuses on decarbonization recommendations for manufacturers.	• Focus efforts to enable continued adaptation and expansion of workforce development activities and assessments at existing IACs at four-year universities.

Manufacturing and Energy Supply Chains
Batteries and Critical Materials

Description

Within MESC, the Office of Batteries and Critical Materials (BCM) is responsible for strategically strengthening and securing the manufacturing and energy supply chains needed to modernize the Nation's manufacturing capabilities and establish supply chain resilience. BCM builds important and strategic manufacturing capabilities through targeted activities including demonstrations, pilots, and full-scale commercial projects. Supply chain resilience targets weaknesses and gaps in the overall supply chain, including minerals, materials, processing, and capabilities needed for batteries and critical materials. National laboratories, universities, industry, and other Federal agencies will apply their expertise and leverage their partnerships through this work in coordination with DOE offices and programs.

To accelerate qualification and industry acceptance of energy materials from diverse sources, BCM will organize a portfolio of activities targeted at the resource base for materials for batteries and the Energy Sector Industrial Base (ESIB). This approach will apply advanced tools to accelerate the qualification process for new or substitute sources of minerals and materials, expanding resource availability; qualify and scale-up feedstocks through advanced materials separation and refinement techniques; and validate prototype functionality through testing and lifetime predictions in end-use applications. BCM will also contribute to the Global Clean Energy Manufacturing Initiative (GCEMI) that will enable domestic energy sector manufacturing and production infrastructure investments to establish new commercial-scale production capabilities for critical devices, components, and/or systems that do not currently exist domestically, strategically targeting early commercialization opportunities and potentially bridging the gap between pilot and commercial scales.

A critical minerals manufacturing scale-up and demonstration investments program will focus on establishing robust domestic energy materials processing and manufacturing through financial assistance grants within critical ESIB areas. The program will target early commercialization and bridge the gap between pilot and commercial scales through projects that demonstrate the processing and/or manufacturing of critical energy materials or energy supply chain components. Related critical minerals/materials of interest for ESIB applications include, but are not limited to, rare earth elements, platinum-group metals, and battery critical materials. The program will also emphasize critical materials from domestic and free-trade sources, including virgin and recycled sources, within the context of a changing supply chain landscape for battery critical materials.

The international and domestic sourcing of critical minerals continues to be a challenge with significant barriers, including the siting, permitting, and operation of sourcing operations and facilities. International partners and allies could benefit from technical assistance, such as early-stage feasibility studies or mineral qualification, in overcoming barriers to supplying minerals in critical ESIB areas. Domestic communities and localities motivated to accommodate these operations could play a pivotal role in structuring meaningful relationships and leveraging commercial needs. The critical minerals sourcing activity aims to align the interests of mineral sourcing with the inherent challenges therein.

The Manufacturing Accelerator Network will support meaningful collaborations with international partners through the GCEMI. This cooperation will focus on creating environmentally sustainable governance and building clean energy capacity, including mineral and material resources, material processing, and scaleup, and other components for the clean energy supply chain as well as mineral resource tracing and tracking. To sustain these supply chains, the development of international cooperation and collaboration regarding end-of-life recovery and re-use of critical materials will be emphasized along with efforts to train the clean energy innovators and manufacturing energy management workforce of the future.

Batteries and Critical Materials
Activities and Explanation of Changes

FY 2023 Enacted	FY 2024 Request Level	Explanation of Changes FY 2024 Request Level vs. FY 2023 Enacted
Batteries and Critical Materials $0	$75,000,000	+$75,000,000
• No program	• Stand up the Global Clean Energy Manufacturing Initiative (GCEMI) that will enable domestic energy sector manufacturing and production infrastructure investments to establish new commercial-scale production capabilities. • Accelerate the qualification for new or substitute sources of minerals and materials through advanced materials separation and refinement techniques. • Employ financial assistance grants for larger scale demonstrations and pilot projects to establish new domestic critical materials production capacity. • Overcome international engagement and mineral qualification barriers, addressing domestic community and locality critical minerals sourcing challenges. • Establish the Manufacturing Accelerator Network for international collaboration on environmentally sustainable governance and clean energy supply capacity.	• New program in FY 2024.

Manufacturing and Energy Supply Chains
Energy Sector Industrial Base

Description

The Energy Sector Industrial Base (ESIB) holistically represents the energy sector and associated supply chains that include all industries, companies and stakeholders directly and indirectly involved in the energy sector. This complex network of industries and stakeholders spans from extractive industries, manufacturing industries, energy conversion and delivery industries, end of life and waste management industries, to service industries which include providers of digital goods and services. All energy sources depend on supply chains, and the global shift to clean energy is introducing new sets of supply chain risks, vulnerabilities, and opportunities.

