

OFFICE OF PERFORMANCE MANAGEMENT & OVERSIGHT

FISCAL 2013 ANNUAL REPORT GUIDANCE

The Office of Performance Management & Oversight (OPMO) measures the performance of all public and quasi-public entities engaged in economic development. All agencies are required to submit an Annual Report, which includes all of the following information and demonstrates progress made against the Annual Plan submitted for the same year.

Based on review of Performance to Plan, the Office of Performance Management and Oversight will annually re-evaluate the goals and measures established by the agencies. The Office will recommend changes to goals and measures as appropriate to align with the statewide economic development policy and plan.

The annual reports of each agency will be published on the official website of the Commonwealth, and be electronically submitted to the clerks of the Senate and House of Representatives, the Chairs of the House and Senate Committees on Ways and Means and the House and Senate Chairs of the Joint Committee on Economic Development and Emerging Technologies.

Filing Instructions:

The Fiscal Year 2013 report is due no later than **Friday, November 1, 2013**. An electronic copy of the report and attachments A & B should be e-mailed to Anne.Struthers@state.ma.us.

1) AGENCY INFORMATION

Agency Name Massachusetts Clean Energy Center

Agency Head Alicia Barton

Title Chief Executive Officer and Executive Director

Website www.masscec.com

Address 55 Summer Street, 9th Floor, Boston, MA 02110

2) MISSION STATEMENT

Please include the Mission Statement for your organization below.

The Massachusetts Clean Energy Center (MassCEC) is dedicated to accelerating the success of clean energy technologies, companies and projects in Massachusetts—while creating high-quality jobs and

long-term economic growth for the people of Massachusetts.

MassCEC provides seed investments to startup companies, funds renewable energy rebates for residents and businesses and supports the development of a local clean energy workforce. Since its inception in 2009, MassCEC has helped clean energy companies grow, supported municipal clean energy projects and invested in residential and commercial renewable energy installations creating a robust marketplace for innovative clean technology companies and service providers.

3) PERFORMANCE ON GOALS AND OBJECTIVES

Please provide details on the agency's progress and accomplishments for Fiscal Year 2013 as it relates to the Fiscal Year 2013 Plan submitted by your agency. This information should be included as **Attachment A and should include prior year perspective**. In addition to your Performance to Plan Report, Questions 5 through 10 provides guidance on the specific information required under Chapter 240 of the Acts of 2010.

4) ACCOUNTING

Please provide financial information for your agency. Below please give a summary of *Receipts and Expenditures* during the fiscal year, and include the *Assets and Liabilities* at the end of the fiscal year. Please include the most recent audited financial report for the agency as **Attachment B**.

	AMOUNT	
Receipts	\$31,369,797	
Expenditures	\$31,077,092	
Assets	\$228,920,983	
Liabilities	\$181,381,229	

5) INVESTMENTS OR GRANTS TO BUSINESSES OR INDIVIDUALS

Does your agency make **investments** and/or provide **grants** to businesses or individuals? **Yes** **No**

If **Yes**, please provide detailed information on investments and/or grants made during FY13 in the **Performance on Goals and Objectives** section of this report. Information should include the number, nature and amounts of investments made and grants awarded by your agency along with job, investment and/or other economic development impact. Please list the name(s) of the investment and/or grant programs offered by your agency in the space provided below:

Six companies/research entities received a \$40,000 grant in FY 2013 under the MassCEC Catalyst Program, which targets early-stage researchers to help demonstrate the commercial viability of their clean energy technology. The entities are:

- Syntha
- SolaBlock
- Northeastern University
- Solid Energy Systems, Inc.
- CLO Team

6) DEBT OR EQUITY INVESTMENT DETAILS

Is your agency involved in **debt** or **equity investments** for businesses? Yes No

If **Yes**, please provide detailed information on debt and/or equity investments made during FY13 in the **Performance on Goals and Objectives** section of this report along with job, investment and/or other economic development impact. Please list the name(s) of the debit and/or equity investments programs offered by your agency in the space provided below:

