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The Maryland Clean Energy Center (MCEC) was created in 2008 by the Maryland General Assembly to fund and facilitate a clean energy future. To fulfill its mission, MCEC offers procurement and technical support for project development, provides access to capital, engages in consumer education, and fosters climate tech innovation to advance the adoption of clean energy and energy efficiency products, services, and technologies.

HB 1220/ SB0960 – Maryland Clean Energy Center – Climate Technology Founder’s Fund

Hearing Date: March 6, 2024

Committee: House Appropriations Committee

Recommend: FAVORABLE WITH AMENDMENTS REPORT

Research and development focused on climate adaptation and impact mitigation has the potential to benefit our state economically and environmentally. Investing in the growth of early-stage start-up companies will allow the state to lead the world in bringing solutions to the marketplace.

Maryland has leveraged the technological advances achieved at the numerous, highly regarded, top-notch research institutions and federal labs located within the state for wealth and job creation by facilitating the transfer of cutting-edge technology in aerospace engineering, IT, and biotechnology industries.

Maryland is well-positioned to benefit from science that seeks to help society adapt to and mitigate the impact of climate change. Discoveries happening here today are becoming the new products, services, and technologies to fuel the state's economic engine.

As a result of funding committed in [HB0419/CH0024](#), MCEC created the Maryland Energy Innovation Accelerator (MEIA) in 2019. The program offers technical and executive management support at the earliest stage of company creation by wrapping executive expertise around climate technologies to pull associated products, services, and technologies to the market. MEIA works closely with researchers at the Maryland Energy Innovation Institute (MEI²), as well as colleges and universities in and outside the state. Investments mandated in the same bill also make seed grants available through MEI² to validate technology developed by those researchers.

Since inception, state funds invested in MEI2 and MEIA totaling \$6 million helped establish an energy innovation ecosystem that produced 37 new companies and created 134 new high-paying jobs in the State of Maryland. Moreover, this state, university, and private sector partnership has helped bring to Maryland over \$214M in non-dilutive grant funding and \$70M in private investment, resulting in an estimated 35X return on investment (ROI).

Per the Clean Energy Jobs Act ([SB0516/CH 757](#)) passed in 2019, \$7M in funds are mandated to transfer from the Strategic Energy Investment Fund (SEIF) to the Video Lottery Terminal Fund (VLT) to provide loans for Small Minority-, Women- and Veteran-Owned Business Account managed by the Department of Commerce. None of these funds have been used to date, and the current uninvested fund balance is \$2.2M, with an additional \$1.2M to be deposited over the next four fiscal years.

HB1220/ SB0960 proposes to put these otherwise idle funds to work directly, now and in the future, to support MWVOB entrepreneurs to advance clean energy and decarbonization solutions faster and provide the critical match necessary to secure as much as \$2M in federal grants to further support this work.

For companies and researchers participating in the MEIA and MEI² programs, this funding will:

- Make supporting MWVOB companies and minority serving universities a primary focus
- Create the Climate Tech Founders Fund to make direct equity investments in early-stage Maryland companies
- Expand technical assistance for entrepreneurs seeking to launch new start-up companies in prototype and manufacturing phases
- Increase availability of critical Innovation Seed Grants to advance the technologies from patented breakthroughs to VC investible prototypes
- Increase the non-dilutive federal energy grant funding coming to Maryland
- Attract new climate tech companies to grow in Maryland
- Provide critical investments into incubator space for those companies to grow in Maryland

Passage of this legislation will put resources to work and would be taking another step toward Maryland achieving economic competitiveness.

MCEC urges a favorable report with sponsor amendments for HB1220/ SB0960 and thanks Chairman Feldman and Delegate Vogel for their leadership in sponsoring this legislation.



Testimony Senate Bill 0960 / House Bill 1220

Maryland Clean Energy Center – Climate Technology Founder's Fund

MAR 6, 2024

What is MCEC and what does it do?

Quasi-governmental instrumentality of State that serves as a statewide Green Bank

Mission to increase clean energy jobs, drive commercialization of climate related technological innovations, and enable equitable adoption of clean energy products and services to reduce greenhouse gas emissions

Facilitates access to capital and operates financing programs using leveraged or direct investment

Provides specialized procurement and technical support to facilitate project implementation

Supports climate tech commercialization

Offers outreach & education programs and events to stimulate markets and enable climate justice

MCEC is Building the Maryland Advanced Energy Economy!

Facilitate Economic Competitiveness, Build Climate Tech Sector



CLIMATE TECH COMMERCIALIZATION

Pre-Accelerator

Launchpad

Accelerator

Pulling advanced energy and climate technologies to market with executive expertise

Since inception, MEI² and MEIA have established an energy innovation ecosystem

112 Companies Accelerated

134 FT Jobs Created

\$70.0M Private Investment

\$214.0M Non-dilutive Grant Funding

37 New Companies Formed

35X Return on Investment (ROI)

Why is support for this bill important?

