



Energy & Sustainability

Maryland's natural gas, electricity, and nuclear power companies are joined by solar, wind, geothermal, and biomass enterprises with a shared vision toward the state's "smart, green and growing" energy future. The state receives electric power via North America's largest power pool, the PJM Interconnection. Calvert Cliffs Nuclear Power plant, in operation since 1975, supplies all of Maryland's nuclear power and accounts for more than 40 percent of total electric generation. Further, Maryland's Renewable Portfolio Standard (RPS) was recently increased to require 50 percent renewable sources by 2030. The state's 1,924 energy and sustainability businesses generate \$9.6 billion in gross state product.

Major Energy & Sustainability Employers in Maryland

Employer	Employment	Product / Service
National Oceanic and Atmospheric Administration	4,300	HQ / Weather analysis and reporting
Exelon	4,200	Energy products and services
Constellation Energy	1,800	HQ / Electricity generation
U. S. Department of Energy	1,050	Energy development and conservation
Johnson Mirmiran & Thompson (JMT)	550	Engineering services
Powercon	500	Manufacturer electrical switchgear
SMECO	475	Energy products and services
Rummel, Klepper & Kahl (RK&K), LLP	450	Architecture and engineering
KCI Technologies	400	Engineering services
AUI Power	200	HQ / Transmission, distribution, and substation construction
Cove Point LNG	200	Liquified natural gas
Phenix Technologies	125	High voltage testing equipment

Note: Numbers are rounded.

Source: Maryland Department of Commerce, December 2022.

Selected Rankings

- Maryland ranks fifth among the states in the square footage of LEED-certified commercial and institutional green buildings per capita for 2024.
- Maryland ranks sixth in the 2022 State Energy Efficiency Scorecard compiled by the American Council for an Energy-Efficient Economy. The report ranks states on the adoption and implementation of energy efficient policies that reduce energy costs, spur job growth, and benefit the environment.
- According to the Gridwise Alliance, Maryland places third in the 2018 Grid Modernization Index, which ranks states on the degree to which they are moving toward a modernized electric grid. The index evaluates grid operations, state support and customer engagement.

Industry Snapshot – Energy & Sustainability in Maryland

- Employment (2023) – 28,383 private sector jobs (38,027 including public sector)
 - Leading subsectors:
 - Waste management and remediation – 11,214 jobs
 - Electric and gas power generation, transmission, and distribution – 9,850 jobs
 - Administration of environmental quality programs – 5,126 jobs
 - Power and communication line construction – 3,390 jobs
- Business establishments (2023) – 1,924

- Total wages (2023) – \$3.8 billion
- Average salary (2023) – \$100,464
- Gross state product (2023) – \$9.6 billion

Sources: Maryland Department of Labor; U.S. Bureau of Economic Analysis; U.S. Census Bureau.

Employment by Occupation

Maryland Employment – May 2023

Selected Production and Distribution Occupations	Employment	Location Quotient*	
		Index	Rank
Atmospheric and Space Scientists	740	4.52	3
Biochemists and Biophysicists	850	1.45	7
Cartographers and Photogrammetrists	570	2.63	8
Computer Network Support Specialists	8,670	3.1	1
Computer Programmers	2,980	1.41	9
Computer Systems Analysts	13,800	1.57	5
Electrical and Electronic Engineering Technologists and Technicians	1,890	1.1	18
Electrical Engineers	3,950	1.21	14
Electronics Engineers, Except Computer	3,110	1.83	3
Environmental Engineers	540	0.76	32
Environmental Scientists and Specialists, Including Health	2,050	1.44	14
Geoscientists, Except Hydrologists and Geographers	330	0.75	25
Marine Engineers and Naval Architects	400	2.29	4
Materials Engineers	910	2.09	4
Mechanical Engineers	5,600	1.13	13
Microbiologists	1,970	5.18	1

* Location Quotient indicates concentration of the occupation in Maryland, with national average equal to 1.0. Rank indicates Maryland's rank among the 50 states.

Source: U.S. Bureau of Labor Statistics, Occupational Employment Statistics.

Assets & Resources

- Maryland Clean Energy Center – Advances clean energy and energy efficiency products, services, and technologies. mdcleanenergy.org
- Maryland Energy Innovation Accelerator (MEIA) - Designed for early-stage companies working with clean energy, as well as energy management and storage technologies. A joint venture with the Maryland Clean Energy Center, the incubator is the first in a planned statewide network of clean energy incubators.
- University of Maryland Center for Environmental Sciences (UMCES) – The premier research and educational institute working to understand and manage the world's natural resources. With locations strategically placed between the mountains and sea, UMCES research laboratories provide scientists direct access to Maryland's diverse natural ecosystems.
- University of Maryland Energy Research Center – Focuses on energy science and technology with a special focus on alternative energy generation and storage.
- Maryland Energy Innovation Institute - Catalyzing energy research and innovation to develop commercially viable energy technologies and spin-offs. energy.umd.edu

- University of Maryland College Park – Other research assets include the Center for Environmental Energy Engineering, the Center for Energetic Concepts Development, and the Harry R. Hughes Center for Agro-Ecology, Inc.

New & Expanding Businesses

- Ion Storage System announced in 2024 that it has the first anodeless SSB to achieve 125 cycles without pressure, the commissioning of its \$30 million manufacturing facility and its award of \$20 million by ARPA-E for the development of SSBs for the Electric Vehicle (EV) industry.
- Hellenic Cables Americas has officially acquired a 38 acre property in Wagner's Point along the Patapsco River in Baltimore City, where it will support hundreds of direct and indirect jobs.
- Blink Charging is establishing its global HQ at a 15,000 square-foot office along Melford Boulevard in Prince George's County. The company is also planning to expand its manufacturing operations in Maryland with a new 30,000 square-foot facility on the nearby Howerton Way.
- Hexagon Purus LDC North America (Carroll County) – A Norweigan clean energy manufacturer expanded in Maryland presence when it relocated to Taneytown and added 100 new jobs.
- CI Renewables (Baltimore County) – Previously a New Jersey solar company, CI Renewables has moved its headquarters to Mount Washington Maryland.
- Blue Whale EV (Anne Arundel County) – Early 2024, Blue Whale EV doubled its headquarters space and created 15 new “green” infrastructure jobs.

Programs & Incentives

- Maryland Small Business Development Financing Authority – Assists small businesses that are unable to qualify for business financing through normal financing channels, including businesses owned by economically and socially disadvantaged entrepreneurs.
- Maryland Industrial Partnerships – Accelerates commercialization of technology by jointly funding collaborative R&D projects between companies and University System of Maryland faculty.
- Enterprise Zone Tax Credit – Real property and state income tax credits for businesses locating in zones making capital investments and creating new jobs.
- Research & Development Tax Credit – Credit for R&D expenses for certified businesses.
- Maryland Energy Administration – Manages grants, loans, rebates, and tax incentives designed to help attain Maryland's goals in energy reduction, renewable energy, climate action, and green jobs.
- Maryland Technology Development Corporation (TEDCO) – Facilitates technology transfer from academic and federal labs into the private sector with seed funding, technical assistance, and entrepreneurial support programs.
- Maryland Venture Fund (TEDCO) – State funded seed and early-stage equity fund.
- Maryland Innovation Initiative (TEDCO) – Funds tech transfer to bridge the gap between universities and commercial businesses. www.tedcomd.com/funding/tech-transfer/maryland-innovation-initiative

Contact for assistance:

Ryan Powell, PhD
Energy Program Manager
ryan.powell1@maryland.gov