

**MINUTES
MASSACHUSETTS CLEAN ENERGY TECHNOLOGY CENTER
BOARD MEETING**

May 18, 2023

Attendees:

Directors:

Secretary Rebecca Tepper (EEA), Chair
Undersecretary Ashley Stolba (Designee of Secretary Yvonne Hao, HED)
Assistant Secretary Kaitlyn Connors (Designee of Secretary Matthew Gorzkowicz, ANF)
Secretary Lauren Jones (LWD)
Katelyn Kelly (Designee of Secretary Lauren Jones, LWD)
Dr. Ramprasad Balasubramanian (Designee of President of the University of Massachusetts Martin Meehan)
Joanna Troy (Designee of Commissioner Elizabeth Mahony, DOER)
Dr. John Cook (President, Springfield Technical Community College)
Bob Haber (Principal, Proficio Capital Partners)
Dr. Aisha Francis (President, Franklin Cummings Tech)
Rear Admiral Francis McDonald (President, Massachusetts Maritime Academy)
Tom Galvin (Director, RESHydro)

Staff:

Jennifer Daloisio (CEO)
Rachel Perez (CFO and Treasurer)
John Hitt, Esq. (General Counsel and Secretary)
Alexandra Zaltman
Galen Nelson
Bruce Carlisle
Hilary Flynn
Jennifer Applebaum
Connor Crowley, Esq.
Leslie Nash
Michelle Beadle
Tom Chase
Jess Hiltz
Elizabeth Youngblood
Cassia Schuler
Meryle Leonard
Lisa Dobbs
Kathryn Niforos
Peter McPhee
Corrin Moss
Megan Lieu
Nils Bolgen

John Gorman
Aleezah Madraswalla
Isabella McKinney
Jeev Wadhwa
Grace O'Connor
Nahlia Yefet
Meg Howard
Camilla Bacolod
Amy Barad
Jeremy Belknap
Rodney Gomez
Lauren Farnsworth
Mary Bancroft
George Blagdon
Jayne Lino
Carla Concha
Malia Ching
Janel Granum
Jennifer Robinson
Stefanie Zidarescu

Others: Michael Judge, Undersecretary of Energy (EEA)
Jonathan Schrag, Deputy Climate Chief and Director of Investment for
Decarbonization and Resilience (Office of Climate, Innovation and Resilience)
Wei Ding, Green Focus Technology, Ding Fann Enterprises LLC
Brendon Jones
Daniel Kroytor, RSM Support

The one hundred-eleventh (111th) meeting of the Massachusetts Clean Energy Technology Center (“MassCEC”) Board of Directors (the “Board”) was held on May 18, 2023 jointly at MassCEC’s office at 294 Washington Street, Boston, MA 02108 and via remote video conference. All participants could hear and be heard by each other throughout the meeting.

Seeing a quorum, Secretary Tepper called the meeting to order at 10:04 am.

I. Adoption of the Meeting Minutes from the March 30, 2023 Meeting of the Massachusetts Clean Energy Center Board of Directors

As the first order of business, the Board reviewed the draft minutes. Upon a motion made by Mr. Galvin and seconded by Dr. Cook, the following roll call vote was taken at 10:04 am:

Secretary Tepper: Yea
Ms. Troy: Yea
Dr. Cook: Yea
Dr. Francis: Yea
Secretary Jones: Yea
Mr. Galvin: Yea
Dr. Balasubramanian: Yea

Ms. Connors: Yea
Ms. Stolba: Yea
Rear Admiral McDonald: Yea
Mr. Haber: Yea

With 11 yeas and 0 nays it was VOTED, without discussion or abstention, at 10:05 am:

To adopt the Meeting Minutes from the March 30, 2023 Meeting of the MassCEC Board of Directors.

II. Update from Chair Secretary Rebecca Tepper and CEO Jennifer Daloisio Updates

Secretary Tepper began by providing a budget update, noting the House of Representatives proposed \$25 million for clean energy activities at MassCEC, and that the Senate similarly proposed a budget of \$25 million but allocated primarily to offshore wind activities at MassCEC. Ms. Daloisio welcomed Joanna Troy as Commissioner Mahony's designee and indicated to the Board that the next meeting in June would be focused on reviewing MassCEC's proposed budget for FY24. Ms. Daloisio also noted that staff were working to schedule a tour of the Wind Technology Testing Center (WTTC) for members of the Board.

