

# CLEAN ENERGY RESULTS

Quarterly Report to the  
Massachusetts Department of Energy Resources  
Covering April 1, 2012 – June 30, 2012



Photo Courtesy of Randy Jordan, Jordan Dairy Farm

September 2012

Massachusetts Department of Environmental Protection

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## **EXECUTIVE SUMMARY**

The Clean Energy Results Program, established in July 2011 and launched in November 2011, is a first-of-its-kind partnership between the Massachusetts Department of Environmental Protection (MassDEP) and the Massachusetts Department of Energy Resources (DOER). This innovative new program builds on MassDEP's unique regulatory expertise and authority to support DOER in advancing the permitting and development of renewable energy and energy efficiency projects throughout Massachusetts. The Massachusetts Clean Energy Center (MassCEC) also works closely with MassDEP and DOER on program activities.

This third quarterly report covers MassDEP activities performed between April 1, 2012 and June 30, 2012. It is being provided pursuant to the Memorandum of Agreement (MOA) executed between MassDEP and DOER, and the Clean Energy Results Program Funding Proposal submitted by MassDEP to DOER (both dated May 16, 2011). As this report will illustrate, the Clean Energy Results Program continues to achieve great success during this third reporting period. Work done by MassDEP staff this quarter has directly advanced more than 80 clean energy and energy efficiency projects with potential for more than 60 megawatts of clean energy production from technology qualifying under the Massachusetts Renewable Energy Portfolio Standard (RPS) and Alternative Energy Portfolio Standard (APS).

Below are highlights from each program area. More information on each of these topics can be found under the Detailed Program Progress section of this report.

### **Water and Wastewater Utilities**

During this quarter, MassDEP Bureau of Resource Protection staff assisted 23 projects with potential for more than eight megawatts of new clean energy generation. MassDEP supported DOER in the launch of a new Drinking Water and Wastewater Facility Energy Evaluation Program that will result in the completion of 16 new comprehensive facility audits by the end of September 2012. Three potential anaerobic digestion projects at large wastewater treatment facilities were pursued with local officials (Greater Lawrence Sanitary District, New Bedford and Brockton). And MassDEP finalized the Scope of Work for a MassCEC-funded In-Conduit Hydropower Project Study for drinking water and wastewater facilities that will assess the potential for in-line hydropower at drinking water and wastewater treatment facilities across the Commonwealth.

### **Organic Waste Diversion and Anaerobic Digestion**

MassDEP Bureau of Waste Prevention and Office of General Counsel staff advanced draft regulations to streamline permitting for anaerobic digestion and other organic waste diversion facilities (final regulations expected later in 2012) and provided assistance to 10 anaerobic digestion projects at farms, wastewater treatment plants, and other locations. MassDEP rolled-out two new financing programs that will provide technical assistance and financing for collection, processing, and food waste diversion: the low-interest Recycling Loan Fund and Recycling Works Program. A fatal flaw analysis funded by the MassDEP Sustainable Materials Recovery Grant Program was completed at the Hamilton Landfill this quarter, and an agreement was established with the Town of Lexington to issue a Request for Proposals

(RFP) for anaerobic digestion at the former landfill. A survey of state colleges, universities, hospitals and correction facilities was conducted this quarter to determine the amount of organic waste generated and diverted to establish a baseline for further assistance.

### **Environmentally Challenged Property**

MassDEP advanced a total of 32 clean energy and energy efficiency projects on environmentally challenged land, with the potential for up to 46 megawatts of new clean energy production this reporting period. That includes work done by the MassDEP Bureau of Waste Site Cleanup on the Baird McGuire Superfund green remediation project and ongoing assistance to the now 4.9 MW Shaffer Landfill in Billerica/Iron Horse Park Superfund solar PV project. Waste Site Cleanup staff also promoted green remediation elements into state-regulated cleanups through a regulatory considerations proposal and continued to plan multi-agency outreach and training efforts targeted at 500-plus Licensed Site Professionals. MassDEP Bureau of Waste Prevention staff worked extensively this quarter with DOER to plan the Clean Energy on Closed Landfills Workshop.

