Contracting Regional Renewable Energy Site Evaluation

Funding provided by the District Local Technical Assistance program

Prepared for the

Towns of Ashland, Bedford, Hamilton, Hopkinton, Sherborn and Sudbury

December 9, 2011

Prepared by
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Acknowledgements

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Special thanks to Merrimac Valley Planning Commission Executive Director, Dennis DiZoglio, and his staff, who provided support for this project by sharing procurement documents and providing insights from past work on similar projects.

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Thank you for the assistance and leadership of the following individuals:

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**Town of Hamilton**
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**Town of Hopkinton**
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**Town of Sherborn**
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**Town of Sudbury**
Maureen Valente, Town Manager
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Executive Summary

Renewable energy technologies, particularly small-scale solar and wind power, can often be advantageously located on underutilized space, generating clean energy and ground lease revenue. Using landfills and brownfields for renewable energy development provides an opportunity to convert space of little value or function into a productive, profitable and environmentally-sound facility. The purpose of this project was to facilitate a regional procurement of preliminary site evaluation services to determine the viability of renewable energy development at underutilized sites within the Metropolitan Area Planning Council (MAPC) region.

By facilitating access to technical assistance for preliminary site evaluations, MAPC helped communities with viable spaces for renewable energy projects take the first step towards clean energy development, which could ultimately lead to increased energy independence and regional renewable energy generation in the Commonwealth. Conducting preliminary site assessments helps prevent suboptimal allocation of resources towards sites with “fatal flaws” that preclude them from supporting renewable energy generation. By participating in a group study, the communities in this project gain the advantage of a peer group of communities engaging in similar activities, which can be leveraged beyond the scope of a preliminary evaluation to sharing knowledge and maintaining momentum as projects move forward.

MAPC and the participating communities identified the following sites for evaluation:

<table>
<thead>
<tr>
<th>Municipality</th>
<th>Area</th>
<th>Address</th>
<th>Description</th>
<th>Owner</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Ashland</td>
<td>6 acres</td>
<td>Howe St.</td>
<td>Landfill, Capped</td>
<td>Municipal</td>
</tr>
<tr>
<td>2 Ashland</td>
<td>30 acres</td>
<td>125 Butterfield</td>
<td>Industrially-zoned parcel</td>
<td>Private</td>
</tr>
<tr>
<td>3 Bedford</td>
<td>13 acres</td>
<td>108 Carlisle Rd.</td>
<td>Landfill, Capped</td>
<td>Municipal</td>
</tr>
<tr>
<td>4 Hamilton</td>
<td>10 acres</td>
<td>Chebacco Rd.</td>
<td>Landfill, Capped</td>
<td>Municipal</td>
</tr>
<tr>
<td>5 Hopkinton</td>
<td>9 acres</td>
<td>66 Fruit St</td>
<td>DPW Parcel</td>
<td>Municipal</td>
</tr>
<tr>
<td>6 Sherborn</td>
<td>9 acres</td>
<td>160 N. Main St.</td>
<td>Landfill, Capped</td>
<td>Municipal</td>
</tr>
<tr>
<td>7 Sudbury</td>
<td>19 acres</td>
<td>20 Boston Post Rd.</td>
<td>Landfill, Capped</td>
<td>Municipal</td>
</tr>
</tbody>
</table>

MAPC contracted with Meridian Associates through a three-quote procurement process to provide site evaluation services. These evaluations were conducted over the course of the
summer, and were summarized in a final report that was distributed to participating communities at a final presentation hosted by MAPC on December 1, 2011.
**TASK ONE:**
Identify Sites for Evaluation

For the first task of this project, MAPC helped participating communities identify sites to be evaluated under this project. Town staff in Ashland, Hamilton, Sherborn and Sudbury already identified landfill and open space sites that they wanted to consider for this evaluation when they applied to participate in the DLTA project. MAPC staff attended meetings with planning, environmental and facilities staff in the towns of Bedford and Hopkinton to review zoning maps and discuss potential parcels for evaluation. Ultimately, the Town of Bedford identified their closed municipal landfill for evaluation, and the Town of Hopkinton identified an underutilized, municipally-owned parcel.

During the period of site selection, the U.S. Environmental Protection Agency (EPA) and National Renewable Energy Laboratory (NREL) released a Request for Applications for the grant program “RE-Powering Feasibility Studies” to conduct comprehensive feasibility studies for solar or wind energy installations on capped landfills. MAPC staff helped the towns of Hamilton, Sherborn and Ashland to prepare applications for the NREL grant for closed municipal landfills in Hamilton and Sherborn and the Nyanza Superfund Chemical Waste Dump in Ashland. Due to a short time frame, MAPC did not compile applications for all the sites that were ultimately included in the MAPC project.

The rationale for preparing the applications was that the NREL feasibility studies would constitute a deeper look at each of the sites and would build on the more general site assessments conducted by MAPC’s consultant. Although the applications were unsuccessful, the materials and information collected on each site for the purposes of the grant application were useful in preparing supplemental information for the consultant RFQ.

A copy of the NREL applications for the Hamilton, Sherborn and Ashland sites is included as Appendix B to this report.
For the second task of this project, MAPC contracted with a professional engineering company to conduct the preliminary site assessment work. The maximum amount available for this contract through the District Local Technical Assistance grant funding was $15,000, which made it possible to solicit quotes for the work through a three-quote process.

MAPC used the three-quote process off of statewide contract PFR-46 to solicit quotes from three qualified companies:

1. Meridian Associates
2. The Cadmus Group
3. Northeast Engineers & Consultants / Sustainable Global Energy

MAPC solicited quotes from the three vendors on Friday, June 3, 2011. Meridian Associates was the only vendor to respond to the solicitation by the deadline of Friday, June 17, 2011, with a quote for the maximum amount available under the project budget, $15,000. For a complete copy of the Request for Quotes (RFQ) and Appendices, please refer to Appendix A.

Meridian Associates conducted site walks on the seven sites during the months of July, August and September 2011. MAPC provided coordination between Meridian Associates and the municipal points of contact to organize the site walks.
The following scope of work was outlined in the original Request for Quotes:

**Task #1: “Fatal Flaw” Analysis**

Evaluate each site for the following “fatal flaws”: Renewable Energy Generating Potential; Proximity to Residential Areas; Proximity to Existing Airports; Construction Considerations; Environmental Considerations; Local Permitting; and Utility Connection. Landfill sites will also consider Cap Structure Integrity, and Post-Closure Use Permitting issues.

This task will include the following steps:

1. Collect the following information on each site to be evaluated:
   a. Recent site plans, including topography and property lines
   b. Site history, including any information on solar and wind energy development compiled in previous assessments
   c. Ownership status of the site and any surrounding areas that may be appropriate for development. Identify any nearby municipal (or private) electric users such as schools or water and wastewater treatment facilities that could directly utilize the generated electricity.
   d. Local environmental and permitting considerations for both solar and wind energy projects. Review local zoning bylaws for provisions relating to renewable energy to determine whether or not regulations will need to be created or changed to support a renewable energy project on the site.
   e. **(FOR LANDFILL SITES ONLY)** Status of construction of final cap in accordance with MassDEP regulations, including:
      i. When was the cap constructed and what type of cap is it (e.g. FML membrane or clay)?
      ii. Has MassDEP approved the certification report for the cap?

2. Visit each site to evaluate attributes such as access, fencing, proximity to electrical power lines, shading/southern exposure, and slopes. **(FOR LANDFILL SITES ONLY)** Evaluate condition of final cap, landfill shape (contours), location of cap-related structures including drainage swales and basins and landfill gas vents and piping.