III. Federal ARPA Funding Update and Authorization

Ms. Daloisio then proceeded to a discussion regarding the use of Federal American Rescue Plan Act (ARPA) funding, indicating that the Climate Bill passed in 2022 allocate \$50 million in ARPA funds to the Clean Energy Investment Fund at MassCEC. Ms. Daloisio indicated this was a very welcome source of funding, but noted there are restrictions in terms of how and when ARPA funds need to be spent that served as the basis for the proposals being given to the Board. Ms. Daloisio indicated that, with timing and staffing restraints, the goal of these proposals was to try to leverage existing programs and structures at MassCEC with the ability to make the biggest impact.

Turning to the first proposed use of ARPA funding, Ms. Daloisio described a planned \$5 million expenditure for a Start-Up Studio. Ms. Daloisio explained that we have a robust incubator and accelerator framework in Massachusetts, but with this proposal MassCEC is looking to go earlier with our support to find entrepreneurs and match them with promising technologies from universities and research centers/labs that have not yet been brought to market. Members of the Board posed several questions, including how much of the \$5 million would be used for building out the studio versus making grants and what ongoing considerations for funding the studio would be, with Ms. Daloisio indicating the plan would be to retain a consultant to establish the studio and that ongoing funding would likely come from MassCEC's overall budget.

Next, Ms. Daloisio turned to the concept of a Marine Energy Research and Innovation Center with a planned \$10 million expenditure of ARPA funds. Ms. Daloisio explained that Massachusetts is first mover in offshore wind and that we have great institutions for research and development for this industry, and the purpose of this center would be to marry these things in a single location with direct access to water/the ocean for researchers and entrepreneurs to test their innovations. Ms. Daloisio indicated that MassCEC retained a consultant, DNV, to conduct a

feasibility study for this center and that some portion of ongoing operational costs of the center would be part of MassCEC budget moving forward. Members of the Board posed several questions, including seeking clarification around the disparate nature of existing research entities in facilities in Massachusetts associated with offshore wind, whether stakeholder research regarding the proposed center was favorable, whether DNV would have a continued role in the center moving forward, the nature of MassCEC's planned involvement with the center once the \$10 million was expended, and how best to have companies pay for access to the center when they may have limited financial resources, each of which was addressed in the ensuing discussion. Additionally, members of the Board indicated they would be interested in updates regarding the development of the center and ongoing costs to MassCEC for its operations.

Next, Ms. Daloisio discussed a planned \$10 million expenditure of ARPA funds towards completing the design and engineering phase of an expansion for the WTTC as well as getting started on some of the necessary concrete work for the expansion. Ms. Daloisio noted the WTTC is a unique facility in North America and one of only a few in the world, and that it is capable of testing the 20-year lifetime of a wind turbine blade in a matter of months. Ms. Daloisio indicated it is an important piece of infrastructure in Massachusetts that supports the build out of the domestic supply chain, consistent with the Biden Administration goals of 30 GW by 2030. Ms. Daloisio indicated that the WTTC was originally funded with Federal ARRA and MassCEC dollars in 2010/2011, and that the facility is currently not large enough for the size of blades being utilized in the industry, with blade tips needing to be cut off bring the blades into the facility. Ms. Daloisio explained that MassCEC has known that we would need to expand the facility since it was built, and that time has come. Ms. Daloisio noted that full expansion of the WTTC will likely cost \$70 million and that we have been working with the Healey-Driscoll Administration and members of the federal Massachusetts delegation in Congress to identify sources of funding to complete this project. Secretary Tepper noted that the Healey-Driscoll Administration has shown it is strongly in favor of this expansion project. Members of the Board proceeded to ask several questions, including how far the \$10 million is anticipated to advance the project, what permitting will be required, and what the anticipated boost, if any, to revenues of the WTTC would be because of this expansion, each of which was answered in the ensuing discussion.

Ms. Daloisio then noted that staff planned to expend \$10 million in ARPA funds for workforce training equipment and infrastructure, specifically with \$5 million focused on the offshore wind industry and \$5 million planned for more general clean energy industry. Ms. Daloisio explained the intention was to assist those who are already engaged in training efforts by providing them the technical assistance and means to procure equipment necessary to train the workers required to meet the Commonwealth's decarbonization goals.

Ms. Daloisio then noted that three existing programs, Mass Fleet Advisory, ACT School Bus, and the Clean Energy Lives Here Campaign, would each receive \$5 million in ARPA funds and provided a reminder regarding the nature of each of these programs.

[Secretary Jones departed at 11:00 am with Ms. Kelly serving as her designee for the remainder of the meeting; Ms. Connors also departed the meeting at 11:00 am.]