### **Clean Energy at Other MassDEP Regulated Sites**

Bureau of Resource Protection staff finalized “Siting Wind and Solar Projects in Public Water Supply Lands” Guidance to reflect language addressing Article 97 issues, and educated MassDEP staff to ensure consistent messaging when dealing with the public. Draft regulation changes were developed for a variety of program areas (including wetlands, coastal development, and solid waste landfills) that will simplify and streamline the siting of renewable energy projects. Ten wetlands, waterways, biomass, and biofuels projects were assisted by MassDEP staff.

### **Clean Energy Support Teams**

The “Digester Day” workshop (organized by MassDEP and U.S. EPA Region One), attended by representatives from industry, state and federal government, was held on May 8<sup>th</sup> to share current information on advancements in the technology. The workshop was a huge success. MassDEP Clean Energy Support Teams continued to assist dozens of projects in collaboration with DOER Green Communities staff. More than 10 Clean Energy Results Program handouts were drafted (to be shared with DOER for review). Information on the Clean Energy Results Program was presented by MassDEP staff at more than 10 venues this quarter with audiences of over 400 attendees.

### **Wind**

This quarter MassDEP drafted a “Summary of Comments” and “Summary of Response to Comments” for public input received in response to the Independent Wind Panel Report. Staff also coordinated with MassCEC to develop a protocol for acoustic survey of operating wind projects, including development of Frequently Asked Questions (FAQ) to be published with the Request for Proposals (RFP) early fall 2012. Technical assistance was provided to three communities to help interpret noise policy and applicable regulations.

## **DETAILED PROGRAM PROGRESS**

During this third reporting period, the Clean Energy Results Program continued to make significant progress towards meeting the clean energy and energy efficiency goals set by MassDEP and DOER in key program areas at the launch of the program (described below).

### **Clean Energy at Water and Wastewater Utilities**

This quarter, MassDEP continued its collaborative and innovative efforts with DOER and MassCEC to advance energy efficiency and clean energy development at drinking water and wastewater plants. Specifically, there was significant progress made in:

1. Working to launch a new, DOER-funded, Drinking Water and Wastewater Facility Energy Evaluation and Audit Program;
2. Evaluating anaerobic digestion potential at three large wastewater treatment facilities; and
3. Evaluating the potential statewide opportunities and technology applications for in-line (conduit) hydropower projects within Massachusetts water infrastructure.

#### **Launch of Municipal/District Drinking Water and Wastewater Facility Energy Evaluation Program**

In less than one month, MassDEP and DOER worked hand-in-hand to plan, develop and release a new competitive proposal from state qualified energy consultants to conduct water and wastewater facility energy evaluations (RFQQ-ENE-2012-015). Using \$230,000 of soon-to-expire federal funds from the American Recovery and Reinvestment Act of 2009 (ARRA) by the Energy Efficiency and Conservation Block Grant (EECBG) Program, MassDEP and DOER created a first-come, first-serve statewide opportunity for municipal plants to receive comprehensive facility auditing services, or a review of engineering plans for New Construction (NC), or upgrades to identify opportunities for increasing energy efficiency. As a result, 16 new comprehensive facility audits will be done by September, 2012, covering 10 drinking systems and six wastewater facilities. The comprehensive audits will include: a review of energy use and rates; an energy balance; pump system evaluations; process system evaluations; and cost/benefit analysis. Also, one facility, the Dartmouth Water Pollution Control Facility, will be using these new program services to conduct an independent energy evaluation of its planned \$10 million plant upgrade project. This new program filled an on-going need to provide financial assistance for conducting stand-alone, comprehensive energy evaluations and audits at drinking water and wastewater treatment plants.

#### **Evaluation of Anaerobic Digestion Potential at Three Large Wastewater Facilities**

During this reporting period, MassDEP stepped up its site-specific clean energy assistance services to three large wastewater treatment facilities: City of Brockton Advanced Water Reclamation Facility; City of New Bedford closed sanitary landfill and abandoned sludge incinerator; and Greater Lawrence Sanitary District (GLSD). MassDEP initiated and coordinated scoping meetings with the cities of Brockton and New Bedford to determine their interest in preparing a new anaerobic digestion study with MassCEC funding assistance. The City of Brockton will conduct a study to determine whether it is

technically and economically feasible to build a new anaerobic digestion system and accept source separated organics (SSO). The City of New Bedford will consider applying for MassCEC funding assistance to evaluate the potential introduction of source separated organics (SSO) with wastewater sludge to create energy production.