3. Based on the site visit and review of available aerial photography and mapping, note the proximity of residents and other sensitive receptors that may be impacted by the energy-related development, including possible concerns regarding acoustics and flicker phenomena for a wind energy project. Using zoning maps, aerial images and other maps, evaluate the site’s proximity to wetlands or other conservation areas that might prohibit solar or wind energy development on the site, as well as proximity to existing airports that might prohibit wind energy development on the site. Check
the FAA Filing Calculation Tool to estimate potential impacts of a wind energy project on the site.

4. From available databases, determine each site’s average wind speed at a height of 70 meters. (Massachusetts Department of Energy Resources (MassDOER) standards require a minimum average wind speed of 6.0 meters per second for wind projects to be considered viable for grant funding.) From this information, as well as the information collected in tasks #1-3, make a preliminary evaluation of the viability of each landfill site for the installation of wind turbine(s), including:
   a. Back-of-the-envelope estimates for production from medium (~600kW) and large (~1.5 MW) size turbines.
   b. Recommended locations for turbines based on development constraints, if applicable.
   c. Recommendations for a further wind feasibility study.

5. Based on the information collected in tasks #1-3, develop a preliminary evaluation for each site of the total area where solar PV cells could be placed, along with an estimated total electricity generation based on generally accepted conversion factors.

6. Contact the appropriate individual(s) at National Grid or NSTAR to discuss the potential for connecting a proposed solar PV or wind energy facility to the utility grid or a local user. From this information, provide a general analysis of the cost to connect the generated electricity to the utility or a local user.

Task #2: Development Options

Based on the elements discovered under Task 1, identify and evaluate renewable energy development options. MAPC hopes to provide communities with a list of options available to them to advance the development of solar PV or wind energy projects on appropriate sites, ranging from third-party Power Purchasing Agreements (PPAs), leasing, net metering, payment-in-lieu-of-taxes (PILOT), developing an RFP, etc.

For each site, the pros and cons of each option (including a rough economic projection) should be described (e.g., third-party options that allow municipal projects to take advantage of federal tax credits), specific steps for pursuing each option listed, and a recommendation made.

(FOR LANDFILL SITES ONLY) Since landfill sites may be in varying states of closure, specific steps needed to close the landfill, obtain a post-closure use permit and/or begin developing a renewable energy project should also be described.
For the final task, MAPC hosted a Clean Energy Forum on Renewable Energy on Landfills and Large Municipal Sites. The forum featured the final presentation from Meridian Associates, as well as a presentation by Mayor Michael Tautznik of the City of Easthampton, whose community had recently completed construction on a 2.2 MW ground-based solar PV project on their municipal landfill. There were over 50 people in attendance, ranging from municipal staff and volunteers, private consultants, employees of state agencies, and others involved in the clean energy field.
Save the Date!

“Assessing Renewable Energy on Landfill and Large Municipal Sites”

Thursday, December 1, 2011
10:00 am - 12:00 pm

Metropolitan Area Planning Council
60 Temple Place, 3rd Floor
Boston, MA 0211

Register online at mapc.org/events

Featured Speaker:
Mayor Michael A. Tautznik
City of Easthampton

Meridian Associates will also present the results from a preliminary study of solar PV and wind potential on sites in the communities of Ashland, Bedford, Hamilton, Hopkinton, Sherborn and Sudbury. Presentations will be followed by a discussion of next steps for developing sites with good potential for utility-scale renewable energy projects.

This project was funded under the 2011 round of the Commonwealth’s District Local Technical Assistance (DLTA) program.

Questions? Contact Helen Aki at haki@mapc.org or 617-451-2770 x 2054

The Metropolitan Area Planning Council
60 Temple Place
Boston, MA 02111
617-451-2770
www.mapc.org
Appendix A: Final Report by Meridian Associates

A link to the PDF version of this report can be downloaded here:
Appendix B: NREL “RE-Powering Feasibility Studies” Applications

1. Nyanza Superfund Chemical Waste Dump, Ashland, MA
2. Sherborn Landfill, Sherborn, MA
3. Hamilton Sanitary Landfill, Hamilton, MA
US EPA RE-Powering Feasibility Studies
Response to the 2011 Request for Applications (RFA)

Project Title
Nyanza Chemical Waste Dump Superfund Landfill

Contact Information
Matthew Selby
Director of Community Development and Health
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Ashland, MA 01721
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mbselby@ashlandmass.com

Helen Aki, LEED AP
Energy Services Coordinator
Metropolitan Area Planning Council
60 Temple Place
Boston, MA 02111
(617) 451-2770 x 2054
haki@mapc.org

Type of Renewable Energy Feasibility Requested
Utility-scale, ground-based solar photovoltaic

Project Description

The Nyanza Chemical Waste Superfund Site (EPA ID#: MAD990685422) is an approximately 200-acre property located near downtown Ashland, Massachusetts. The property was one of the first sites addressed by CERCLA in the 1980s, and is currently listed on the National Priorities List as a Final NPL. A 12-acre landfill was created during the first phase of the EPA’s clean up of the site (operation unit 1), and has since been capped. This is the portion of the site that the owner is interested in developing as a renewable energy project, and the EPA has said the development of a solar farm there would be allowed. The landfill cap is a flat, grassy, hilltop area with good access from Megunko Road and could support at least a 4 to 5 MW ground-based solar PV project, according to a preliminary study using NREL’s In My Backyard tool. The property is zoned as a Rail Transit District, a special district created to promote smart growth adjacent to the Ashland station on the Massachusetts Bay Transit Authority’s commuter rail.

This project is a component of the Metropolitan Area Planning Council (MAPC)’s regional preliminary site assessment project, which seeks to secure technical assistance for renewable energy “fatal flaws” and feasibility analyses of potential renewable energy development sites in the MAPC region. These efforts help us to advance goals in our regional plan, MetroFuture, which call for generating more energy from local, renewable sources, and for reducing greenhouse gas emissions from our region. They are also important in meeting the Livability Principles of the EPA/HUD/DOT Partnership for Sustainable Communities, which recently awarded a $4 million Regional Planning Grant to the MetroBoston Sustainable Communities Consortium, with MAPC serving as the lead applicant and key implementer.
Dear Ms. Matthews:

This letter is to express my agency's support for the development of renewable energy projects on contaminated and underutilized properties in Metro Boston. The Metropolitan Area Planning Council (MAPC) is currently working to secure feasibility studies for potential renewable energy sites in our region, including the ones being submitted in response to the U.S. EPA’s Request for Applications, as well as several others. These efforts help us to advance goals in our regional plan, MetroFuture, which call for generating more energy from local, renewable sources, and for reducing greenhouse gas emissions from our region. They are also important in meeting the Livability Principles of the EPA/HUD/DOT Partnership for Sustainable Communities, which recently awarded a $4 million Regional Planning Grant to the MetroBoston Sustainable Communities Consortium, with MAPC serving as the lead applicant and key implementer.

Enclosed you will find applications for feasibility studies on the following three sites:

- The former Hamilton Sanitary Landfill, with a proposed 1.5 to 2 MW solar PV project.
- The former Sherborn Landfill, with a proposed 800kW to 1 MW solar PV project.
- The Nyanza Chemical Waste Dump Superfund Site, which is located in Ashland, MA, with a proposed 4 to 5 MW solar PV project.

All projects have strong support from local stakeholders, including municipal leadership. As part of their commitment to pursuing their respective projects, representatives from each of the towns submitted requests for technical assistance to MAPC through the District Local Technical Assistance program (DLTA) earlier this year. DLTA funds are distributed among the state’s 13 Regional Planning Agencies (RPAs) to provide cities and towns with technical assistance to promote regional collaboration, to encourage economic development and housing production, and to facilitate best practices in zoning and protecting the environment. MAPC is the largest provider of DLTA services in Massachusetts.