Informed by ESIB modeling, mapping, and analysis activities, manufacturing infrastructure investments will provide financial assistance grants to establish new domestic processing and/or manufacturing in critical ESIB segments of the supply chain. These investments will support the Defense Production Act (DPA) and other authorities to enable domestic energy sector manufacturing and production infrastructure investments to establish new commercial-scale production capabilities for critical devices, components, and/or systems that do not currently exist domestically, or where critical manufacturing gaps exists, and will target strategic ESIB areas.

Defense Production Act (DPA) activities will also include support for development of Supply Chain Modeling, Mapping, and Analysis tools. This is instrumental for aligning and prioritizing MESC investments across various sectors of the supply chain across all advanced energy technologies and identifying capabilities in securing a reliable and sustainable domestic energy sector industrial base. Previous DOE investment in modeling and analysis has intentionally focused on individual technologies and research and development (R&D) programs. ESIB will leverage and incorporate these efforts in developing a first holistic framework, capable of capturing cross-technology feedbacks and higher-level industry diagnostics and metrics and that extends modeling emphasis beyond R&D to manufacturing supply chain and strategic investments.

ESIB will also continue technical assistance on regional energy sector supply chain and manufacturing gaps, issues, and potential strategies. Through an annual program to provide national laboratory support to outside entities, ESIB will connect laboratory expertise and capabilities with specific technical needs associated with minerals, materials, components, systems analysis and modeling, and the overall Energy Sector Industrial Base, with an emphasis on U.S. manufacturing and quality jobs. Specific attention will also foster DOE participation in the development and scaling up of domestic supply chains. Funding will also be utilized for technical assistance to the Department of Treasury in implementing tax provisions associated with the energy manufacturing industry.

Energy Sector Industrial Base
Activities and Explanation of Changes

FY 2023 Enacted	FY 2024 Request Level	Explanation of Changes FY 2024 Request Level vs. FY 2023 Enacted
Energy Sector Industrial Base $2,000,000	**$65,000,000**	**+$63,000,000**
• Provide a center of excellence on regional energy sector supply chain gaps and issues. • Support technical assistance to the Department of Treasury in implementing tax provisions with industry.	• Target investment to enable domestic energy sector manufacturing and production infrastructure and establish new domestic component, device, or system manufacturing in critical ESIB segments of the supply chain and to support the Defense Production Act (DPA). • Support development of Supply Chain Modeling, Mapping, and Analysis tools to provide a comprehensive and upgradeable framework for integrated cross-sector energy supply chain diagnostics and insights. • Leverage national laboratory capabilities to support technical assistance, expertise, facilities, and coordination to address regional energy sector supply chain and manufacturing gaps, issues, and strategies.	• New investment to strengthen domestic energy sector manufacturing and production infrastructure and support DPA. • Launch holistic supply chain modeling, mapping, and analysis capable of capturing cross-technology feedbacks and higher-level industry diagnostics and metrics and that extends modeling emphasis beyond R&D to manufacturing supply chain and strategic investments. • Continue and build Energy Sector Industrial Base technical assistance efforts launched in FY 2023.

Manufacturing and Energy Supply Chains
Program Direction

Overview

Program Direction provides for the costs associated with the Federal workforce, including salaries, benefits, travel, training, building occupancy, IT services, security clearance, and other related expenses. It also provides for the costs associated with contractor services that, under the direction of the Federal workforce, support the MESC mission.

Salaries and Benefits support Federal employees who provide executive management, programmatic oversight, and analysis for the effective implementation of the MESC program.

Travel & Training includes transportation, subsistence, and incidental expenses that allow MESC to effectively provide the Department's electricity-related outreach to regions, states, and tribes regarding planning needs and issues, policies, siting protocols, and new energy facilities.

Support Services includes contractor support directed by the Federal staff to perform administrative tasks and provide analyses to management. These efforts include issue-oriented support on science, engineering, environment, and economics that benefit strategic planning; technology and market analysis to improve strategic and annual goals; development of management tools and analyses to improve overall office efficiency; assistance with communications and outreach to enhance MESC's external communication and responsiveness to public needs; development of program-specific information tools that consolidate corporate knowledge, performance tracking and inventory data, improve accessibility to this information, and facilitate its use by the entire staff.