Under the MassCEC Investments Programs, two companies received the following funding in FY 2013:

- Retroficiency: \$500,000 investment (equity)
- CoolChip Technologies: Up to \$500,000 approved by the MassCEC Board of Directors, but only \$200,000 paid out in FY2013 (convertible note)

7) LOAN DETAILS

Is your agency involved in **real estate loans**, **working capital loans**, or any **other type of loan** or **guarantee**? Yes No

If **Yes**, please provide detailed information on loan(s) and/or guarantee(s) made during FY13 in the **Performance on Goals and Objectives** section of this report along with job, investment and/or other economic development impact. Please list the types of loan(s) and/or guarantee(s) offered by your agency in the space provided below:

N/A

8) OTHER FORMS OF FINANCING OR FINANCIAL ASSISTANCE?

If your agency provides any other form of financing or financial assistance, please include FY13 details in the **Performance on Goals and Objectives** section of this report along with job, investment and/or other economic development impact. Please list the types of other forms of financing offered by your agency in the space provided below:

N/A

9) PATENTS OR PRODUCTS

Does your agency track **patents** or **products** resulting from agency-funded activities? **Yes** **No**

If **Yes**, please include details in the **Performance on Goals and Objectives** section of this report along with job, investment and/or other economic development impact. Please list the agency-funded activities of your agency that promote patent and product advancement in the space provided below:

See attachment A.

10) TECHNICAL ASSISTANCE

If your agency provides technical assistance, please provide detailed information on technical assistance provided during FY13 in **the Performance on Goals and Objectives** section of this report along with job, investment, and/or other economic development impact. Please list the name(s) of the technical assistance programs offered by your agency in the space provided below:

N/A

OFFICE OF PERFORMANCE MANAGEMENT & OVERSIGHT

FISCAL 2013 ANNUAL REPORT

MASSCEC – ATTACHMENT A

AGENCY INFORMATION

Agency Name Massachusetts Clean Energy Center

Agency Head Alicia Barton

Title Chief Executive Officer and Executive Director

Website www.masscec.com

Address 55 Summer Street, 9th Floor, Boston, MA 02110

PERFORMANCE ON GOALS AND OBJECTIVES

MassCEC made significant progress during Fiscal Year 2013, and accomplished several notable successes. The organization grew and expanded its focus to new areas like water innovation, and by breaking ground on the construction of the New Bedford Marine Commerce Terminal – America’s first purpose-built offshore wind port facility. We created several new programs such as InnovateMass and IncubateMass that strengthen MassCEC’s support of the local cleantech ecosystem by providing focused and transparent programs for administering the funds deployed to these areas. We launched new rebate programs such as the extremely successful Woodstove Change-Out effort, and we also expanded on successful initiatives like the MassCEC internship program. All of this occurred while seeing solar and other forms of renewable energy expand dramatically in the state fueled in part by our funding programs.

Over the last year, MassCEC has dramatically the profile of the Massachusetts cleantech industry. We have contributed MassCEC’s thought leadership to local and national dialogs on the state and future of the industry, and conveyed strongly the cleantech leadership of Massachusetts to national and international audiences.

MassCEC has placed significant emphasis on organizational structure and on reinforcing standardization of best practices to ensure the success for the long term. In just under five years, MassCEC has grown from an organization newly created by statute, to a leading public agency that deployed approximately \$38 million to the industry last year with support from 58 full time staff. MassCEC will build on these successes in the coming year, and strive to become a model public agency and a globally recognized leader in the field of cleantech.

