

Attachment 2b PILOT PROJECT DELIVERABLES

The following table summarizes the Milestone deadlines and associated Grant Installments. Please refer to the Project Deliverable Requirements by Milestone for a detailed description of deliverables to be submitted to demonstrate completion of each Milestone.

Project Schedule And Deliverables		Due	Total Grant Payout
Design Milestone (Design Awards only) – System Design, Initial Permit Applications			
<input type="checkbox"/>	1. Engineering designs and/or equipment specifications	6 months from Effective date	Up to 100% of Design-phase portion of grant <\$>
<input type="checkbox"/>	2. Copies of permitting and interconnection applications and associated analysis, e.g., noise, air quality, traffic, interconnection studies (<i>list individually</i>)		
<input type="checkbox"/>	3. Community Outreach Report	<DUE DATE>	
<input type="checkbox"/>	4. W-9 emailed to finance@masscec.com		
Construction Milestone #1 – Financing, Site Preparation, and Equipment Order			
<input type="checkbox"/>	1. Updated construction-phase budget	8 months from Effective date <DUE DATE>	Up to 50% of Construction-phase portion of grant <\$>
<input type="checkbox"/>	2. Financing Certification Statement (Attachment 1) signed by Grantee confirming that all construction financing is in place based on updated construction-phase budget		
<input type="checkbox"/>	3. Digital photos of site showing conditions before Project begins and upon completion of site preparation, with descriptive labels. (Site preparation definition will be determined during contracting.)		
<input type="checkbox"/>	4. Copies of key equipment orders (include descriptions if not previously supplied in Design Phase, or changes made since)		
<input type="checkbox"/>	5. W-9 emailed to finance@masscec.com (Include here if no Design Phase)		
Construction Milestone #2 – Commissioning			
<input type="checkbox"/>	1. Digital photos of new equipment/systems (MassCEC may use these pictures for publicity)	32 months from Effective date <DUE DATE>	Up to 85% of Construction-phase portion of grant (less amount previously disbursed)
<input type="checkbox"/>	2. Copy of warranty(ies) or service contract(s) for key equipment		
<input type="checkbox"/>	3. Permits received (<i>list individually</i>)		
<input type="checkbox"/>	4. Utility's authorization to interconnect		

<input type="checkbox"/>	5. Commissioning report documenting that all Grant funded systems are operating as the design intended and pursuant to the Minimum Technical Requirements.		<\$>
<input type="checkbox"/>	6. Completed Construction Project Report template, submitted in an editable Word format (Attachment 2)		
<input type="checkbox"/>	7. For projects with electrical output: Production Tracking System (PTS) registration (contact MassCEC for form) and at least one automated electric generation report to PTS. <i>Please allow a few weeks for this process.</i>		

Construction Milestone #3 – Commissioning and Final Permitting			
<input type="checkbox"/>	1. Report on Pilot Operations, including information on first three months of operations (Attachment 3)	36 months from Effective date <DUE DATE>	Up to 100% of Construction-phase portion of grant (less amounts previously disbursed) <\$>

Attachment 1
FINANCING CERTIFICATION STATEMENT
For Submission at Construction Milestone 1

Grantee Contact and Project Financing Information	
Project Title	
Grantee Contact Name	
Title	
Organization	
Telephone	
Email	
<p>List all required project-related financing agreements.</p> <p>Include sources, amounts and dates executed (month/day/year)</p>	<p>1.</p> <p>2.</p> <p>3.</p> <p>(add more if necessary)</p>

The undersigned is a duly authorized representative of the grantee listed above.

I certify that all funds required for the completion of the Project are secured as of this date.

By: _____
 (Signature of Authorized Representative)

Title _____

Printed Name _____

Date _____

Attachment 2 PILOT PROJECT DESCRIPTION

For Submission at Construction Milestone 2

Date Submitted: _____

1. **Project Narrative:** Provide a brief description of the organics-to-energy project. This information may be posted on the MassCEC website.