This year, MAPC authorized a portion of DLTA funds to help secure engineering services for the communities that applied with interest in conducting a “fatal flaws” analysis of landfill, brownfield
and other marginal or underutilized sites within their borders. Although these funds are sufficient to subsidize a first-cut, preliminary site assessment for some of these sites, they cannot cover for all of the proposed sites the sort of in-depth feasibility study described in the RFA. MAPC sees this grant as an ideal opportunity to connect our communities to high-quality technical assistance, and contribute to the success of a greater number of clean energy projects within the region.

I look forward to hearing your decision and appreciate your consideration. If you have any questions, please contact Helen Aki, MAPC’s Energy Services Coordinator, at haki@mapc.org.

Yours truly,

Marc D. Draisen
Executive Director
US EPA RE-Powering Feasibility Studies
Response to the 2011 Request for Applications

Project Description: The Nyanza Chemical Waste Dump Superfund Site
Ashland, Massachusetts

May 20, 2011

The Nyanza Chemical Waste Dump Superfund Landfill (EPA ID#: MAD990685422) is located in the Town of Ashland, Middlesex County, Massachusetts. Its precise location is at latitude 42N 15' 29.54" and longitude 71W 28' 32.98". Ashland is located 25 miles west-southwest of Boston, and 20 miles east-southeast of Worcester. Approximately 10,000 people live within 3 miles of the site. The site is comprised of three distinct areas: the 35-acre former Nyanza, Inc. property which currently consists of wetlands, the Megunko Hill area, and an industrial park along Megunko Road; drainageways between the former Nyanza Inc. property and the Sudbury River, consisting of the Eastern Wetland, Trolley Brook, and Outfall Creek/Lower Raceway; and a 26-mile stretch of the Sudbury River down to its confluence with the Assabet River in Concord, Massachusetts. The site is listed on the National Priorities List and is known as a Final NPL.

From 1917 to 1978, several companies involved in the manufacturing of textile dyes and dye intermediates, inorganic colloidal solids, and acrylic polymers occupied the Site. Nyanza, Inc. was the most recent dye manufacturing company to occupy the Site. They operated at the Site from 1965 until 1978. The former plant grounds are currently occupied by several industrial businesses, the largest of which is Nyacol Products, Inc.

Starting in 1917, several types of chemical wastes were disposed of in various locations on the Site property with a majority of these wastes deposited on Megunko Hill, which was used as an unsecured landfill. Wastes included partially treated process wastewater, chemical sludge from the wastewater treatment process, solid process wastes (e.g. chemical precipitate and filter cakes) in drums, solvent recovery distillation residues in drums, and off-specification products. Process chemicals that could not be recycled or reused (including phenol, nitrobenzene, and mercuric sulfate) were also disposed of on the Site property. Over 45,000 tons of chemical sludges generated by wastewater treatment processes, along with spent solvents and other chemical wastes, were buried on the property. The area that contained the largest amount of buried waste and exposed sludge was referred to as the Hill section.
Nyanza, Inc. and its predecessors originally discharged the dye waste stream to a concrete vault (or settling pond) adjacent to the main process building. The vault was used as a central sump for the collection of wastewater from the entire Nyanza, Inc. operation, as well as from other generating tenants housed in the immediate vicinity. The liquid occasionally overflowed via a pipe into Chemical Brook, which flowed into Trolley Brook and underground through Chemical Brook Culvert into Outfall Creek, and then into the Raceway that entered the wetlands along the Sudbury River. The vault was taken out of service in the 1960s or 1970s, but continued to be a source of groundwater contamination at the Site until its removal in 1988. Nyanza, Inc. connected to the Metropolitan District Commission sewer collection system in March 1970.
History of Cleanup

Due to the large and complex nature of the contamination at the Site, EPA divided the cleanup activities into four Operable Units (OUs). OU #1 is the former Nyanza Inc. property and several adjacent upland and wetland areas where soils and sludges were contaminated with heavy metals, volatile organic compounds (VOCs), and semi-volatile organic compounds (SVOCs). OU #2 is comprised of a groundwater plume of organic contamination that extends from the former Nyanza Inc. property in a north/northeasterly direction toward the Sudbury River. OU #3 includes the Eastern Wetland, Trolley Brook, Chemical Brook and Outfall Creek/Lower Raceway. These drainageways are located between the former Nyanza Inc. property and the Sudbury River. OU #4 includes a 26-mile stretch of the Sudbury River where sediment and fish are contaminated with mercury.

EPA completed OU #1 Remedial Action (RA) activities on September 25, 1992 and OU #3 RA activities on May 30, 2002. RAs at OU #2 and OU #4 have not been completed. RA activities are ongoing for OU #2 and Remedial Investigation/Feasibility Study (RiFFS) activities are ongoing for OU #4. In accordance with Section 104(c)(3)(A) of CERCLA, the Massachusetts Department of Environmental Protection (MassDEP) is responsible for Operation and Maintenance (O&M) activities of all RAs.

Site Characteristics

As part of the first phase of the EPA cleanup, a 12-acre landfill was created on Operable Unit #1. Remediation activities were completed on that portion of the site nearly two decades ago, and the landfill has since been capped. This is the area that the site owner, Robert Gayner, is interested in developing as a renewable energy project. The EPA has said the development of a solar farm on this site would be allowed, and the owner has begun talks with solar developers.

The landfill cap is a flat, grassy, hilltop area with good access from Megunko Road. According to NREL’s In My Backyard tool, the cap could support at least a 4 to 5 MW PV project. The Nyanza property is zoned as Rail Transit District, a special district created to promote smart growth adjacent to the Ashland station on the Massachusetts Bay Transit Authority’s commuter rail. The Town of Ashland is strongly in support of this project as it would be consistent with smart growth goals for the area, and improve the value of currently contaminated and underutilized land.
The project's main partners, MAPC, the Town of Ashland, and the Nyanza site owner are principally interested in a preliminary analysis of the economic and physical viability of the site. If an initial study shows that a solar farm is economically and physically viable at this site, the town and the site owner would benefit from guidance to identify financing options and establish the details of a partnership (PPA, etc) on the project moving forward, as well as more detailed information on a possible system design.

According to MassGIS data, the site is about 3 miles from a major transmission line and substation located across the Framingham town border. The local utility, NSTAR, has been notified of the project and is generally supportive of efforts that promote renewable energy generation, as it is required by law as an investor-owned utility in the Commonwealth of Massachusetts to procure a certain percentage of its energy from renewable sources according to the state Renewable Portfolio Standard. However, NSTAR cannot give formal approvals until after a formal interconnection study is completed. Ashland intends to file for an interconnection study once a “fatal flaws” analysis shows that a project is viable at the site.

**Applicant Background**

The Metropolitan Area Planning Council (MAPC) is a regional planning agency established by Chapter 40B of the Massachusetts General Laws serving the people who live and work in the 101 cities and towns of greater Boston. Its mission is to promote smart growth and regional collaboration, which includes protecting the environment, developing clean and efficient energy
resources, supporting economic development, encouraging sustainable land use, improving transportation, bolstering affordable housing, ensuring public safety, advancing equity and opportunity among people of all backgrounds, and fostering collaboration among municipalities.

MAPC’s work is guided by its regional plan, MetroFuture. Last October, MAPC was awarded a $4 million Sustainable Communities Grant on behalf of the MetroBoston Sustainable Communities Consortium. The Sustainable Communities Grant Program is a joint initiative between the U.S. Department of Housing and Urban Development, the U.S. Environmental Protection Agency, and the U.S. Department of Transportation. The cultivation of clean, renewable energy resources in the region is an important goal outlined in MetroFuture and the Sustainable Communities Grant Program, and MAPC is working on several projects that contribute towards achieving that goal.