The data below reports on metrics for MassCEC’s first fiscal year annual report to the

CREATE CLEAN ENERGY JOBS

- Number employed in clean energy jobs in MA: the 2013 Massachusetts Clean Energy Industry Report (see attached) found 79,994 clean energy workers in Massachusetts, an increase of 11.8% from 2012.
- Number of trainees graduated from clean energy training programs: 541
- Number of trainee graduates offered full time employment: 99
- Number of trainees retained after for one year:74
- Number of applicants to MassCEC's Clean Energy internship program (Summer 2013): 914
- Number of internship applicants accepted (Summer 2013): 184
- Number of companies participating (Summer 2013): 110

ACCELERATE CLEAN ENERGY TECHNOLOGY COMMERCIALIZATION

- Number employed in clean energy jobs in MA: the 2013 Massachusetts Clean Energy Industry Report found 5,557 clean energy firms in Massachusetts.
- Number of patents filed by supported clean energy companies in MA: 109 patents awarded and 579 patents in progress
- Number of follow-on investment rounds by supported clean energy companies: see information below
- Volume of follow-on investment raised by supported clean energy companies: see information below
 - Capital invested into clean energy companies¹²: \$ 980,000.00
 - Number of co-investors engaged in supported clean energy companies: 8
 - Volume of co-investment raised in supported clean energy companies: 4,357,500
 - Number of follow-on private investors in supported clean energy companies: 28
 - Volume of follow-on private investment in supported clean energy companies: 68,875,425
 - Total MA payroll dollars in MA (FY13): 20,475,143

¹ Number of investors does not include investors contributing less than \$250,000.

² The data from our portfolio companies is self-reported.

- Number of deals sourced in FY 13: 45
- Number of investments closed in FY 13³: 2
- Leverage on MassCEC investment: see information above

INCREASE CLEAN ENERGY GENERATION AND EFFICIENCY

- Renewable energy capacity installed in MA during FY 13, due to MassCEC programs. These represent only a portion of total renewable energy capacity installed in MA during FY 13, and do not include capacity installed for projects not funded by MassCEC:
 - Solar: 16.4 MW
 - Wind: 36.4 MW
 - Small Hydro*: 5.18 MW
 - Organics to Energy: 195 kW
 - Biomass Thermal⁴: 1,000 kBTU/hr (293 kW-thermal)
 - Solar Hot Water⁵: 3,840 kBTU/hr (1,120 kW-thermal)

* Many funded hydro projects increase output without increasing in capacity
- For those projects listed above, FY13 renewable energy generation in MA, as reported to MassCEC:
 - Solar: 54,950.58 MWh
 - Wind: 169,400 MWh
 - Small Hydro: 20,140,811 kWh
 - Organics to Energy: 5,009,058 kWh
 - Biomass Thermal: NA⁶
 - Solar Hot Water: 2,089,000 kBTU (612,200 MWh-thermal)
- Reduction in installed cost (\$/kW) for technologies that MassCEC currently tracks this information for (which does not include all technologies at this time):

³ Number of Deals Sourced in FY13 is the number of companies/entrepreneurs MassCEC investment staff engaged for the period from June 30 2012 to June 30 2013.

⁴ Only MassCEC's Outdoor Hydronic Heater Change-Out Program is tracked under Biomass Thermal for FY13 as other Biomass Thermal programs, with the exception of the Wood Stoves Change-Out Program, did not have projects installed during FY13. The Wood Stoves Change-Out Program's goal is to replace highly-polluting systems with cleaner systems. Therefore, it did not track capacity and does not provide significant increases in energy generation.

⁵ Note: Solar Hot Water Capacity is not typically reported. This value is estimated using a 14.5% capacity factor.

⁶ The Outdoor Hydronic Heater Change-Out Program does not provide significant increases in energy generation, as its goal is to replace highly-polluting systems with cleaner systems.