MassDEP also worked with leaders at the Greater Lawrence Sanitary District (GLSD), a facility which already utilizes digester biogas for sludge processing but does not produce electricity onsite, to undertake an anaerobic digestion study, with MassCEC funding assistance. This study will investigate an existing operational problem: the production of excess digester foam. In addition to exploring potential solutions to the foaming problem, the study will also evaluate the introduction of off-site SSO waste streams in to digester and the potential for other new electric onsite clean power generation.

### **Evaluating Opportunities and Technology Applications for In-Line (Conduit) Projects**

As part of MassDEP's on-going interagency partnership with MassCEC, a new scope of work was finalized this quarter for engaging a contractor to explore opportunities for in-line hydropower energy generation within the water infrastructure of Massachusetts. As a result of inter-agency efforts, MassCEC will provide \$60,000 to MassDEP to fund a qualified consultant to undertake this project. The results of this study will provide a survey of currently available technologies and their installation requirements and energy production capabilities. The final project report will help municipally-owned water and wastewater facilities to identify specific hydropower technologies that are currently available, and provide a screening tool that will allow water systems in the Commonwealth the ability to identify hydropower generation opportunities, energy savings and approximate payback time periods.

## **Anaerobic Digestion/Organics Diversion/Combined Heat and Power**

MassDEP continues to work closely with its state partners through the Massachusetts Organics Task Force and other forums to tackle regulatory and financial barriers to diverting source-separated organics and siting anaerobic digestion projects. During this reporting period, MassDEP continued its efforts to develop an organics collection infrastructure that could provide the necessary feedstock for energy production through anaerobic digestion.

### **Regulatory Streamlining**

The public comment period for MassDEP's package of draft regulation amendments closed on January 23, 2012. These changes will establish clear permit pathways for anaerobic digestion facilities, as well as facilities that recycle and compost material that has been separated from the solid waste stream. During this third reporting period, MassDEP continued to review the public comments and began drafting the final regulation package that will receive higher level review and is expected to be issued in final form during the fall of 2012. Significant legal and technical resources were put towards this effort this quarter.

### **Creation of Framework/Infrastructure for Increased Organics Diversion**

MassDEP continued to work towards implementation of key components of the Organics Action Plan that was developed last quarter (with assistance from the Organics Sub-Committee). MassDEP is using its Organics Subcommittee to assist in the development of the regulatory framework for implementing a ban on the disposal of organic materials in landfills and incinerators in Massachusetts.

MassDEP met with subcommittee members three times during the reporting period and plans on meeting monthly through fall 2012. The goal is to have a recommended regulatory framework and draft regulations ready for internal review by late fall. Topics discussed included defining components of the framework (size thresholds, etc.), stakeholder involvement, and scope of ban (material definition, generators covered, enforcement, etc.). Representatives from Connecticut DEP presented at the June 2012 meeting to talk about their efforts to increase food waste diversion. For more information, visit (May-July meetings): <http://www.mass.gov/dep/public/committee/swacorg.htm>.

As a first step in assessing the potential for organics diversion at state facilities, MassDEP and the Lead by Example Program surveyed state agencies on the volumes and current management practices of organic material at these facilities.

### **Financial Incentive Programs**

MassDEP completed the rollout of the low-interest Recycling Loan Fund Program that was established last quarter to provide additional financial assistance for organics collection and processing companies, (with a maximum loan amount to \$500,000). This quarter, the Recycling Works Program started providing technical assistance for food waste diversion to businesses and institutional entities with specific projects in the Devens and Worcester areas, but also individual company assistance. Prioritized

assistance was given to businesses and institutions who will need to comply with the organics waste disposal ban by 2014.

MassDEP issued its Sustainable Materials Recovery Program – Municipal Grant Application, which included a program targeting organics capacity. MassDEP is currently reviewing several organics capacity requests and a number of pilot organics collection projects. MassDEP anticipates announcing grant awards in early fall 2012.

### **Siting of Anaerobic Digestion**

During this reporting period, MassDEP also made progress advancing the siting of anaerobic digesters. As previously reported, MassDEP has been working with the Massachusetts Division of Capital Asset Management (DCAM) and other state partners (MassCEC, DOER, and the Massachusetts Department of Food and Agricultural) to select appropriate and suitable state land for potential siting of stand-alone anaerobic digesters. During this reporting period, MassDEP worked with DCAM to arrange meetings with facility managers to describe the benefits of the technology, what makes their sites suitable, and determine next steps. Successful outcomes of those meetings will be reported next quarter.