Other Related Expenses includes corporate IT support (for DOE's Energy Information Technology Services [EITS] desktop services and IT equipment) and working capital fund (WCF) expenses, such as rent, supplies, copying, graphics, mail, printing, and telephones. It also includes office safety requirements, equipment upgrades and replacements, commercial credit card purchases using simplified acquisition procedures where possible, security clearance expenses, and other needs.

Highlights of the FY 2024 Budget Request

The FY 2024 MESC Program Direction Budget Request will:

- Provide additional FTEs to support mission critical work, of which a portion will be reserved for executive management, programmatic oversight, and analysis for the effective implementation of DPA and GCEMI activities.
- Support strengthening MESC's overall performance, organization, budget, operations, human capital, and project management as the office continues to grow in support of its mission.

Program Direction
Activities and Explanation of Changes

FY 2023 Enacted	FY 2024 Request Level	Explanation of Changes FY 2024 Request Level vs. FY 2023 Enacted
Program Direction $1,000,000	**$24,000,000**	**+$23,000,000**
Salaries and Benefits $600,000	$15,420,000	+$14,820,000
• Salaries and Benefits support FTEs that provide executive management, programmatic oversight, and analysis for the effective implementation of the program. Funding also provides support for Under Secretary for Infrastructure operations.	• Salaries and Benefits supports 50 proposed FTEs that provide executive management, programmatic oversight, and analysis for the effective implementation of the programs.	• New funding will meet estimated staffing needs, including DPA and GCEMI activities, of the office to execute expected roles and responsibilities.
Travel & Training $24,000	$57,000	+33,000
• Travel includes transportation, subsistence, and incidental expenses to effectively facilitate its mission.	• Travel includes transportation, subsistence, and incidental expenses to effectively facilitate its mission.	• New funding for staff needs to travel as part of MESC duties.
Support Services $150,000	$4,490,000	+$4,340,000
• Support Services includes contractor support directed by the Federal staff to perform administrative tasks and provide analysis to management. Support Services may include support for post-doctoral fellows.	• Support Services includes contractor support directed by the Federal staff to perform administrative tasks and provide analysis to management. Support Services may include support for post-doctoral fellows.	• New funding for technical/administrative support services needs in launching and managing multiple years of project solicitation cycles and active project management.
Other Related Expenses $226,000	$4,033,000	+$3,807,000
• Other Related Expenses includes EITS desktop services and WCF expense, such as rent, supplies, copying, graphics, mail, printing, and telephones. It also includes equipment upgrades and replacements, commercial credit card purchases using the simplified acquisition procedures to the maximum extent possible, security clearance expenses and other needs.	• Other Related Expenses includes EITS desktop services and WCF expense, such as rent, supplies, copying, graphics, mail, printing, and telephones. It also includes equipment upgrades and replacements, commercial credit card purchases using the simplified acquisition procedures to the maximum extent possible, security clearance expenses and other needs.	• New funding reflects costs associated with up to increase in FTEs.

Manufacturing and Energy Supply Chains

Infrastructure Investment and Jobs Act (IIJA)

The Office of Energy Efficiency and Renewable Energy was appropriated funds through the Infrastructure Investment and Jobs Act (IIJA) (P.L. 117-58); however, the Office of Manufacturing and Energy Supply Chains will manage the activities listed below. In FY 2022, approximately $1.6 billion of activities related to vehicles, buildings, advanced manufacturing, and energy efficiency moved to be managed by the new MESC office. In FY 2024, funding will continue for activities related to vehicles (battery manufacturing and recycling grants and battery material processing grants), buildings (implementation grants for industrial research and assessment centers and industrial research and assessment centers), and advanced manufacturing (advanced energy manufacturing and recycling grant program).

Appropriated Funding Organization	FY 2022 IIJA Appropriation ($K)	FY 2023 IIJA Appropriation ($K)	FY 2024 IIJA Appropriation ($K)	Managing Organization
Energy Efficiency and Renewable Energy				
Battery Manufacturing and Recycling Grants – Sec. 40207c	$600,000	$600,000	$600,000	MESC
Battery Material Processing Grants – Sec. 40207b	$600,000	$600,000	$600,000	MESC
Implementation Grants for Industrial Research & Assessment Centers – Sec. 40521.b1	$80,000	$80,000	$80,000	MESC
Industrial Research and Assessment Centers – Sec. 40521.b2/b3	$30,000	$30,000	$30,000	MESC
Battery and Critical Mineral Recycling - State and Local Programs – Sec. 40207.f3	$50,000	$0	$0	MESC
Battery and Critical Mineral Recycling - Retailers as Collection Points – Sec. 40207.f4	$15,000	$0	$0	MESC
Advanced Energy Manufacturing and Recycling Grant Program – Sec. 40209	$150,000	$150,000	$150,000	MESC
State Manufacturing Leadership – Sec. 40534	$50,000	$0	$0	MESC
Energy Efficient Transformer Rebates – Sec. 40555	$10,000	$0	$0	MESC
Extended Product System Rebates – Sec. 40555	$10,000	$0	$0	MESC
Total, Energy Efficiency and Renewable Energy	**$1,595,000**	**$1,460,000**	**$1,460,000**	