- Solar: FY12 average cost/watt: \$5.26/watt vs. FY13 \$4.72/watt
- Solarize Mass: Customers participating in the 2012 program experienced, on average, a \$1.08/watt cost reduction relative to market pricing on purchased projects. This is equivalent to a 20% cost savings through the group purchasing program.
- Renewable Thermal:
 - Biomass Thermal: FY12: No projects installed. FY13: \$59.00 per kBTU/hr (\$200/kW-thermal).
 - Solar Hot Water: FY12: \$1,218 per kBTU/hr (\$4,158 per kW-thermal). FY13: \$1,257 per kBTU/hr (\$4,290 per kW-thermal).
- Cost per kWh generated for technologies that MassCEC currently tracks this information for (which does not include all technologies at this time):
 - Wind: \$0.074 per kWh (Based upon capital cost only; does not include financing, O&M or administration costs.)
 - Renewable Thermal:
 - Solar Hot Water: FY12: \$0.111/kWh thermal. FY13: \$0.122/kWh thermal. (Based upon capital cost only; does not include financing, O&M or administration costs.)
- kWh and Dollars saved by supported energy efficiency projects: Through its InnovateMass program, this year MassCEC supported two Massachusetts companies to showcase cutting edge energy efficiency technologies as they near commercialization.⁷

ELIMINATE MARKET/INDUSTRY BARRIERS

1. *Facilitate beta testing sites:* Through the MassCEC InnovateMass program, we facilitated 7 pre-commercial demonstration projects at testing sites in the Commonwealth.
2. *Increase access to international markets:*
 - #MA companies newly exporting: 12 companies, \$5M in sales
 - #International companies opening offices in MA: 6 companies, 25 jobs
3. *Increase secondary education pipeline:*
 - STEM graduates: 14,574

⁷ As a result of the Green Communities Act mandate on utilities and other efficiency program administrators to invest in “all cost-effective energy efficiency,” in 2013 Massachusetts is making significant investments in efficiency measures that will deliver 1,195 GWh in annual electricity savings, and will deliver \$2.353 billion in benefits over the lifetime of the measures.

4. *Increase workforce diversity:*

- Women now make up approximately 21% of the clean energy workforce
- 14% of the clean energy workforce are racial or ethnic minorities
- Diversity statistics of STEM graduates (14,574):
 - White Total: 9,285
 - Non White Total: 5,289
 - Male White: 4,340
 - Female White: 4,945
 - Non-White Male: 2,490
 - Non-White Female: 2,799
- MassCEC Clean Energy Internship Program (self-reported):
 - Male: 58.52%
 - Female: 39.24%
 - White: 76.91%
 - Non-white:22.9%

5. *Facilitate municipal energy planning:*

- SolarizeMass: 27 municipalities actively participating in FY 2013

Acton	Palmer	Brookline
Arlington	Pittsfield	Carlisle
Boston	Lenox	Chelmsford
Hopkinton	Lincoln	Lee
Melrose	Shirley	Medford
Mendon	Sudbury	Medway
Millbury	Sutton	Newton
Montague	Wayland	Northampton
Newburyport	Bourne	Williamstown

- Community Energy Strategies: 15 communities (including 3 regional planning authorities)

Watertown	Amherst
Northampton	Hadley
Newburyport	Holyoke
Swampscott	Greenfield
Hamilton	Buckland
Wenham	Shelburne
Salem	Montague
East Hampton	

6. *Increase public acceptance of renewable energy*

- Permitting time for projects
 - i. Communities applying to participate in Solarize Mass received more competitive scoring if they could do the following: 1) Identify what the permitting process was for solar projects before the program; 2) Demonstrate that the permitting department was engaged and aware of the permitting volume generated by the program; and 3) Considered streamlining efforts for the local permitting process.
- MassCEC provided direct support and funding for several projects to increase public acceptance of wind projects:
 - i. Technical and facilitation services for the Town of Falmouth to evaluate options for addressing noise concerns related to two operating wind turbines; the value of contracted services was \$390,000.
 - ii. Acoustic research study to collect and analyze noise data from a variety of operating wind turbines; \$400,000 contract executed in FY13.
 - iii. Acoustic monitoring for Kingston Wind Independence wind turbine; MassCEC awarded \$95,000 for this effort in FY13.
 - iv. MassCEC funded preliminary facilitation services to assist MassDEP in planning its Wind and Noise Technical Advisory Group.
- Supporter turnout at local meetings for renewable energy projects:
 - 37 SolarizeMass community meetings held in FY13 with 30 to 250

supporter turnout per meeting.