This year, MAPC accepted applications for a new Regional Site Assessment program that would help municipalities secure engineering services for “fatal flaws” analyses of landfill, brownfield and other marginal or underutilized sites within their borders. MAPC believes that facilitating access to direct technical assistance for preliminary site evaluations and development options helps encourage communities with viable spaces for renewable energy projects to take the first steps towards development, ultimately resulting increased energy independence and regional renewable energy generation for the Commonwealth. This process also helps prevent suboptimal allocation of resources towards sites with “fatal flaws” that preclude them from supporting renewable energy generation.

MAPC received an overwhelming number of responses to this new program, and has identified over 10 candidate sites to be assessed this year. Although MAPC has been able to identify sufficient funds to subsidize a first-cut, preliminary site assessment for some of these sites, it does not have the resources for the sort of in-depth feasibility study described in the US EPA’s RE-Powering America RFA. MAPC sees this RFA as a unique opportunity to connect some of these communities with sites that qualify as “contaminated” to high-quality technical expertise that might otherwise have been difficult or impossible to secure.

The EPA technical assistance would be particularly useful to the Town of Ashland, which submitted a proposal to MAPC to evaluate the possibility of a solar farm on the 12-acre capped landfill located on the Nyanza Chemical Waste Dump Superfund Site. The Town of Ashland is also interested in feasibility studies at its municipal landfill, and another privately-owned site that is not contaminated. As a Superfund site with a complicated history, the Nyanza project poses particular challenges for a feasibility study that the EPA’s engineering team would be better equipped to assess. MAPC’s technical expertise will likely focus on municipal landfills, because they tend to have fairly uniform characteristics and can be assessed, in aggregate, at a lower overall cost. MAPC sees this grant as the ideal opportunity to get detailed information and expertise on the specific characteristics present at the Nyanza site.
If technical assistance is awarded from EPA/NREL, MAPC has the capacity to share the best practices and lessons learned from the process with its 101 member cities and towns. There are many communities with similar capped and closed landfills in the MAPC region that are interested in using this space to generate both clean power and revenue, but many lack the staff time or expertise to even begin the process of determining whether or not these sites are viable for renewable energy development. If successful, MAPC is capable of leveraging the Nyanza project to generate a ripple effect that can build momentum in other communities who are just starting off down the path towards renewable energy development.

Resources:


In My Backyard Tool. Produced by the National Renewable Energy Laboratory. Available online at: http://www.nrel.gov/eis/imby/

MetroBoston Data Common Tool. Produced by the Boston Indicators Project/Metropolitan Area Planning Council. Available online at: http://www.metrobostondatacommon.org/

Figure 4: MetroBoston Data Common – Transmission Lines near Nyanza Superfund Site
Lura Matthews  
Center for Program Analysis  
U.S. Environmental Protection Agency  
Mail Code 5101T  
1200 Pennsylvania Ave. NW  
Washington, DC 20460  

Dear Ms. Matthews:  

This letter is to express my support for a utility-scale, solar energy project on the Nyanza Chemical Waste Dump Superfund Landfill. I am very interested in discovering whether or not such a project would be feasible, and what it would take to make it a reality.  

The Town of Ashland is a strong supporter of energy conservation and renewable energy development. In 2005, the town completed construction of a new high school, which is partially powered by PV roof panels. In 2010, the town completed the installation of solar panels on the DPW garage. This year, the town is also participating in a regional performance contracting project in collaboration with the Metropolitan Area Planning Council (MAPC) and 13 other communities in the Metro Boston region.  

The Nyanza Chemical Waste Dump Superfund Landfill is a 12-acre site listed on the National Priorities List. The EPA has said the development of a solar farm on this site would be allowed, and the site owner, Robert Gayner, has begun talks with solar developers. Earlier this year, the Town applied for and received a technical assistance award from MAPC to pursue a “fatal flaws” preliminary site analysis for a potential solar sites within Ashland. MAPC is filing this application for a solar PV feasibility study on the Town’s behalf.  

The comprehensive feasibility study described in the EPA’s RE-Powering Request for Applications would provide precisely the information needed to move this project forward. I look forward to hearing your decision, and if such technical assistance is granted, working with MAPC and the Nyanza site owner to move forward on developing a renewable energy project that will benefit our whole community. Thank you for your consideration.  

Kindest Regards,  

John Petrin  
Town Manager
Lura Matthews  
Center for Program Analysis  
U.S. Environmental Protection Agency  
Mail Code 5101T  
1200 Pennsylvania Ave. NW  
Washington, DC 20460

Dear Ms. Matthews:

This letter is to express my support for a renewable energy (utility-scale, ground-based solar photovoltaic) project on the Nyanza Chemical Waste Superfund Site. The Nyanza Superfund Landfill is currently an underutilized property with limited options for development. It is my understanding that this property could be used to generate clean, renewable power, yielding economic as well as environmental benefits. Although I have not yet had the time or resources to conduct a preliminary analysis to determine the economic and physical viability of the site, I am very interested in discovering whether or not such a project would be feasible, and what it would take to make it a reality.

I was recently made aware of the U.S. EPA’s RE-Powering Feasibility Studies program through the Town of Ashland’s Director of Community Development and Health, Matthew Selby. I would be very interested in seeing the results a feasibility study, as I feel it is necessary to get a more definitive opinion on whether or not development is favorable before taking action on this project. If favorable, I would be open to acting on the recommendations made through the feasibility study, if they provided a sufficiently quantitative basis for decision-making.

On July 26, 2000, the Court entered a Consent Decree ("Decree") among the United States, the Commonwealth of Massachusetts (the "Commonwealth"), Robert E. Gayner ("Gayner") and MCL Development Corporation ("MCL")-CIVIL ACTION NO.99-40135. On August 7, 2002, Gayner and MCL transferred all of their property located at or in the vicinity of the Site to Megunko Transit District, LLC ("Megunko"), a Massachusetts Limited Liability Company established and managed by Gayner and the Consent Decree was amended accordingly in August 2000-CIVIL ACTION NO. 9940133NMG.

The Containment Cap (Landfill) is approximately 11+ acres of flat unrestricted grassed over land. It is located on the top of Megunko Hill and all trees were removed for a considerable distance from the perimeter. This use has been discussed with the EPA and DEP and all parties have agreed that this would be an ideal site for a solar farm.

I look forward to hearing your decision, and if such technical assistance is granted, working with the Town of Ashland and others to move forward on developing a renewable energy project that will benefit our whole community. Thank you for your consideration.

Yours truly,

[Signature]

Robert E. Gayner, Manager

Megunko Transit District LLC
May 9, 2011

Center for Program Analysis
U.S. Environmental Protection Agency
Mail Code 5101T
1200 Pennsylvania Ave. NW
Washington, DC 20460

Dear Ms. Matthews,

This letter confirms that NSTAR Electric Company (NSTAR) has received notice of the Metropolitan Area Planning Council (MAPC)'s intent to submit applications to the U.S. EPA for preliminary site assessments in the towns of Ashland, Bedford, Hopkinton, Sherborn and Sudbury, Massachusetts. NSTAR generally supports efforts that promote renewable energy generation, and is required by law as an investor-owned utility in the Commonwealth of Massachusetts to procure a certain percentage of its supply from renewable sources, in accordance with the state's Renewable Portfolio Standard.

The Massachusetts Interconnection Tariff calls for study of potential project impact on the NSTAR Electric Power System (EPS) prior to interconnection. Since the projects described in MAPC's applications have not yet entered the design phase, they have not submitted interconnection applications and NSTAR consequently does not have information to approve any specific project.

Current net metering regulations in Massachusetts allow for up to 1% of a provider's total load to be met by distributed generation projects. It is expected that percentage will rise to 2% in 2011 for municipally owned and partnered projects, pending forthcoming revised net metering regulations. NSTAR looks forward to hearing more about the projects and receipt of interconnection applications from MAPC's partner towns.