CLIMATE TECH IS THE NEXT BIOTECH !

- Advance Economic Competitiveness for Maryland
- Provide technical support and investment capital for very early stage MWVOB who are advancing new technologies, products and services which will help reduce GHG emissions.
- Keep MEIA Program operational to create companies using nascent climate technologies
- Provide 1 to 1 match for future US Department of Commerce EDA Build to Scale Phase 2 Grant Funds
- Provide seed grants to move technology to the market

Put Stagnant Funds to Work NOW

Department of Commerce Video Lottery Terminal Funding (VLT Fund)

Currently Allows just for Loans to Small-, Minority-, Women-, and Veteran-Owned Businesses

MEA - SEIF Contributes a Portion to the VLT Fund









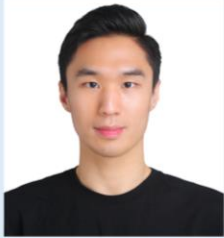







- \$2.2M since 2021 (fund Balance)
- \$1.2M in each fiscal year from 2025 – 2028

Seeking to Redirect funds from SEIF to MCEC for the MEIA Program

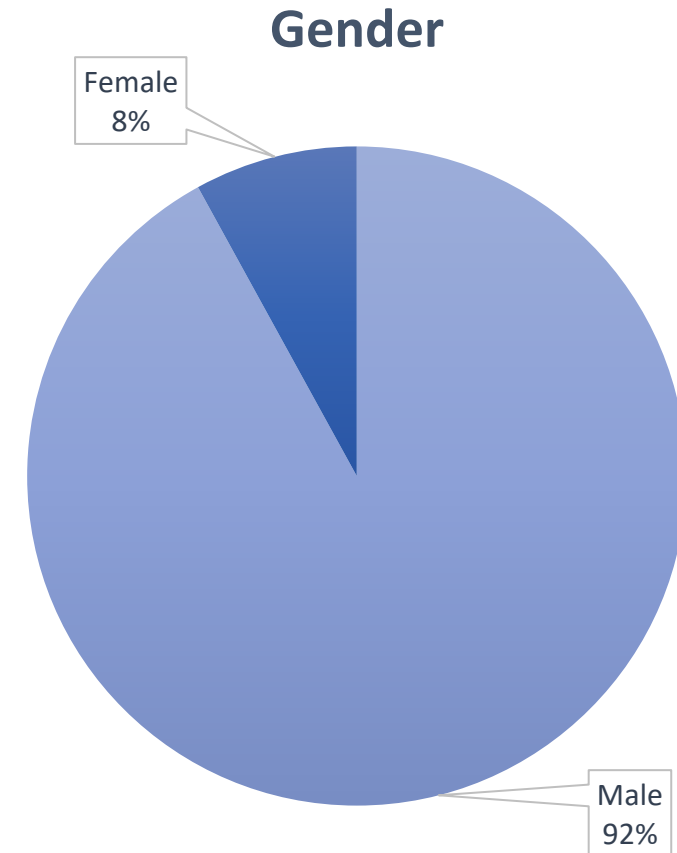
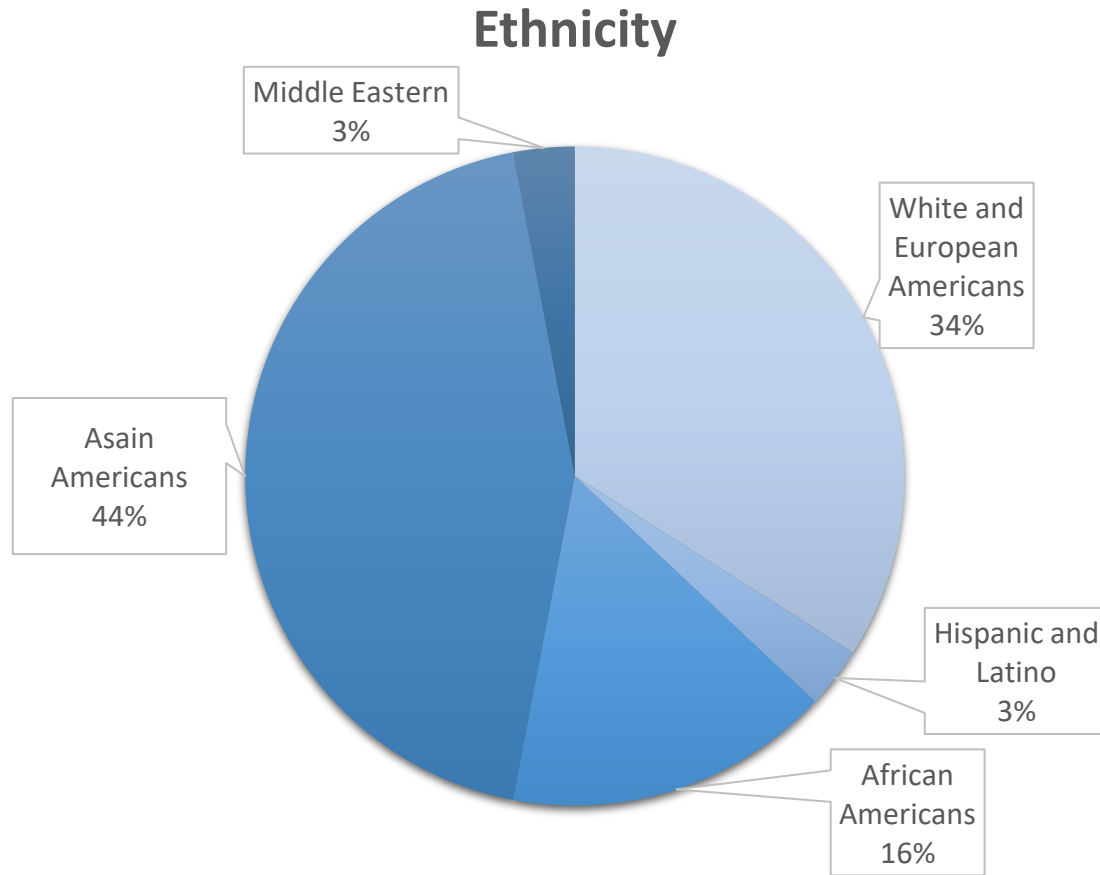
Requesting future funds be directed from SEIF to MCEC to fund MEIA Program