- The 15 communities selected in FY13 have been holding Clean Energy 101 Community Forums and Clean Energy 201 Community Forums with supporter turnout of 40 to 90 attendees per forum. Some of these forums were held in FY14.



Massachusetts Clean Energy Center
Statement of Net Assets
June 30, 2013

	Governmental Activities	NBMCT	WTTC
Assets			
Noncapital assets			
Cash and cash equivalents	\$4,681,151	\$13,611,343	\$5,070,358
Accounts receivable			
Renwable energy surcharge	1,863,079	-	-
Accounts receivable - trade	-	-	667,298
Due from other funds	2,045,179	-	-
Other	182,345	-	39,439
Prepaid expenses	96,248	7,630	67,147
Program loans (net of allowance of \$6,655,291)	3,284,834	-	-
Program investments	8,070,709	-	-
Assets committed under programs			
Cash and cash equivalents - restricted for awards	28,360,221	-	86,234
Term investments - restricted for awards	130,791,101	-	-
Other agency funds - custodial	3,965,922	-	-
Alternative compliance payments - custodial	166,118,308	-	-
Escrow - restricted	2,572,584	-	-
Total assets committed under programs	<u>331,808,136</u>	<u>-</u>	<u>86,234</u>
Total noncapital assets	<u>352,031,681</u>	<u>13,618,973</u>	<u>5,930,476</u>
Capital assets (net of accumulated depreciation)			
Land	-	2,534,325	-
Buildings	-	6,123,698	29,992,611
Furniture and fixtures	198,772	1,125	216,585
Operational equipment	-	417,636	1,366,175
Leasehold improvements	2,887	-	9,642
Total capital assets	<u>201,659</u>	<u>9,076,784</u>	<u>31,585,013</u>
Total assets	<u>\$ 352,233,340</u>	<u>\$ 22,695,757</u>	<u>\$ 37,515,489</u>
Deferred outflow of resources			
Renewable energy contracts - deferred outflow	211,343	-	-
Liabilities			
Accounts payable and accrued expenses - trade	690,079	2,654,845	770,471
Accounts payable and accrued expenses - awards	4,410,343	-	-
Other liabilities	726,082	-	-
Deferred grant revenue	-	-	-
Due to other fund	-	1,783,706	261,473
Due to other agencies - custodial	3,965,922	-	-
Alternative compliance payments - custodial	166,118,308	-	-
Total liabilities	<u>176,122,077</u>	<u>4,438,551</u>	<u>1,031,944</u>
Net Position			
Invested in capital assets	201,659	9,076,784	31,585,013
Restricted for			
Alternative and Clean Energy Investment Trust Fund	72,652,380	-	-
Renewable Energy Trust Fund	103,257,224	-	-
NBMT	-	9,180,422	-
WTTC	-	-	4,898,532
Total net position	<u>\$ 176,111,263</u>	<u>\$ 18,257,206</u>	<u>\$ 36,483,545</u>