- **Battery Manufacturing and Recycling Grants**: The goal of this investment is to provide grants to ensure that the United States has a viable domestic manufacturing and recycling capability to support a North American battery supply chain. Focus on demonstration projects, construction of commercial-scale facilities, and retrofit or retooling of existing facilities for battery component manufacturing, advanced battery manufacturing, and recycling.
- **Battery Material Processing Grants**: The goal of this investment is to provide grants for battery materials processing to ensure that the United States has a viable battery materials processing industry. Funds can also be used to expand our domestic capabilities in battery manufacturing and enhance processing capacity.
- **Implementation Grants for Industrial Research & Assessment Centers**: The goal of this investment is to fund upgrades for small- and medium-sized manufacturers that have been recommended in an assessment from an Industrial Assessment Center or Combined Heat and Power Technical Assistance Partnership.
- **Industrial Research and Assessment Centers**: The goal of this investment is to provide funding for institutions of higher education, community colleges, trade schools, and union training programs to identify opportunities for optimizing energy efficiency and environmental performance at manufacturing and other industrial facilities.

- **Battery and Critical Mineral Recycling - State and Local Programs**: The goal of this investment is to award grants to states and units of local government to assist in the establishment or enhancement of state battery collection, recycling, and reprocessing programs.
- **Battery and Critical Mineral Recycling - Retailers as Collection Points**: The goal of this investment is to award grants to retailers that sell covered batteries or covered battery-containing products to establish and implement a system for acceptance and collection of covered batteries and covered battery-containing products for reuse, recycling, or proper disposal.
- **Advanced Energy Manufacturing and Recycling Grant Program**: The goal of this investment is to support manufacturing projects in communities that have experienced coal mine or coal-fired power plant closures. The Program will provide grants to small- and medium-sized manufacturers to build, expand, or re-equip facilities to produce or recycle property needed to support secure, resilient domestic clean energy supply chains. It also supports grants for manufacturers to install equipment that will substantially reduce greenhouse gas emissions manufacturing and industrial facilities.
- **State Manufacturing Leadership**: The goal of this investment is to provide funding to states to invest in smart manufacturing technologies.
- **Energy Efficient Transformer Rebates**: The goal of this investment is to provide rebates to industrial or manufacturing facility owners, commercial building owners, multifamily building owners, utilities, or energy service companies for the replacement of a qualified energy inefficient transformer with a qualified energy efficient transformer.
- **Extended Product System Rebates**: The goal of this investment is to provide rebates for qualified extended product systems (i.e., electric motor, electronic control, and driven load).

Inflation Reduction Act (IRA) Investments

The Office of Energy Efficiency and Renewable Energy was appropriated funds through the Inflation Reduction Act of 2022 (IRA); however, not all IRA activities will be managed by the organization to which funds were appropriated. The Office of Manufacturing and Energy Supply Chains will manage the activities listed below.

Appropriated Funding Organization	FY 2022 IRA Funding ($K)	Managing Organization
Energy Efficiency and Renewable Energy		
Enhanced Use of Defense Production Act (DPA) of 1950 – Sec. 30001	$250,000	MESC
Domestic Manufacturing Conversion Grants – Sec. 50143	$2,000,000	MESC
Total, MESC IRA Coordination (EERE)	**$2,250,000**	

- **Defense Production Act:** The Defense Production Act provides DOE with a vital tool to make targeted investments in key technology areas that are essential to ensuring power grid reliability and achieving our clean energy future. DOE's DPA program is focused on heat pumps and will invest in manufacturers with domestic operations to retool existing factories or build new factories for heat pumps and their components. These investments will bolster U.S. competitiveness and security while reducing reliance among U.S. consumers and businesses on volatile natural gas and home heating oil costs and supply.
- **Domestic Manufacturing Conversion Grants:** The goal of this investment is to provide grants for domestic production of efficient hybrid, plug-in electric hybrid, plug-in electric drive, and hydrogen fuel cell electric vehicles, in accordance with section 712 of the Energy Policy Act of 2005 (42 U.S.C. 16062).