Sincerely,

Sincerely,

Jan Gudell
Program Manager
Tel: 781-441-8366
E-Mail: jan.gudell@nstar.com

CC: Helen Aki
Energy Services Coordinator
Metropolitan Area Planning Council
60 Temple Place, 6th Floor
Boston, MA 02111
US EPA RE-Powering Feasibility Studies
Response to the 2011 Request for Applications (RFA)

Project Title
Sherborn Landfill

Contact Information

Gino Carlucci, AICP
Town Planner
19 Washington St
Sherborn MA 01770
(508) 651-7855
planning@sherbornma.org

Helen Aki, LEED AP
Energy Services Coordinator
Metropolitan Area Planning Council
60 Temple Place
Boston, MA 02111
(617) 451-2770 x 2054
haki@mapc.org

Type of Renewable Energy Feasibility Requested
Utility-scale, ground-based solar photovoltaic

Project Description

Sherborn’s municipal landfill is located at 160 North Main Street on Assessors Map #10, Parcel 1A. According to Assessor’s records, the parcel consists of 15 acres (MassDEP report indicates 9.5 acres). The facility is capped, but not lined. It became inactive in 1987 and now shown in the DEP report as closed. According to NREL’s In My Backyard (IMBY) tool, the Sherborn landfill could support around a 1 MW solar PV project.

This project is a component of the Metropolitan Area Planning Council (MAPC)’s regional preliminary site assessment project, which seeks to secure technical assistance for renewable energy “fatal flaws” and feasibility analyses of potential renewable energy development sites in the MAPC region. These efforts help us to advance goals in our regional plan, MetroFuture, which call for generating more energy from local, renewable sources, and for reducing greenhouse gas emissions from our region. They are also important in meeting the Livability Principles of the EPA/HUD/DOT Partnership for Sustainable Communities, which recently awarded a $4 million Regional Planning Grant to the MetroBoston Sustainable Communities Consortium, with MAPC serving as the lead applicant and key implementer.
Dear Ms. Matthews:

This letter is to express my agency’s support for the development of renewable energy projects on contaminated and underutilized properties in Metro Boston. The Metropolitan Area Planning Council (MAPC) is currently working to secure feasibility studies for potential renewable energy sites in our region, including the ones being submitted in response to the U.S. EPA’s Request for Applications, as well as several others. These efforts help us to advance goals in our regional plan, MetroFuture, which call for generating more energy from local, renewable sources, and for reducing greenhouse gas emissions from our region. They are also important in meeting the Livability Principles of the EPA/HUD/DOT Partnership for Sustainable Communities, which recently awarded a $4 million Regional Planning Grant to the MetroBoston Sustainable Communities Consortium, with MAPC serving as the lead applicant and key implementer.

Enclosed you will find applications for feasibility studies on the following three sites:

- The former Hamilton Sanitary Landfill, with a proposed 1.5 to 2 MW solar PV project.
- The former Sherborn Landfill, with a proposed 800kW to 1 MW solar PV project.
- The Nyanza Chemical Waste Dump Superfund Site, which is located in Ashland, MA, with a proposed 4 to 5 MW solar PV project.

All projects have strong support from local stakeholders, including municipal leadership. As part of their commitment to pursuing their respective projects, representatives from each of the towns submitted requests for technical assistance to MAPC through the District Local Technical Assistance program (DLTA) earlier this year. DLTA funds are distributed among the state’s 13 Regional Planning Agencies (RPAs) to provide cities and towns with technical assistance to promote regional collaboration, to encourage economic development and housing production, and to facilitate best practices in zoning and protecting the environment. MAPC is the largest provider of DLTA services in Massachusetts.

This year, MAPC authorized a portion of DLTA funds to help secure engineering services for the communities that applied with interest in conducting a “fatal flaws” analysis of landfill, brownfield...
and other marginal or underutilized sites within their borders. Although these funds are sufficient to subsidize a first-cut, preliminary site assessment for some of these sites, they cannot cover for all of the proposed sites the sort of in-depth feasibility study described in the RFA. MAPC sees this grant as an ideal opportunity to connect our communities to high-quality technical assistance, and contribute to the success of a greater number of clean energy projects within the region.

I look forward to hearing your decision and appreciate your consideration. If you have any questions, please contact Helen Aki, MAPC’s Energy Services Coordinator, at haki@mapc.org.

Yours truly,

Marc D. Draisen
Executive Director
US EPA RE-Powering Feasibility Studies  
Response to the 2011 Request for Applications  

Project Description: Sherborn Municipal Landfill  
Sherborn, Massachusetts  

May 20, 2011  

The Town of Sherborn’s municipal landfill is located at 160 North Main Street, Sherborn, Massachusetts. Its precise coordinates are latitude 42N 15’ 50.525” and longitude 71W 21’ 47.12. According to the Town Assessor’s records, the parcel consists of 15 acres (MassDEP report indicates 9.7 acres). The closest neighboring land uses include a golf course, athletic fields, and agricultural land. There are also a number of residences about a quarter of a mile away on Everett Street.

Sherborn is a small town of around 4,500 people located about 18 miles southwest of Boston. It is almost entirely residential, and 50% of its land area is designated open space. Municipal leadership has indicated that a solar photovoltaic facility at the former landfill site would achieve the goal of providing an economic use for a site with few, if any, other opportunities, while also producing a clean source of revenue and generating revenue. Reducing greenhouse gas emissions is a high priority for the town, and is driven in large part by a high rate of citizen participation. The Sherborn Energy Committee, a group composed of local volunteers working to help the town meet the 5 criteria for the Commonwealth of Massachusetts Green Communities program, is supportive of this project and available to help advocate and coordinate on its behalf.

The Sherborn landfill was closed in 1987. The facility was capped but not lined.
The property is zoned residential, and Sherborn is considering the site for a solar PV overlay district. According to NREL’s In My Backyard tool, the landfill cap could support an approximately 1 MW solar farm. Although the total property is heavily forested, the cap itself is cleared, flat and grassy and seems well-suited for a solar farm. The project’s principal partners, MAPC and the Town of Sherborn, are primarily interested in a preliminary analysis of the economic and physical viability of the site. If an initial study shows that a solar farm is economically and physically viable at this site, the town would benefit from guidance to identify financing options and establish the details of a partnership (PPA, etc) on the project moving forward, as well as more detailed information on a possible system design.
The DEP report/MassGIS data indicates that the nearest major transmission lines are located just 1.5 miles from the site. The nearest electrical substation is also located about 1.5 miles away, across the Framingham town border. There are also visible power lines about 1000 feet away from the site, located off of North Main Street.

The local utility, NSTAR, has been notified of the project and is generally supportive of efforts that promote renewable energy generation, as it is required by law as an investor-owned utility in the Commonwealth of Massachusetts to procure a certain percentage of its energy from renewable sources according to the state Renewable Portfolio Standard. However, NSTAR cannot give formal approvals until after a formal interconnection study is completed. Sherborn intends to file for an interconnection study once a “fatal flaws” analysis shows that a project is viable at the site.
There are five monitoring wells around the landfill site that are tested. The most recent sampling was done in 2009.
Applicant Background

The Metropolitan Area Planning Council (MAPC) is a regional planning agency established by Chapter 40B of the Massachusetts General Laws serving the people who live and work in the 101 cities and towns of greater Boston. Its mission is to promote smart growth and regional collaboration, which includes protecting the environment, developing clean and efficient energy resources, supporting economic development, encouraging sustainable land use, improving transportation, bolstering affordable housing, ensuring public safety, advancing equity and opportunity among people of all backgrounds, and fostering collaboration among municipalities.