Climate Tech Commercialization

Maryland Energy Innovation Accelerator (MEIA) - Current Teams

 <p>Dung Minh Hoang, Founder of Aquatic Circle</p>	 <p>Brooke Smallwood, Founder of Oasis Energy Systems</p>	 <p>Gabriel Cepeda, Founder of Vecino</p>	 <p>Ning Zeng, Founder of Carbon Lock Down Project</p>
 <p>Kobby Ose- Kusi, Founder of Pirl</p>	 <p>Onat Dogruer and Yvonne Thurman Co- Founder's Archer Power Solutions</p>	 <p>Daniel Nothaft, Founder of Uplift Geosystems</p>	 <p>Hamideh Soltani, Director of USPlasma</p>
 <p>Taein Lee, Founder of JJ Innovation Materials</p>	 <p>Shenqiang Ren, Founder of NewCopper</p>	 <p>Carlos Romero Talamas, Founder of TerraFusion</p>	 <p>Bob Gatte, CEO of HighT-Tech Catalyst</p>
 <p>Steven Davey, Co- Founder of CUPTech</p>	 <p>Ichiro Takeuchi, Co- Founder of MEST</p>	 <p>Kevin Tu, Founder of Sustainabli</p>	 <p>Canhui Wang, Co- Founder of Carbon Plus</p>

MEIA Team Ethnicity and Gender Summary



Climate Tech Commercialization

\$7M State Investment Request for MEIA Program

Appropriation can be used as match for up to \$2M in EDA Federal Grant

- **Operating/Admin (currently funded thru MCEC via SEIF) \$ 2.500M**
- **Phase 1 Prototype Support \$ 350K**
- **Phase 2 Manufacturing Support Accelerator \$ 280K**
- **Phase 3 Founders Fund & Incubator Partnerships \$ 1.720M**
- **Recruit Clean Climate companies to Maryland \$ 150K**
- **Seed Grant Funding for MEI² \$ 1.000M**

Request Fully Funded

Sources/Uses	FY24	FY25	FY26	FY27	FY 28	VLT - 4 YR
BEGINNING FUND BALANCE	-	-	250,000	-	-	
SOURCES OF REVENUE						
SEIF/ VLT Appropriation	-	1,200,000	1,200,000	1,200,000	1,200,000	4,800,000
SEIF/ VLT Prior Years' Funds	-	2,200,000				2,200,000
SUB TOTAL - REVENUE	-	3,400,000	1,200,000	1,200,000	1,200,000	7,000,000
USES OF FUNDS						
MEI2/ Seed Grants VLT Appropriation		1,000,000	500,000	250,000	250,000	2,000,000
MEIA Operational		625,000	625,000	625,000	625,000	2,500,000
Phase I Prototype		87,500	87,500	87,500	87,500	350,000
Phase II Manufacturing		70,000	70,000	70,000	70,000	280,000
Phase III Climate Tech Founders Fund		1,330,000	130,000	130,000	130,000	1,720,000
Bus Dev		37,500	37,500	37,500	37,500	150,000
SUB TOTAL - EXPENSES	-	3,150,000	1,450,000	1,200,000	1,200,000	7,000,000
ENDING FUND BALANCE	-	250,000	-	-	-	

Potential Investment Impact

Fostering Economic Competitiveness

- Return on investment at least 25X (\$120M)
- Increase in private investment at 10X (\$48M)
- Create a minimum of 14 new companies per year
- Create more than 50 new jobs per year
- Secure \$18M in non-dilutive grant funding per year (SBIR, ARPA-E, EDA)



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