Upon a motion made by Mr. Galvin and seconded by Dr. Cook, the following roll call vote was taken at 11:06 am:

Secretary Tepper: Yea
Ms. Troy: Yea
Dr. Cook: Yea
Dr. Francis: Yea
Ms. Kelly: Yea
Mr. Galvin: Yea
Dr. Balasubramanian: Yea
Ms. Stolba: Yea
Rear Admiral McDonald: Yea
Mr. Haber: Yea

With 10 yeas and 0 nays it was unanimously VOTED, without discussion and abstention, at 11:06:

To authorize the expenditure of up to \$50,000,000 in American Rescue Plan Act (ARPA) Funds, and further to authorize MassCEC's Chief Executive Officer (i) to enter into contracts and issue individual awards under the programs in a manner consistent with the staff memorandum and (ii) to make program modifications, including modifications to award levels, provided that such modifications are consistent with the program goals set forth in the staff memorandum.

IV. Technology to Market: Strategy, FY24 Authorization and Program Update.

Ms. Daloisio introduced Leslie Nash, MassCEC's Program Director for Tech-to-Market programs to provide the strategy behind these programs and a requested authorization of funding for FY24. Ms. Nash indicated these programs are targeted towards commercialization of early-stage companies focused on clean energy solutions in MA, as well as incubators and accelerators. Ms. Nash stressed that the Commonwealth needs innovation to meet its ambitious climate goals for 2030 and 2050, and that the rate of this innovation needs to increase. In addition to decarbonization, Ms. Nash explained that innovation is also a great driver of local jobs and economic development in general, and that these programs solidify MassCEC's role as a leader in the industry.

Ms. Nash addressed how innovation is reflected in and supportive of the Clean Energy and Climate Plan (CECP) for 2030, noting some of the relevant pillars key to achieving net zero (e.g., in end use energy in transportation and buildings, energy efficiency and flexibility in the grid and storage, and in decarbonization of energy supply through offshore wind). Ms. Nash provided the Board with an example of innovation at scale in the offshore wind industry, beginning with the policy driver of the 5.6 GW goal of offshore wind energy and walking through the innovations needed, challenges to those innovations, and MassCEC grantees from our Tech-to-Market programs who are addressing these challenges.

Ms. Nash noted that MassCEC's innovation programs also provide an opportunity to support the Commonwealth's equity goals in the energy transition. In particular, Ms. Nash spotlighted prioritization of environmental justice communities, giving the example of InnovateMass awardee Climate Controller conducting a demonstration project in multiple low- and middle-income homes in Worcester regarding low-cost retrofit installations of air-to-water heat pumps. Ms. Nash also noted engagement of a diverse workforce as a key consideration,

spotlighting Diversity in Cleantech – Early Stage (DICES) awardee SeaDeep, a minority owned business focusing on the use of artificial intelligence in underwater visual asset inspections.

Ms. Nash continued to explain the general role of government in innovation, noting MassCEC can provide stable and countercyclical opportunities for funding and permitting acceleration of innovation. Ms. Nash pointed to research that supports that public funding for energy R&D generally stimulates more private sector engagement and spending and noted MassCEC programs focus on bridging known funding gaps between federal funding and traditional early-stage venture capital investing. Ms. Nash presented the Board with a slide regarding what is referred to as the technology developers’ “valleys of death” from conceptualization to commercialization and full deployment in the market and identifying where MassCEC programs help companies bridge these valleys.

Ms. Nash then noted that Tech-to-Market programs provide direct support (awards directly to innovators) and indirect support for early-stage innovators (awards to incubators and accelerators who in turn support innovators). Ms. Nash provided some statistics around these long-standing programs at MassCEC, including 405 awards made, \$42.5 million awarded, and \$194 million in leveraged funds. Ms. Nash provided the Board with a basic description of each of the current Tech-to-Market programs and indicated awards to large-scale demonstration projects are currently under consideration. Members of the Board proceeded to ask a series of questions, including what the influence of AI in these programs is amounting to at this stage, how long these programs have been in operation, and the basis for calculating the \$10.4 million authorization, each of which was answered in the ensuing discussion.

Upon a motion made by Dr. Cook and seconded by Mr. Galvin, the following roll call vote was taken at 11:32 am:

Secretary Tepper: Yea
Ms. Troy: Yea
Dr. Cook: Yea
Dr. Francis: Yea
Ms. Kelly: Yea
Mr. Galvin: Yea
Dr. Balasubramanian: Yea
Ms. Stolba: Yea
Rear Admiral McDonald: Yea
Mr. Haber: Yea

With 10 yeas and 0 nays it was unanimously VOTED, without discussion and abstention, at 11:33 am:

To authorize the expenditure of up to \$10,400,000 for the Technology-to-Market Program, and further to authorize MassCEC’s Chief Executive Officer (i) to enter into contracts and issue individual awards under the program in a manner consistent with the staff memorandum and (ii) to make program modifications, including modifications to award levels, provided that such modifications are consistent with the program goals set forth in the staff memorandum.