In addition, MassDEP staff worked to advance a number of other anaerobic digestion projects this reporting period, including at: three wastewater treatment plants (reported under Water and Wastewater Utilities Section); four farms (Barway, Barstow, Pine Island, and Jordan Dairy Farm); and at three other locations (Crapo Hill Landfill, Dartmouth; Hamilton; Lexington). Discussions were also held with various private firms interested in siting anaerobic digesters in Massachusetts.



## **Environmentally Challenged Property**

MassDEP continues to bolster its efforts to encourage new clean and efficient sources of energy at environmentally challenged property. During this reporting period, MassDEP provided technical assistance to 32 landfill, brownfield, and Superfund projects this quarter that (once operational) will have the potential for 46 megawatts of clean energy production.

### **Clean Energy at Closed Landfills and Contaminated Land**

Last quarter, MassDEP issued post-closure use permits for clean energy projects at landfills that brought the total MassDEP permitted projects to over 49 megawatts (close to the 50 megawatt goal set for environmentally challenged property under the program). During this reporting period, MassDEP assisted 21 landfill clean energy projects that, once operational, will have potential for 29 megawatts of clean energy production. Four previously permitted solar PV projects were under construction at closed landfills at the end of this quarter. One wind turbine and one solar PV project started generating power in June 2012. MassDEP also advanced 11 clean energy projects proposed on brownfields, federal Superfund sites, and other contaminated land that (once operational) will have potential for 17 megawatts of clean energy production.

### **Green Remediation**

MassDEP continues to evaluate the financial and technical feasibility of state-led “green remediation” at the Baird McGuire Superfund site in Holbrook. A study done last quarter made favorable recommendations for the implementation of solar PV to off-set costs and emissions associated with the energy-intensive groundwater pump-and-treat system at the site. MassDEP’s decision to move forward with use of solar photovoltaics (PV) depends on whether MassDEP continues operation of the current pump treatment system for an indefinite period of time (versus other proposed alternatives).

Significant steps were taken this quarter to promote the use of green remediation at state regulated contaminated sites. Amendments to the Massachusetts Contingency Plan (MCP) at 310 CMR 40.0191 (Response Action Performance Standard) and 310 CMR 40.0858 (Phase III evaluation of Comprehensive Remedial Alternatives) are under review that would promote consideration of sustainable investigative and remedial practices in the performance of response actions, including incorporation of renewable energy sources (aka Green Remediation).

### **Planning for Extensive, Targeted Outreach**

This quarter MassDEP continued its extensive outreach and training efforts with the Licensed Site Professional Association (LSPA). Specific focus of workshop and training opportunities will be on renewable energy siting opportunities and issues associated with contaminated land, as well as green remediation elements and implementation. MassDEP is also coordinating with EPA on these opportunities as they relate to its oversight role of Superfund cleanups. MassDEP worked extensively this reporting period with DOER to plan for the Clean Energy on Landfills Workshop in July 2012.

## **Clean Energy at Other MassDEP Regulated Sites**

MassDEP made substantial progress promoting clean energy and energy efficiency in several other key program areas during this reporting period.

### **Other Regulatory Revisions**

MassDEP is supporting clean energy development by making changes to its existing regulations and writing new regulations that reflect the agency's increasing experience with these types of projects. As part of the current regulatory reform effort, the following are examples of regulation changes that are being developed: The wetlands regulations (310 CMR 10.00) are being modified to create a new limited project status for renewable energy project installations that require access roads in wetlands resource areas, the three sets of regulations pertaining to the Chapter 91 Public Waterfront Act (310 CMR 9.00), Water Quality Certification regulations (314 CMR 9.00), and the Wetlands Protection Act regulations (310 CMR 10.00) are all being modified to contain improved mechanisms for reviewing/approving the piloting or testing of new energy technologies. MassDEP hopes to have proposed draft regulations for these changes out for public comment in the fall, and final regulations in place by the end of calendar year 2012.

### **Ocean Management Plan**

Since 2008, MassDEP has helped to establish the policy and regulatory framework for harnessing the potential of offshore energy development through its participation in interagency committees working on the Ocean Management Plan and its regulations. MassDEP is currently drafting changes to its own regulations (Wetlands Protection Act, Waterways and Water Quality Certification) to reflect the Ocean Management Plan. To support clean energy technology developers, these three sets of regulations will be revised to provide for a more straightforward permitting process for the testing of new water-dependent renewable energy technologies in areas subject to the Ocean Management Plan.