Massachusetts Clean Energy Center
Statement of Net Assets
June 30, 2013

	Governmental Activities	NBMCT	WTTC
Revenue			
Systems Benefit Charge	\$23,738,347	-	-
Testing Revenue	-	-	1,957,120
State appropriations and federal pass-through grants	\$3,377,258	19,761,201	-
Program Earnings	598,845	-	-
Total Revenue	<u>\$27,714,450</u>	<u>19,761,201</u>	<u>1,957,120</u>
Expenditures			
Renewable Energy Generation	\$20,176,374	-	-
Investments in Clean Technology	\$2,013,256	-	-
Workforce Development	\$2,055,393	-	-
Sector Development	\$2,299,938	-	-
Knowledge Development	\$750,568	-	-
New Bedford Marine Terminal	-	1,426,348	-
Wind Testing Technology Center	-	-	3,413,215
Total expenditures	<u>\$27,295,529</u>	<u>\$1,426,348</u>	<u>3,413,215</u>
Net operating income (loss)	\$418,921	18,334,853	(1,456,095)
Other income (expense)			
Net increase (decrease) in net realizable value of loan programs	(1,974,571)	-	-
Realized (loss) on program loans	-	-	-
Net increase (decrease) in carrying and fair value of program inv	1,360,068	-	-
Interest and investment income	946,242	3,348	5,430
Net increase (decrease) in fair value of investments	7,871	-	-
Net increase (decrease) in fair value of escrow	-	-	-
Net gain from termination of REC contracts	-	-	-
Net loss from return of program funds	(384,536)	-	-
Carry costs	-	(80,995)	-
Net gain from superfund settlement/other income	(4,519)	-	3,900
Net increase (decrease) in fair value of REC contracts	298,204	-	-
Total other income (expense)	<u>248,759</u>	<u>(77,647)</u>	<u>9,330</u>
Change in net position	667,680	18,257,206	(1,446,765)
Net Position			
Beginning of year	175,443,583	-	37,930,310
End of year	<u>\$176,111,263</u>	<u>18,257,206</u>	<u>\$36,483,545</u>

OPMO Strategic Planning

MassCEC FY 2013

Priorities, Goals and Metrics

Submitted March 15, 2012



MassCEC's Mission

- MassCEC will accelerate economic growth and job creation in all areas of Massachusetts' clean energy sector by deploying strategic initiatives that are replicable and scalable, create a clean energy ecosystem, encourage people to make better energy choices and reduce the real costs of energy.

- We operationalize our mission statement into four goals against which we measure our programs:
 1. Create clean energy jobs in Massachusetts
 2. Accelerate the commercialization of new clean energy technologies
 3. Increase clean energy generation capacity (megawatts, MW) and energy efficiency measures (negawatts, NW) installed in Massachusetts
 4. Eliminate barriers critical for market and industry growth

MassCEC Goals & Metrics

Goal	Metrics
Create clean energy jobs	<ul style="list-style-type: none"> •Number employed in clean energy jobs in Massachusetts •Number graduating from sponsored clean energy training programs •Number of trainee graduates offered full time employment •Number of trainee graduates retained for 1 year
Accelerate clean energy technology commercialization	<ul style="list-style-type: none"> •Number of clean energy companies in Massachusetts •Number of patents filed by supported clean energy companies in Massachusetts •Number of follow-on investment rounds by supported clean energy companies •Volume of follow-on investment raised by supported clean energy companies •Number of deals sourced •Number of investments closed •Leverage on MassCEC investment
Increase clean energy generation and energy efficiency	<ul style="list-style-type: none"> •Installed renewable energy capacity in Massachusetts, by technology type •Annual renewable energy generation in Massachusetts, by technology type •Reduction in installed cost (\$/kW), by technology type •Cost per kilowatt hour generated, by technology type •Kilowatt hours saved by supported energy efficiency projects •Dollars saved by supported energy efficiency projects
Eliminate market/industry barriers (FY13 priorities below): <ol style="list-style-type: none"> 1. Facilitate beta testing sites 2. Increase access to international markets 3. Increase secondary ed. pipeline 4. Increase workforce diversity 5. Facilitate municipal energy planning 6. Increase public acceptance of RE 	<p>Metrics associated with each barrier necessarily differ. The critical measures of success for MassCEC's FY13 market barrier priorities are:</p> <ol style="list-style-type: none"> 1. Number of beta testing sites; Number of technologies; Patents, financings, and sales by site users 2. Number of MA companies abroad & sales volume; Number of international companies in MA & related jobs 3. Number of STEM majors, graduates 4. Diversity profile of trainees, STEM graduates, sector workforce 5. Number of cities/towns adopting energy plans & savings (financial and energy) 6. Permitting time for projects; Supporter turnout at local meetings for renewable energy projects