Ms. Nash then concluded by presenting an update for Tech-to-Market direct and indirect support programs and highlighting performance statistics related to the DICES and IncubateMass programs.

V. Investments: Strategy, Update, and Portfolio Review

Ms. Daloisio introduced Hilary Flynn, MassCEC's Managing Director, Investments, to provide an overview to the Board regarding the overall investment function and investment strategy at MassCEC, as well as an update of MassCEC's investment portfolio. Ms. Flynn highlighted that where grants serve a critical role in the earliest stage companies and advancing specific projects, scaling these companies ultimately requires flexible working capital that comes from other tools including equity investments and venture debt. Ms. Flynn explained MassCEC's role is to be an early-stage investor who can provide stable and patient funding for these companies with a strong public and private network, and that the investment function can also contribute back to MassCEC's ongoing work to the extent MassCEC realizes a return on investments. Ms. Flynn provided context for MassCEC's investment activities in the present, explaining that, while there was a cleantech investment surge in 2020-2021, overall venture capital activity has dropped off to pre-2020 levels and, outside of clean transportation, most climate tech areas are currently underfunded, leaving a critical gap that MassCEC is well-suited to address.

[Dr. Francis departed the meeting at 11:45 am.]

Ms. Flynn presented with an overview of the 2030 Investment Fund approved by the Board in 2022 – a \$50 million commitment through FY 2030 consisting of \$5 million in annual funding from MassCEC's budget and reinvestment of process from exits – and thesis, namely, to invest in early-stage companies based in Massachusetts with high potential to reduce greenhouse gases, create jobs, and maintain the Commonwealth's climate-tech leadership position. Ms. Flynn also clarified that MassCEC investments generally prioritizes opportunities within one of MassCEC's 4 focus areas (offshore wind, clean transportation, high-performance buildings, and net zero grid).

Ms. Flynn provided the Board with an overview of MassCEC staff's investment evaluation criteria, the due diligence associated with each criterion, and the threshold for recommending investment. Ms. Flynn also explained the approval process from staff to MassCEC's executive team, and on to the Investment Committee and the full Board, including the dollar thresholds for bringing investments to the IC and the full Board for approval, as applicable.

VI. Executive Session

Secretary Tepper indicate the Board would then move into Executive Session for purpose 7 of Chapter 30A, Section 21 of the Massachusetts General Laws in order to discuss trade secrets, or commercial or financial information or the competitive position in a particular field or endeavor regarding potential portfolio investment in a company and to receive a portfolio pipeline update, which information is confidential pursuant to Chapter 23, Section 2(k). Secretary Tepper noted that the Board would not reconvene in open session upon the conclusion of the Executive Session.

Upon a motion made by Dr. Cook and seconded by Mr. Galvin, the following roll call vote was taken at 11:32 am:

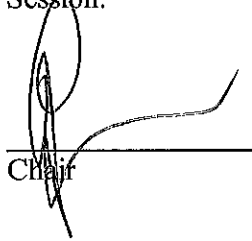
Secretary Tepper: Yea
Ms. Troy: Yea
Dr. Cook: Yea
Dr. Francis: Yea
Ms. Kelly: Yea
Mr. Galvin: Yea
Dr. Balasubramanian: Yea
Ms. Stolba: Yea
Rear Admiral McDonald: Yea
Mr. Haber: Yea

With 10 yeas and 0 nays it was unanimously VOTED, without discussion and abstention, at 11:54 am:

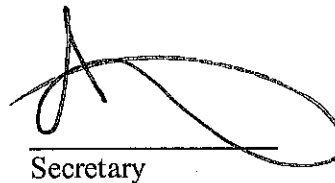
To move into Executive Session for purpose 7 of Chapter 30A, Section 21 of the Massachusetts General Laws in order to discuss trade secrets, or commercial or financial information or the competitive position in a particular field or endeavor regarding potential portfolio investments, which information is confidential pursuant to Chapter 23J, Section 2(k).

VII. Adjourn.

The meeting was adjourned during Executive Session at 12:29 pm. The Board did not return to Public Session and did not take any votes on the matters discussed during Executive Session.



Chair



Secretary

Public Meeting Documents and Exhibits:

Meeting Agenda
PowerPoint Presentation on ARPA Funding – Program Authorization
PowerPoint Presentation on FY24 Tech-to-Market Strategy & Reauthorization
PowerPoint Presentation on Investment Strategy, Update, and Portfolio Review