### **Water Supply Land/Wetlands/Waterways**

This quarter, MassDEP continued to review site specific proposals for installation of solar in Zone I areas (including Groveland and New Bedford) under the new "Siting Wind and Solar Projects in Public Water Supply Lands" Guidance. MassDEP also reviewed geothermal well applications for heating and cooling, and provided assistance to biomass and biofuel project proponents.

## Clean Energy Support Teams

### Technical Assistance

The Clean Energy Support Teams were very active this quarter providing project proponents and other parties with a range of MassDEP expertise on the environmental and regulatory aspects of siting clean energy projects. The Clean Energy Support Team leads are meeting monthly and share information on renewable energy projects and experiences in their region.

- The Southeast Region Team was involved in numerous pre-permitting and permitting meetings with project proponents of Solar PV at 12 different locations. Scoping meetings were held for anaerobic digestion projects at two wastewater treatment facilities and one landfill (as reported in previous sections).
- The Northeast Region Team was active in providing pre-permit application assistance to project proponents of Solar PV at 3 sites and anaerobic digestion at a landfill site (as reported in previous sections).
- The Western Region Team provided technical assistance and pre-permitting guidance to project proponents interested in biofuel, alternative fuel and anaerobic digestion (as reported in previous sections).
- The Central Region Team provided technical assistance to three landfill to gas projects as well as a Hydroelectric Power facility.

For more information on projects assisted, please see Appendix C: Detailed Program Activities.

### Outreach

CERP outreach continued to be robust this quarter with support teams distributing program information and materials at forums and other venues throughout the state. MassDEP presentations on the Clean Energy Results Program were provided to:

- Organics Subcommittee of MassDEP Solid Waste Advisory Committee (April 2, 2012)
- Licensed Site Professional (LSP) Education Committee, Board of Directors, Technical Practices Committee and Superfund Advisory Committee (April-May 2012)
- Energy Efficiency Advisory Council Workgroup Meeting (April 12, 2012)
- North Shore Technology Council (NSTC) (April 13, 2012)
- North Shore Technology Council (NSTC) Sustainability Forum (May 2, 2012)
- The Central Mass Business Environment Network (May 3, 2012)
- The Annual Living Green & Renewable Energy Fair, Salem, MA (May 2012)
- Metrowest/495 Partnership meeting (May 23, 2012)
- Vertex Engineering (June 14, 2012)
- MA Community Banks - Renewable Energy Lending 101 (June 25, 2012)

## **Outreach Materials**

MassDEP made significant steps in preparing educational outreach material to help the advancement of renewable energy projects and energy efficiency in the MassDEP regulated community. Some of the materials drafted this quarter include:

- A Guide to Understanding Common Questions about Solar Photovoltaic (PV) Systems
- Guidance for Siting Wind and Solar Projects on Public Water Supply Lands (amended to address Article 97 issues)
- Information summarizing the Mass Energy Insight program for use by drinking water and waste water facilities during sanitary surveys and inspections
- Energy efficiency promotional handout for permitting and inspection contacts to provide to facilities that have energy-consuming buildings and operations
- Frequently Asked Questions about Anaerobic Digestion
- Anaerobic digestion case studies for waste water treatment plants, farms, industrial and stand alone facilities
- Natural Heritage Requirements Fact Sheet for the July 2012 Renewables on Landfills Conference
- Incentives for Developing Solar Photovoltaics at Contaminated Lands in Massachusetts
- Using Positive Cash Flow to Achieve Energy-Saving Upgrades at Drinking Water and Wastewater Facilities

After review by DOER, these materials will be made available on the MassDEP CERP web site, which is steadily growing and serving as the central location for online information on MassDEP CERP goals, activities and services.

## **Potential Public Nuisance/Health Impacts from Wind Turbines**

During this reporting period, MassDEP continued to undertake several activities to address potential public nuisance and public health impacts from the siting of wind turbines.