MAPC’s work is guided by its regional plan, MetroFuture. Last October, MAPC was awarded a $4 million Sustainable Communities Grant on behalf of the MetroBoston Sustainable Communities Consortium. The Sustainable Communities Grant Program is a joint initiative between the U.S. Department of Housing and Urban Development, the U.S. Environmental Protection Agency, and the U.S. Department of Transportation. The cultivation of clean, renewable energy resources in the region is an important goal outlined in MetroFuture and the Sustainable Communities Grant Program, and MAPC is working on several projects that contribute towards achieving that goal.

This year, MAPC accepted applications for a new Regional Site Assessment program that would help municipalities secure engineering services for “fatal flaws” analyses of landfill, brownfield and other marginal or underutilized sites within their borders. MAPC believes that facilitating access to direct technical assistance for preliminary site evaluations and development options helps encourage communities with viable spaces for renewable energy projects to take the first steps towards development, ultimately resulting increased energy independence and regional renewable energy generation for the Commonwealth. This process also helps prevent inefficient allocation of resources towards sites with “fatal flaws” that preclude them from supporting renewable energy generation.

MAPC received an overwhelming number of responses to this new program, and has identified over 10 candidate sites to be assessed this year. Although MAPC has been able to identify sufficient funds to subsidize a first-cut, preliminary site assessment for some of these sites, it does not have the resources for the sort of in-depth feasibility study described in the US EPA’s RE-Powering America RFA. MAPC sees this RFA as a unique opportunity to connect some of these communities with sites that qualify as “contaminated” to high-quality technical expertise that might otherwise have been difficult or impossible to secure.

If technical assistance is awarded from EPA/NREL, MAPC has the capacity to share the best practices and lessons learned from the process with its 101 member cities and towns. There are many communities with similar capped and closed landfills in the MAPC region that are interested in using this space to generate both clean power and revenue, but many lack the staff time or expertise to even begin the process of determining whether or not these sites are viable for renewable energy development. If successful, MAPC is capable of leveraging the Sherborn
project to generate a ripple effect that can build momentum in other communities that are just starting down the path towards renewable energy development.

References:

In My Backyard Tool. Produced by the National Renewable Energy Laboratory. Available online at: http://www.nrel.gov/eis/imby/

MA Department of Environmental Protection, Massachusetts Landfill Profiles, Development of Renewable Electricity Generation from Wind or Solar Energy, published June 16, 2009

MetroBoston Data Common Tool. Produced by the Boston Indicators Project and the Metropolitan Area Planning Council. Available online at: http://www.metrobostondatacommon.org/
Dear Ms. Matthews:

This letter is to express my support for a utility-scale solar photovoltaic project on the former Sherborn landfill. I am very interested in discovering whether or not such a project would be feasible, and what it would take to make it a reality.

Sherborn is committed to reducing greenhouse gas emissions. A solar photovoltaic facility at the former landfill site will achieve the goal of providing an economic use for a site with few, if any, other opportunities, while also producing a clean source of electricity and generating revenues for the Town. The landfill site has been designated as a solar photovoltaic overlay district in April, 2011, as it is close to transmission lines and has no nearby neighbors.

Determining whether this site is viable is a high priority for the Town. The comprehensive feasibility study described in the the EPA’s RE-Powering Request for Applications would provide precisely the information needed to move this project forward. I look forward to hearing your decision, and if such technical assistance is granted, working with MAPC and others to move forward on developing a renewable energy project that will benefit our whole community. Thank you for your consideration.

Sincerely,

Gino D. Carlucci, Jr.
Town Planner
May 9, 2011

Center for Program Analysis
U.S. Environmental Protection Agency
Mail Code 5101T
1200 Pennsylvania Ave. NW
Washington, DC 20460

Dear Ms. Matthews,

This letter confirms that NSTAR Electric Company (NSTAR) has received notice of the Metropolitan Area Planning Council (MAPC)'s intent to submit applications to the U.S. EPA for preliminary site assessments in the towns of Ashland, Bedford, Hopkinton, Sherborn and Sudbury, Massachusetts. NSTAR generally supports efforts that promote renewable energy generation, and is required by law as an investor-owned utility in the Commonwealth of Massachusetts to procure a certain percentage of its supply from renewable sources, in accordance with the state’s Renewable Portfolio Standard.

The Massachusetts Interconnection Tariff calls for study of potential project impact on the NSTAR Electric Power System (EPS) prior to interconnection. Since the projects described in MAPC’s applications have not yet entered the design phase, they have not submitted interconnection applications and NSTAR consequently does not have information to approve any specific project.

Current net metering regulations in Massachusetts allow for up to 1% of a provider’s total load to be met by distributed generation projects. It is expected that percentage will rise to 2% in 2011 for municipally owned and partnered projects, pending forthcoming revised net metering regulations. NSTAR looks forward to hearing more about the projects and receipt of interconnection applications from MAPC’s partner towns.

Sincerely,

Sincerely,

[Signature]
Jan Gudell
Program Manager
Tel: 781-441-8366
E-Mail: jan.gudell@nstar.com

CC: Helen Aki
Energy Services Coordinator
Metropolitan Area Planning Council
60 Temple Place, 6th Floor
Boston, MA 02111
Project Title
Hamilton Sanitary Landfill

Contact Information
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Town Manager
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Helen Aki, LEED AP
Energy Services Coordinator
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(617) 451-2770 x 2054
haki@mapc.org

Type of Renewable Energy Feasibility Requested
Utility-scale, ground-based solar photovoltaic

Project Description
The Hamilton Sanitary Landfill is a closed and capped landfill located on 50 acres of town-owned, residentially-zoned land in northeastern Massachusetts. It borders the tri-town area of Hamilton, Manchester and Essex, MA, about two miles from downtown Manchester, and four miles from downtown Beverly and Hamilton. Approximately 7 of those 50 acres are available for development, and the town of Hamilton is considering a 1.5 to 2 MW ground-based solar PV system on that space. The town was recently designed a Green Community by the Massachusetts Department of Energy Resources for its commitment to clean energy and climate change mitigation, and renewable energy has been part of the local dialogue for some time.

This project is a component of the Metropolitan Area Planning Council (MAPC)’s regional preliminary site assessment project, which seeks to secure technical assistance for renewable energy “fatal flaws” and feasibility analyses of potential renewable energy development sites in the MAPC region. These efforts help us to advance goals in our regional plan, MetroFuture, which call for generating more energy from local, renewable sources, and for reducing greenhouse gas emissions from our region. They are also important in meeting the Livability Principles of the EPA/HUD/DOT Partnership for Sustainable Communities, which recently awarded a $4 million Regional Planning Grant to the MetroBoston Sustainable Communities Consortium, with MAPC serving as the lead applicant and key implementer.
Dear Ms. Matthews:

This letter is to express my agency’s support for the development of renewable energy projects on contaminated and underutilized properties in Metro Boston. The Metropolitan Area Planning Council (MAPC) is currently working to secure feasibility studies for potential renewable energy sites in our region, including the ones being submitted in response to the U.S. EPA’s Request for Applications, as well as several others. These efforts help us to advance goals in our regional plan, MetroFuture, which call for generating more energy from local, renewable sources, and for reducing greenhouse gas emissions from our region. They are also important in meeting the Livability Principles of the EPA/HUD/DOT Partnership for Sustainable Communities, which recently awarded a $4 million Regional Planning Grant to the MetroBoston Sustainable Communities Consortium, with MAPC serving as the lead applicant and key implementer.

Enclosed you will find applications for feasibility studies on the following three sites:

- The former Hamilton Sanitary Landfill, with a proposed 1.5 to 2 MW solar PV project.
- The former Sherborn Landfill, with a proposed 800kW to 1 MW solar PV project.
- The Nyanza Chemical Waste Dump Superfund Site, which is located in Ashland, MA, with a proposed 4 to 5 MW solar PV project.