Organics-to-Energy Implementation Project Profile	
Grantee Name	
Project Title	
Generator Nameplate Capacity (kW), if any	
Brief Project Description	Project Photo or Rendering
Cost and Funding Breakdown	
Total Cost	
MassCEC Funding	
Other Sources of Funding	

2. Technical Details: Please provide updated information about the facility upon project completion.

Technical Worksheet	
Technology (type of system, noteworthy features):	Types of feedstocks and estimated annual quantities:
New installed system capacity (kW), if applicable:	New installed system heating capacity (kWe), if applicable:
CNG fueling station description, if applicable:	Types and estimated annual quantities of liquid and/or solid outputs:
Estimated Annual Electrical Production resulting from funded project (kWh/yr):	Estimated Annual Usable Heat Production (not including heat used within system) (kWh/year, assuming 3,412 BTU/kwh):
<i>For vehicle fueling projects:</i> Estimated Annual Gasoline Gallon Equivalents (GGE/year):	<i>For pipeline injection projects:</i> Estimated volume of gas to pipeline (scf/year):

3. Project Schedule: Please fill in the following schedule with the dates projected as of execution of contract with MassCEC, and actual completion dates:

Project Schedule		
	Original Plan (at time of Grant Agreement)	Actual Dates
1. Pre-construction permitting:		
2. Orders placed for major system components:		
3. Site preparation completed:		
4. Major system components delivered to the project site:		
5. New systems installed:		
6. Final permits obtained:		
7. All systems commissioned:		
Please explain the reasons behind schedule changes, if any:		

4. **Lessons Learned:** Please describe lessons learned in each of the categories below. Think about what went well, what went wrong, what you would do differently next time, and how you would advise someone else going through this process.

1. <u>Initial Decision-Making Process and Feasibility Study Stage:</u>
2. <u>Design, Permitting, and Stakeholder Interaction:</u>
3. <u>Equipment Procurement:</u>
4. <u>Site Preparation, Construction and Equipment Installation:</u>
5. <u>Interconnection:</u>
6. <u>Commissioning:</u>

5. **Operations and Maintenance:** Who will be responsible for preventive maintenance? Routine maintenance and repairs? What are your anticipated operations and maintenance costs (annual and periodic major expenses)?

6. **Total Project Costs:** Please provide updated information on the total cost of the project, which may include more elements or higher values than were part of the Allowable Expenses in the MassCEC Grant Agreement Contract Budget, as of project completion. The table below is an imbedded Excel spreadsheet: click on it twice to open Excel; click elsewhere in the main Word document to close Excel. White cells are data entry cells, and yellow cells are calculation cells. Rounding of figures is acceptable, however the total should be a reasonable reflection of the total installed cost. Figures entered here *need not* precisely match figures submitted as part of Grantee’s invoice to MassCEC for grant disbursement. Do not include any costs associated with feasibility studies.

Equipment Description	Model	Manufacturer	Location of Manufacturer (City/ State/ Zip/ Country)	Quantity	Unit Cost	Total Cost
[list major equipment (e.g., tanks, pumps, generator, etc.), insert rows as required]						\$ -
[list major equipment (e.g., tanks, pumps, generator, etc.), insert rows as required]						\$ -
Main Equipment Costs						\$ -
Data Acquisition System (If Applicable)						\$ -
Meter						\$ -
Other						\$ -
Peripheral Equipment Costs						\$ -
Design Costs (engineering, permitting, RPS-related etc.)						\$ -
Balance of Plant and Installation Costs (equipment, labor, electrical, etc.)						\$ -
Interconnection Costs (if applicable)						\$ -
Total Installed Cost						\$ -

Attachment 3

REPORT ON PILOT OPERATIONS

For Submission at Construction Milestone 3

The purposes of the report on pilot operations are to provide useful information to others who may develop a similar facility; qualitative and quantitative characterization of facility capabilities (particularly the types and amounts/rates of feedstocks that can be used, the quantity of gas generated, and amounts of materials that may require disposal); experience with particular system components (e.g., performance, reliability, compatibility); and recommendations for reliable or improved operations. The report shall, at a minimum, address the following topics:

- I. System start-up
- II. Review of system components (e.g., performance, reliability, compatibility with other components)
- III. Summary of key operating parameters at steady state
- IV. Uses/disposal of all outputs
- V. Difficulties encountered and how addressed
- VI. Description and results of any experimental operations
- VII. Plans for maintaining or modifying operations
- VIII. Annualized estimates of input and output quantities