MassCEC's Participation in EDPC

- MassCEC's mission, goals and FY13 priorities are closely aligned with the Governor's economic development strategy. Each of MassCEC's four goals is directly tied to multiple Action Items called for under the EDPC Plan Implementation Matrix, and many of the Action Items relate to more than one of MassCEC's goals.
- The tables on the following slides set out MassCEC's strategy for aligning our goals and activities with the EDPC Action Items.

EDPC/MassCEC Alignment Overview

EDPC Action Item	MassCEC Goals			
	<i>Create Jobs</i>	<i>Accelerate Technology</i>	<i>Increase MW & NW</i>	<i>Eliminate Market Barriers</i>
1.3.2 (Increase STEM attractiveness)	X			X
1.3.4 (Increase STEM diversity)	X			X
2.1.1 (State-support for collaborative R&D)		X		
2.1.2 (Identify emerging areas of innovation and support public-private collaboration)	X	X	X	X
2.1.3 (Increase support for incubators & innovators)		X		X
2.2.1 (Increase internship program activities)	X			
2.3.2 (Promote state as “first adopter”)		X	X	X
2.4.1 (Increase support for prototyping facilities)		X		X
4.3.2 (Increase conferences & related marketing presence)				X
5.2.1 (Develop test beds for renewables & efficiency tech)		X		X
5.2.2 (Keep energy supply costs competitive)			X	
5.2.3 (Pursue hydro and other renewable generation)			X	
5.4.1 (Use non-tax incentives to grow industry)		X		X

EDPC/MassCEC Alignment (detailed)

Goal	Associated EDPC Matrix Action Item
<p>Create Clean Energy Jobs</p>	<p>1.3.2 Increase the attractiveness of STEM careers to both students and teachers, including increasing their exposure to role models in STEM careers, through expanded internship and externship opportunities and other means</p>
	<p>1.3.4 Ensure that STEM programs are designed in a way to increase STEM interest and achievement across all populations, especially those currently under-represented in STEM careers</p>
	<p>2.1.2 Under the leadership of the Massachusetts Technology Collaborative, identify three to five emerging areas of global innovation excellence in the Commonwealth and support public-private collaborations to accelerate the growth of such areas, building on the example of Mass Insight’s Advanced Cyber Security Center initiative</p>
	<p>2.2.1 Increase by 20% annually over the next five years the number of internship placements made by multi-school, multi-employer internship programs, building on the examples of programs currently run by the Greater Boston Chamber of Commerce, the Federal Reserve Bank of Boston, Mass Technology Leadership Council, the Massachusetts Marketing Partnership, the Massachusetts Clean Energy Center and the Massachusetts Life Sciences Center, as well as newly proposed programs such as the Massachusetts Startup Fellows Program. The internship programs should, in particular, focus on facilitating the flow of young students into young companies to help them integrate into the local innovation economy.</p>