All projects have strong support from local stakeholders, including municipal leadership. As part of their commitment to pursuing their respective projects, representatives from each of the towns submitted requests for technical assistance to MAPC through the District Local Technical Assistance program (DLTA) earlier this year. DLTA funds are distributed among the state’s 13 Regional Planning Agencies (RPAs) to provide cities and towns with technical assistance to promote regional collaboration, to encourage economic development and housing production, and to facilitate best practices in zoning and protecting the environment. MAPC is the largest provider of DLTA services in Massachusetts.

This year, MAPC authorized a portion of DLTA funds to help secure engineering services for the communities that applied with interest in conducting a “fatal flaws” analysis of landfill, brownfield
and other marginal or underutilized sites within their borders. Although these funds are sufficient to subsidize a first-cut, preliminary site assessment for some of these sites, they cannot cover for all of the proposed sites the sort of in-depth feasibility study described in the RFA. MAPC sees this grant as an ideal opportunity to connect our communities to high-quality technical assistance, and contribute to the success of a greater number of clean energy projects within the region.

I look forward to hearing your decision and appreciate your consideration. If you have any questions, please contact Helen Aki, MAPC’s Energy Services Coordinator, at haki@mapc.org.

Yours truly,

Marc D. Draisen
Executive Director
US EPA RE-Powering Feasibility Studies  
Response to the 2011 Request for Applications  

Project Description: The Hamilton Sanitary Landfill  
Hamilton, Massachusetts  

May 20, 2011

The Hamilton Sanitary Landfill is located at 500 Chebacco Road, South Hamilton, Massachusetts 01982. Its precise coordinates are latitude 42° 35’ 46.838” and longitude 70° 48’ 17.445”. The property is approximately 2 miles from downtown Manchester, four miles from downtown Beverly or Hamilton, and easily accessed from Essex, Gloucester or Salem. It is 0.8 miles off the Route 128 Exit 16. The landfill is located on approximately 50-acres of town-owned land in a residentially-zoned area, and encompasses an area of approximately 12.7 acres, of which approximately 7.1 are available for development.

Landfill operations began at the site in the late 1950s, following approval by the Department of Public Health. The site was used as a burn dump until the early 1970s, at which time the burn dump comprised an area of approximately 3 acres and was located in the vicinity of the current site entrance. Operations transitioned to a sanitary landfill method of waste disposal at this time in response to State regulatory requirements and landfilling progressed northerly in the area referred to as Area 1.

In 1976, under order from the Department of Environmental Quality Engineering (DEQE), the Town prepared a landfill feasibility study documenting the manner in which Area 1 would be closed and the program for expanding landfilling operations further north, to the area now referred to as Area 2. The feasibility study included a hydrogeologic investigation of the site, which identified a groundwater divide trending in a northwest/southeast direction, where Area 1 was located on the westerly side of the divide. Groundwater west of the divide was found to flow to Gravelly Pond, and groundwater east of the divide was found to flow towards Maple Swamp. The delineation of the groundwater divide was the driving factor that led to the closure of Area 1.

Figure 1: Hamilton Landfill Areas
Landfilling operations ceased in Area 1 in 1978 and the area was closed and capped in 1980 in accordance with DEQE-approved plans. Operations continued in Area 2 until 1983, at which time all disposal activities at the site ceased. Cover soils were placed in Area 2 in 1984. There are some minor steps that are still required to get DEP’s final approval for the closure of the second cell, but those steps are flexible enough to be timed to coincide with other development at the site. The site has been extensively examined over the last several years with surface, groundwater and sediment sampling. An ongoing monitoring program is in place.

Project Details

The area of the landfill site that Hamilton is considering for development is located on Area 1, a closed and capped region that covers 7.1 acres. NREL’s IMBY tool suggests that this area could support a 1.5 to 2 MW solar PV project.
Nearby facilities include the Town of Manchester’s Gravelly Pond water treatment plant, which is located approximately 250 west of the landfill, and the capped Manchester Landfill and open-air solid waste transfer station, which are located approximately 800 feet south of the site. Gravelly Pond, a surface water drinking supply for the Town of Manchester, is located approximately 400 feet west of the landfill. A small portion of the landfill is currently used for yard waste drop-off. Branches and brush are stockpiled near the site entrance within a 40-foot by 60-foot area at the southwestern corner of the landfill. The DPW also stockpiles soil and miscellaneous materials at the site in the 80-foot wide corridor between the landfill access road and Chebacco Road.

There are currently two gun clubs leasing some space at the site. The Hamilton/Wenham Rod & Gun Club lease approximately 8 acres of land located in the northeastern corner of the site, and the Miles River Marsh Rats Skeet and Trap Club lease approximately 5 acres of land adjacent to the eastern perimeter of the landfill. The Rod & Gun Club activities include a rifle and pistol shooting range, as well as an archery area, and the Miles River Marsh Rats operate a skeet and trap shooting range.

The local electric utility in Hamilton is National Grid. National Grid is generally supportive of efforts that promote renewable energy generation, as it is required by law as an investor-owned utility in the Commonwealth of Massachusetts to procure a certain percentage of its energy from renewable sources according to the state Renewable Portfolio Standard. However, it cannot give formal approvals until after a formal interconnection study is completed. Hamilton intends to file for an interconnection study once a “fatal flaws” analysis shows that a project is viable at the site. Massachusetts GIS system data shows transmission lines located about 7 miles away from the site.

Water to the site is provided by the town of Manchester, with the possibility of developing a well system on-site. There are no direct natural gas lines to the site.
In its February 2004 Master Plan, the Town of Hamilton identified planning and market opportunities that would assist the town in generating non-residential tax revenue, while providing opportunity for new business growth and additional local jobs for the community. The landfill site, given its size and proximity to Route 128, represents the town’s best opportunity for creating a commercially-zoned area within which private development could take place. In its pursuit of this potential development opportunity, the town is considering creating a commercial zoning overlay district that would allow development at the site for such uses as research and development (biotechnology, medical, environmental science, computer technology), light manufacturing, office, and public space (areas used for passive recreation, including outdoor cafes or restaurant seating).

The town’s Landfill Committee, which is comprised of members from the Board of Selectmen, Economic Development Committee, Planning Board, Zoning Board of Appeals, and Conservation Commission, has worked with the consulting team responsible for the ongoing landfill site assessment process so that the town’s site development interests can be properly integrated into the ongoing landfill assessment process.

Figure 3: MetroBoston Data Common - Transmission Lines near the Hamilton Landfill
The Town of Hamilton is a strong supporter of renewable energy development. The local non-profit, Hamilton-Wenham Green (HWG), has been a driving force behind clean energy and sustainability initiatives in the area. In 2010, the group introduced the towns of Hamilton and Wenham to the Commonwealth of Massachusetts’ Green Communities Program, and helped them complete all five program criteria to become designated as Green Communities. This included passing a by-right provision for the siting of wind energy, which was approved at the Hamilton Town Meeting by a wide margin. HWG plans to introduce a similar provision for by-right solar energy development this year, and anticipates it will be equally successful. As a result of this designation, the town of Hamilton is now eligible for a selective pool of grant funding that is available to designated Green Communities in the Commonwealth, to be used for clean energy and conservation projects. HWG is in strong support of the development of a solar project on the Hamilton landfill, and intends to provide on-the-ground advocacy and education about the project if the results of a feasibility study are favorable.

The project’s principal partners, MAPC, the Town of Hamilton, and Hamilton-Wenham Green are primarily interested in a preliminary analysis of the economic and physical viability of the site. If an initial study shows that a solar farm is economically and physically viable at this site, the town would benefit from guidance to identify financing options and establish the details of a partnership (PPA, etc) on the project moving forward, as well as more detailed information on a possible system design.