### **Independent Expert Science Panel Report**

As previously reported, in January, 2012, the Independent Expert Science Panel (convened by MassDEP and the Massachusetts Department of Public Health (MDPH)) submitted its final report *Wind Turbines and Health Impacts* to the agencies. This 126-page report reflects the work of the seven member panel of medical and scientific experts who were asked to review the scientific literature and information submitted by the public and to prepare the report, which began in July 2011. Approximately 500 sets of comments and numerous reports and other information were submitted during the comment period covering: the panel's assessment methodology and report content; the panel's findings and conclusions; detailed comments on noise measurement, alternative best practices; and recommended next steps.

During this quarter, MassDEP drafted a "Summary of Comments" document, comprised of testimony from the three public meetings and written comments and materials submitted during the January to March 2012 comment period. This draft has been provided to MassDEP's Commissioner's Office for review. Subsequently, it will be shared with MDPH and the Independent Expert Panel for their feedback. MassDEP has also prepared a draft "Summary of Responses to Comments" and expects that to undergo internal agency review early fall 2012. When these documents are completed, they will be posted on MassDEP's web site.

### **Technical Assistance to Communities**

MassDEP continues to provide technical assistance to municipalities and other partners to help interpret the agency's noise policy and applicable regulations. During this quarter, MassDEP regional staff worked with the Town of Kingston to develop an intake log to track complaints related to local wind turbines. MassDEP released preliminary results of sound sampling at Falmouth wind turbines that showed night-time levels exceeding MassDEP regulations. Daytime sampling has not revealed any exceedences to date. MassDEP also responded to a request by the Fairhaven Board of Health letter requesting MassDEP perform a sound study related to the newly installed Fairhaven Wind LLC turbines.

### **MassCEC Research Study on Wind Turbine Acoustics**

During this reporting period, MassDEP continued to assist MassCEC in development of a scope and methodology for an acoustic monitoring study of operating turbines. This study will measure the level and quality of sound emissions from operating wind turbine projects in Massachusetts to increase data and information on the sound impact of wind turbines, taking into account the influence of different variables. The study will also provide a quantitative basis for testing and validating pre- and post-construction noise evaluation methodologies. A Technical Advisory Group (TAG) will be established for this effort in upcoming months.

## **PROGRAM DEVELOPMENT ACHIEVEMENTS**

During this third reporting period, MassDEP continued to expand its efforts under the Clean Energy Results Program. The high-level management team (consisting of senior officials from DOER, MassCEC, and MassDEP) continued to meet twice a month to ensure agency clean energy work across the three agencies is fully aligned.

### **Internal Cross-Agency Training**

A comprehensive capacity-building program (described in more detail in the last quarterly report) was implemented and completed this quarter to ensure designated agency clean energy staff has comprehensive, up-to-date expertise in the areas of clean energy and energy efficiency. Pursuant to the MassDEP and DOER Clean Energy Results Program MOA and funding agreement, this training program ensures MassDEP is fully aligned with DOER and MassCEC in communicating the Commonwealth's clean energy goals, policies, and programs to the public.

Five out of the six training sessions were held during this third reporting period, and the training program was completed. Evaluations from 100 participants (approximately one-third of those who attended) indicated that the trainings met or exceeded expectations. PowerPoint slides and the training videos were distributed to MassDEP, DOER, and MassCEC staff. Topic areas were identified by participants interested in future trainings (such as identifying opportunities to promote energy efficiency at MassDEP regulated sites).

### **Database**

MassDEP, DOER, and the Executive Office of Energy and Environmental Affairs Information Technology office advanced development of the new MassDEP-DOER Clean Energy Results Database this quarter. This new database will eliminate the need for more than three different databases and spreadsheets to track information from MassDEP and DOER agency programs. It will enable streamlined inter-agency sharing of information on activities and outcomes that will save significant staff resources (and paper/electronic resources) that were previously required to manage separate databases. It also ensures that information being tracked and communicated by MassDEP and DOER is consistent across programs and agencies.

During this reporting period, the Clean Energy Results Database was further developed and tested by future users at MassDEP and DOER. Roll-out of the database will happen in September 2012.

### **Mapping**

During this quarter, the newly formed DOER-MassDEP-MassCEC Geographic Information Systems (GIS) "subgroup" met to further explore the use of GIS as a spatial planning tool for siting of clean energy technology. The subgroup identified technologies to focus on over the upcoming year to further explore site selection drivers, existing GIS data, and other factors to determine whether using GIS as a spatial planning tool for this purpose would be useful. Updates were made to the 10-plus clean energy maps produced last quarter.



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