EDPC/MassCEC Alignment, cont'd

Goal	Associated EDPC Matrix Action Item
Accelerate Clean Energy Technology Commercialization	<p>2.1.1 Establish a consistent pattern of state support for collaborative research and development among universities and businesses, building on the examples of the Holyoke Green High Performance Computing Center and the Massachusetts Life Sciences Center's cooperative research matching grant program</p>
	<p>2.1.2 Under the leadership of the Massachusetts Technology Collaborative, identify three to five emerging areas of global innovation excellence in the Commonwealth and support public-private collaborations to accelerate the growth of such areas, building on the example of Mass Insight's Advanced Cyber Security Center initiative</p>
	<p>2.1.3 Increase by 20% annually over the next five years state funding of capital, mentoring and advice, including incubator and/or accelerator programs, for early stage entrepreneurs and small businesses, building on the example of Mass Challenge</p>
	<p>2.3.2 Establish a national reputation within state and local government as "first adopters" of local innovation, building on the example of the "Mayor's Office of New Urban Mechanics" in the City of Boston and of the Department of Housing and Community Development's initiative to bring clean energy and energy efficiency innovations into public housing developments</p>
	<p>2.4.1 Increase by 20% annually over the next five years state funding of capital, mentoring and advice, including shared facilities for the making and testing of product prototypes, to support the growth of small and mid-sized businesses, building on the examples of the Massachusetts Growth Capital Corporation and the Treasurer's Small Business Banking Partnership</p>
	<p>5.2.1 Develop Holyoke and other well-suited locations as test beds for cost-competitive renewable energy and energy efficient technologies</p>
	<p>5.2.2 Keep energy supply costs competitive based on market conditions in the region</p>

EDPC/MassCEC Alignment, cont'd

Goal	Associated EDPC Matrix Action Item
<p>Increase Clean Energy Generation and Energy Efficiency</p>	<p>2.1.2 Under the leadership of the Massachusetts Technology Collaborative, identify three to five emerging areas of global innovation excellence in the Commonwealth and support public-private collaborations to accelerate the growth of such areas, building on the example of Mass Insight's Advanced Cyber Security Center initiative</p>
	<p>2.3.2 Establish a national reputation within state and local government as "first adopters" of local innovation, building on the example of the "Mayor's Office of New Urban Mechanics" in the City of Boston and of the Department of Housing and Community Development's initiative to bring clean energy and energy efficiency innovations into public housing developments</p>
	<p>5.2.2 Keep energy supply costs competitive based on market conditions in the region</p>
	<p>5.2.3 Pursue large scale hydro with other cost-competitive low carbon alternatives along with renewable generation under the Commonwealth's renewable portfolio standards</p>

EDPC/MassCEC Alignment, cont'd

Goal	Associated EDPC Matrix Action Item
Eliminate Critical Market and Industry Barriers	1.3.2 Increase the attractiveness of STEM careers to both students and teachers, including increasing their exposure to role models in STEM careers, through expanded internship and externship opportunities and other means
	1.3.4 Ensure that STEM programs are designed in a way to increase STEM interest and achievement across all populations, especially those currently under-represented in STEM careers
	2.1.2 Under the leadership of the Massachusetts Technology Collaborative, identify three to five emerging areas of global innovation excellence in the Commonwealth and support public-private collaborations to accelerate the growth of such areas, building on the example of Mass Insight's Advanced Cyber Security Center initiative
	2.1.3 Increase by 20% annually over the next five years state funding of capital, mentoring and advice, including incubator and/or accelerator programs, for early stage entrepreneurs and small businesses, building on the example of Mass Challenge
	2.3.2 Establish a national reputation within state and local government as "first adopters" of local innovation, building on the example of the "Mayor's Office of New Urban Mechanics" in the City of Boston and of the Department of Housing and Community Development's initiative to bring clean energy and energy efficiency innovations into public housing developments
	2.4.1 Increase by 20% annually over the next five years state funding of capital, mentoring and advice, including shared facilities for the making and testing of product prototypes, to support the growth of small and mid-sized businesses, building on the examples of the Massachusetts Growth Capital Corporation and the Treasurer's Small Business Banking Partnership
	4.3.2 Under the leadership of the Massachusetts Marketing Partnership, in collaboration with the Massachusetts Convention Center Authority, leverage our status as a leading host of international scientific, medical and technical conferences to better connect and market our key industry clusters
	5.2.1 Develop Holyoke and other well-suited locations as test beds for cost-competitive renewable energy and energy efficient technologies
	5.4.1 Focus on use of non-tax business incentives (such as workforce training, infrastructure investments and financing assistance) in developing and growing industry clusters