

Cleantech Startup Growth Initiative Baseline Study

Final Executive Summary

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Executive Summary

The research team (the team) conducted this study with the objective to document the baseline (2015 and 2016) performance indicators for the Cleantech Startup Growth and Manufacturing Corps (M-Corps) Initiatives. To estimate the baseline indicators, the team reviewed the initiatives' data, interviewed incubator staff, and conducted surveys with cleantech startups enrolled in the NYSERDA-sponsored incubator programs (participants) and those who were not (non-participants).

NYSERDA's incubator strategy has helped accelerate the growth of cleantech startups in NYS. The Cleantech Startup Growth Initiative is a continuation of NYSERDA's cleantech incubator strategy (which the team refers to as the "legacy program"). The baseline indicators noted in this report capture the effect of the legacy program since the baseline represents a time-period prior to the Cleantech Startup Growth Initiative. During the baseline period, the participating cleantech companies reported raising a substantial amount of capital, over \$100 million. Findings also show a considerable decrease in commercialization time for participating client companies compared to non-participating companies.

Many participants are far from being profitable and can benefit from extra support. In the baseline period, about 63% reported no revenues and nearly 40% noted securing financial capital was their main challenge and would like additional help. NYSERDA will infuse capital into cleantech companies via the ignition grants, which may alleviate this issue. The team **recommends** that NYSERDA and incubators investigate which participants are successful in raising capital and why and share any lessons learned.

Finding suitable mentors and/or coaches can be a challenge. Staff of three incubators reported difficulties in recruiting mentors or coaches who are effective in leading companies to succeed or willing to devote the time for coaching at no or low cost. The team **recommends** that NYSERDA investigate incubator needs relating to professional staff coaching and mentoring and assess monetary requirements needed by current coaches and mentors to devote additional time to incubator client companies. This inquiry will inform NYSERDA as to the best offerings to help incubators find effective mentors.

Information on the company ownership structure is needed to ensure that the sampling and analysis fully represents the population. The team found an outlier in capital raised in both participant and non-participant survey data that may be a function of company ownership structure. Knowing such information would enable the team to determine whether companies tapping the resources of a parent company are represented in the larger population of start-up companies. The team **recommends** tracking the company ownership structure in program data and survey data in the next iteration of this study.

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Table ES-1 documents the team’s estimates of the baseline indicators for the two initiatives.

Table ES-1: Cleantech Startup Growth (CSG) and M-Corps Outputs, Outcomes, and Indicators Summary

Outputs/Outcomes	Indicators	Initiative ^a	Data Source ^b	Original CEF Baseline ^b	Updated CEF Baseline ^b	
					Estimate by Group ^c (P=participants, NP=non-participants)	Baseline Estimate
Product commercialization	# of products commercialized	CSG	1,2	0	P: 66 and NP: 214	280
Revenue (new & products that have been commercialized)	Dollar revenue generated by participating clients	CSG	4	\$0	P: \$45 million (<i>Note: Participant specific indicator</i>)	45 million
Private investment (private and follow-on capital and program funding leveraged by the incubators through sponsors other than NYSERDA)	Private Investment – participating client companies	CSG	2	\$0	P raised: \$103 - \$141 million (<i>Note: Participant specific indicator</i>)	\$103 - \$141 million
	Program funding from other sponsors leveraged by incubators	CSG	1	N/A	NYSERDA-sponsored incubators received \$1.3 million from other sponsors (<i>Note: Participant specific indicator</i>)	\$1.3 million from other sponsors
Continued investment in the incubator program will maintain the historical investment leverage levels of incubator client companies and graduates and improve the position of client companies and graduates	Increase in Dollar [private and follow-on capital] raised by the client companies & graduates (<i>Note: Excludes public funding</i>)	CSG	2,3,4	\$0	P raised \$82,000 - \$121,000 more than NP, on average, by product in development; P raised: \$103 - \$141 million; NP raised: \$176 - \$225 million	Total capital raised: \$279 - \$366 million
	Increase in the Number of deals	CSG	2,3	N/A	P made 53-54 more deals than NP; P deals: 90-91; NP deals: 37	127 – 128 deals
	Decrease in the Time to market for client companies	CSG	2,3	N/A	P were 2 times faster than NP to bring product to market; P: 29 months, on average; NP: 57 months, on average	36 months, on average to bring product to market
Targeted and timely infusions of capital via the ignition grants will better position incubator client companies to attract follow-on capital from investors and/or secure commercialization support from partners, and improve the position of company	Dollar value of ignition grant capital	CSG	2	N/A	P: \$0 (<i>Note, initiative was not launched during the baseline period</i>)	\$0
	Dollar value of follow-on capital raised by client companies	CSG	2,3	N/A	P: \$22 - \$23 million; NP: \$49 million	\$71 - \$72 million
	Decrease in Time to first customer/end-user for qualified cleantech companies	CSG	2,3	N/A	P were 2.5 times faster than NP to land a first sale; P: 30 months, on average; NP: 76 months, on average	Average time to first customer: 38 months
High-performing incubators will be able to attract funding from other sponsors to help sustain their operations and programs while retaining a focus on NYSERDA’s clean energy goals	Value of sponsorship funding leveraged by the incubators	CSG	1	N/A	NYSERDA-sponsored incubators received \$1.3 million from other sponsors (<i>Note: Participant specific indicator</i>)	1.3 million from other sponsors
	Number of high-value mentors and other service providers that incubators provide to client companies	CSG	1	N/A	300 incubator-affiliated stakeholders provided assistance (<i>Note: Participant specific indicator</i>)	300 incubator-affiliated entities