**Applicant Background**

The Metropolitan Area Planning Council (MAPC) is a regional planning agency established by Chapter 40B of the Massachusetts General Laws serving the people who live and work in the 101 cities and towns of greater Boston. Its mission is to promote smart growth and regional collaboration, which includes protecting the environment, developing clean and efficient energy resources, supporting economic development, encouraging sustainable land use, improving transportation, bolstering affordable housing, ensuring public safety, advancing equity and opportunity among people of all backgrounds, and fostering collaboration among municipalities.

MAPC’s work is guided by its regional plan, *MetroFuture*. Last October, MAPC was awarded a $4 million Sustainable Communities Grant on behalf of the MetroBoston Sustainable Communities Consortium. The Sustainable Communities Grant Program is a joint initiative between the U.S. Department of Housing and Urban Development, the U.S. Environmental Protection Agency, and the U.S. Department of Transportation. The cultivation of clean, renewable energy resources in the region is an important goal outlined in MetroFuture and the Sustainable Communities Grant Program, and MAPC is working on several projects that contribute towards achieving that goal.

This year, MAPC accepted applications for a new Regional Site Assessment program that would help municipalities secure engineering services for “fatal flaws” analyses of landfill, brownfield and other marginal or underutilized sites within their borders. MAPC believes that facilitating access to direct technical assistance for preliminary site evaluations and development options
helps encourage communities with viable spaces for renewable energy projects to take the first steps towards development, ultimately resulting increased energy independence and regional renewable energy generation for the Commonwealth. This process also helps prevent inefficient allocation of resources towards sites with “fatal flaws” that preclude them from supporting renewable energy generation.

MAPC received an overwhelming number of responses to this new program, and has identified over 10 candidate sites to be assessed this year. Although MAPC has been able to carve out sufficient funds to subsidize a first-cut, preliminary site assessment for some of these sites, it does not have the resources for the sort of in-depth feasibility study described in the US EPA’s RE-Powering America RFA. MAPC sees this RFA as a unique opportunity to connect some of these communities with sites that qualify as “contaminated” to high-quality technical expertise that might otherwise have been difficult or impossible to secure.

If technical assistance is awarded from EPA/NREL, MAPC has the capacity to share the best practices and lessons learned from the process with its 101 member cities and towns. There are many communities with similar capped and closed landfills in the MAPC region that are interested in using this space to generate both clean power and revenue, but many lack the staff time or expertise to even begin the process of determining whether or not these sites are viable for renewable energy development. If successful, MAPC is capable of leveraging the Hamilton project to generate a ripple effect that can build momentum in other communities who are just starting down the path towards renewable energy development.

Resources:

In My Backyard Tool. Produced by the National Renewable Energy Laboratory. Available online at: http://www.nrel.gov/eis/imby/

MetroBoston Data Common Tool. Produced by the Boston Indicators Project and the Metropolitan Area Planning Council. Available online at: http://www.metrobostondatacommon.org/

May 18, 2011

Lura Matthews
Center for Program Analysis
U.S. Environmental Protection Agency
Mail Code 5101T
1200 Pennsylvania Ave. NW
Washington, DC 20460

Dear Ms. Matthews:

This letter is to express my support for a utility-scale renewable energy project on the Hamilton Sanitary Landfill. I am very interested in discovering whether or not such a project would be feasible, and what it would take to make it a reality.

The Town of Hamilton is a strong supporter of energy conservation and renewable energy development. As a designated Green Community, the Town’s focus on energy conservation includes building envelope weatherization, heating and cooling systems upgrades, and an award-winning Organic Recycling Program. We are also evaluating potential energy and cost savings with our street lights.

Alternative renewable energy development has been part of the local dialogue since at least 2009 when a wind analysis was conducted on Sagamore Hill and at the Gordon-Conwell Seminary to determine the viability of a wind turbine project. The Town is currently conducting a similar wind study/analysis at the landfill site and has met with vendors and consultants to learn more about opportunities in solar energy development. Earlier this year, the Town applied for and received a technical assistance award from the Metropolitan Area Planning Council (MAPC) to pursue a “fatal flaws” preliminary site analysis of the landfill site, as a part of which MAPC is filing this application for a solar PV feasibility study on the Town’s behalf.

The comprehensive feasibility study described in the the EPA’s RE-Powering Request for Applications would provide precisely the information needed to move this project forward. I look forward to hearing your decision, and if such technical assistance is granted, working with MAPC and others to move forward on developing a renewable energy project that will benefit our whole community. Thank you for your consideration.

Kindest Regards,

[Signature]

Michael A. Lombardo
Town Manager
Hamilton-Wenham GREEN

Lura Matthews  
Center for Program Analysis 
U.S. Environmental Protection Agency 
Mail Code 5101T  
1200 Pennsylvania Ave. NW 
Washington, DC 20460

Dear Ms. Matthews:

Hamilton Wenham Green would like to express its full support for a utility-scale renewable energy project on the Hamilton Sanitary Landfill. We are very interested to learn whether such a project would be feasible, and excited about working to advance renewable energy in our community.

Hamilton Wenham Green (HWG) is a non-profit organization focused on energy issues and environmental sustainability. We brought the Commonwealth's Green Communities program to both Hamilton and Wenham and played a large supporting role in gaining Green Communities designation in the first cohort. Last year, a provision for as-of-right siting for wind energy passed Town Meeting by a large margin, and we look forward to introducing a similar measure for solar energy in the near future.

HWG's focus is on education, public outreach and support. We held three public forums on energy generation and the stretch code, a full day Energy Efficiency Fair hosted by Kevin O'Connor of "This New House", and a public tour of the state-of-the-art home which was the premier feature on "This New House".

The comprehensive feasibility study described in the the EPA's RE-Powering Request would move Hamilton one giant step closer to generating our own local and renewable energy. When the grant for technical assistance is put to work, you can count on Hamilton Wenham Green's complete support.

Kind Regards,

Sue Patrolia  
Hamilton Wenham Green Founding Member, 2011 Board Member  
978-837-2012  
sue.ermec@gmail.com
May 10, 2011

Center for Program Analysis
U.S. Environmental Protection Agency
Mail Code 5101T
1200 Pennsylvania Ave. NW
Washington, DC 20460

Dear Ms. Matthews,

This letter confirms that National Grid has received notice of the Metropolitan Area Planning Council (MAPC)’s intent to submit an application to the U.S. EPA for a feasibility study of utility-scale, ground-based solar PV on the Town of Hamilton’s landfill. National Grid supports efforts that promote renewable energy generation, and is required by law as an investor-owned utility in the Commonwealth of Massachusetts to procure a certain percentage of its supply from renewable sources, in accordance with the state’s Renewable Portfolio Standard.

The Massachusetts Interconnection Tariff calls for a detailed study of potential project impact on National Grid’s Electric Power System (EPS) prior to interconnection. Since the project described in MAPC’s application has not yet entered the design phase, it has not yet submitted an interconnection application and National Grid consequently does not have information to approve any specific project. Once submitted, National Grid will review the project and provide estimated costs for interconnecting to the EPS and an interconnection agreement which will be executed between the parties.

Current net metering regulations in Massachusetts allow for a maximum of 1% of National Grid’s peak load (currently 51 MWs) to be met by solar or wind distributed generation projects. It is expected that percentage will rise to 2% in 2011 for municipally owned and partnered projects, pending forthcoming revised net metering regulations. National Grid looks forward to hearing more about this and other projects and receipt of interconnection applications from MAPC’s partner towns.

Sincerely,

Edward H. White
Vice President
Customer & Business Strategy
National Grid