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Outputs/Outcomes	Indicators	Initiative ^a	Data Source ^b	Original CEF Baseline ^b	Updated CEF Baseline ^b	
					Estimate by Group ^c (P=participants, NP=non-participants)	Baseline Estimate
	In kind (non-Dollar) goods or services provided by sponsors to the incubators	CSG	1,2	N/A	Incubators provide 6 goods/services per client company, on average (<i>Note: Participant specific indicator</i>)	6 goods/services per client company, on average
Products manufactured in total	Number of products manufactured in total	M-Corps	2	0	Incubator P: 23; Incubator NP: 198	221
Agreements signed to invest in cleantech startup companies	Number of agreements signed to invest in cleantech startup companies	M-Corps	2,3	0	Incubator P deals: 48; Incubator NP deals: 22	70
Products manufactured in NYS	Number of products manufactured in NYS	M-Corps	2	N/A	Incubator P: 12; Incubator NP: 117	129
Revenue generated by cleantech companies producing products	Dollar revenue generated by cleantech companies producing cleantech products	M-Corps	2,4	N/A	Incubator P: \$7.9 million (<i>Note: No data from non-participants due to the proprietary nature of this data</i>)	At least \$7.9 million
Revenue generated by manufacturing partners producing cleantech products	Dollar revenue generated by manufacturing partners producing cleantech products	M-Corps	No data	N/A	No data (<i>Premature; private partners named by respondents are investors who will receive a return on investment when the product is profitable.</i>)	Unknown
Accelerate time-to-market for cleantech products	Decrease in Time to market for cleantech products	M-Corps	2,3	N/A	Incubator P were 2.5 times faster than NP to bring product to market; P: 26 months, on average; NP: 68 months, on average	39 months, on average to bring product to market
Cost share by market actors including services, equipment, machine time, as well as cash cost share	Dollar value provided by market actors to cleantech companies (<i>Note: Includes private and public funding</i>)	M-Corps	2,3	N/A	Incubator P deals: \$81.0 -\$81.1 million; Incubator NP deals: \$236 - \$286 million	\$317- \$367 million
	Non-dollar value of services, equipment, and machine time provided by market actors to Cleantech companies	M-Corps	1	N/A	Incubators provide 6 in-kind (non-dollar) goods/services per client company, on average (<i>Note: Respondents were unable to provide a valuation of these services</i>)	Unknown

^a For the M-Corps indicators, the team leveraged survey data from manufacturers enrolled in the NYSERDA-sponsored incubator programs and surveyed program non-participants. Subsequent evaluations will update these estimates and obtain estimates for indicators not investigated in the first round of research.

^b Sources include: (1) incubator interviews, (2) participant survey, (3) non-participant survey, and (4) program data. Based on these data, the team updated the CEF baseline values, which NYSERDA program staff originally developed based on program data at the time the CEF plan was developed.

^c The team identified an outlier in both participant and non-participant survey data. An investigation revealed that these two companies that raised large amounts of capital also had unexpected, atypical ownership structures. Consequently, the team estimated the investment and other indicators without and with the outlier in the samples, providing the lower and upper estimates of the ranges, with the exception of one metric. For the private investment raised by participants, the lower range estimate is obtained from the program data. When the outlier did not impact the estimate, the table provides a point estimate.