

CADMUS



PROPOSAL FOR SOLAR ENERGY CONSULTING SERVICES TO THE TOWN OF WILLIAMSBURG: COMMUNITY SOLAR DEVELOPMENT

January 9, 2018

Submitted to:
Walter Kim Boas, Energy Committee Chair
Charlene Nardi, Town Administrator
Town of Williamsburg, MA

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To: Walter Kim Boas

From: Meister Consultants Group, A Cadmus Company (MCG-Cadmus or Cadmus)

Date: January 3, 2018

Subject: Proposal for Small-Scale, Community Solar Development

Meister Consultants Group, a Cadmus Company (MCG-Cadmus or Cadmus) is pleased to submit this proposal to the Town of Williamsburg. Our proposal encompasses solar energy consulting services in support of the Town's effort to develop community solar on the Wood Waste -Town Transfer Station and the South Street Water Recharge Area. Cadmus is providing a quote, description of project approach, and our qualifications.

Cadmus is a leader in solar advisory services, with 15 years of hands-on, technical experience, including reviews of thousands of solar systems, and deep involvement in solar policies. Our unique perspective and respected expertise help our clients move solar projects forward and improve results by building solid business cases that reduce economic, environmental, contractual, and other risks.

We have supported numerous clients with site assessments, feasibility studies, financial modeling, financial pro forma analysis, and the legal review of leases, power purchase agreements, and procurement documents. Cadmus has advised well over 100 municipal entities across the Northeast with renewable energy procurement, energy management, and other clean energy technical assistance.

Our team offers a wide range of renewable energy expertise that allows us to help navigate the underlying political, technical, and legal contexts for renewable energy procurement and development. Cadmus's local presence, procurement expertise, and extensive knowledge of state incentive programs, gives the Town of Williamsburg a unique advantage in efficiently implementing this project.

As indicated in the Town's initial request, we are sending this cover letter and our proposal via email. Should you wish to discuss our proposal in further detail, please contact me at 617-209-1986, or chad.laurent@mc-group.com

We look forward to supporting the Town of Williamsburg in this important work.

Sincerely,



Chad Laurent, Principal

1. Quote

To give the Town’s project team flexibility to adjust the scope of work in response to project specifics and evolving needs, we propose to provide these services on an hourly basis with a not-to-exceed cap of \$12,500. Hourly rates appear in Table 1. A budget by task is provided in Table 2.

Table 1 - CADMUS Hourly Rates

Staff Title	Hourly Rate
Principal	\$290
Sr. Associate II	\$240
Sr. Associate I	\$210
Associate II	\$190
Associate I	\$175
Sr. Analyst II	\$165
Sr. Analyst I	\$155
Analyst II	\$135
Analyst I	\$115
Admin	\$70

Table 2 - Budget by Task

Item	Scope of Work (from Request for Quotes)	Price
(1)	Site Feasibility, Solar Design, and Economic Potential Study	\$3,700
(2)	RFP Development	\$3,100
(3)	Bid Review and Economic Analysis	\$2,700
(4)	Contract Negotiation	\$3,000
Total Price (sum of items 1 through 5)		\$12,500

The following assumptions were made in proposing this budget:

- Services will be provided on a time and materials basis, with a not-to-exceed cap of \$12,500.
- Cadmus’s level of effort on each task may change based on the Town’s direction and project specifics. For example, if the Town requests little assistance with a particular task, the budget can be reallocated to other activities within the overall scope of work where a higher level of effort is needed.
- Services outside the scope of tasks listed in this proposal can be provided on a time and materials basis outside of the cap. Cadmus will not proceed with out-of-scope tasks without written authorization from the Town.
- 2018 hourly rates are subject to annual escalations to accommodate raises, promotions, and cost of living increases for our staff.
- Direct costs (e.g., travel) are billed using federal GSA per diems as a guideline for cost reasonableness and cost limitation.

2. Qualifications

Cadmus's Massachusetts-based Renewable Energy Team has been in the renewable energy consulting business for more than 15 years. We have provided solar consulting services to more than 100 municipalities in the Northeast. Cadmus has worked extensively with municipal clients to design economically and technically feasible renewable energy projects—on municipal buildings, landfills, parking lots and other locations. We support cities and towns with a range of potentially complex and time-intensive processes, including: conceptual design; economic projections; site analyses; feasibility studies; preparation of bid documents; proposal evaluation; contract review and negotiations; PILOT negotiations and drafting; project oversight; and system design review and inspection.

As dedicated renewable energy industry experts, our team is at the forefront of relevant technical and policy issues. Specifically, we play an active role in guiding, evaluating, and implementing net metering, Massachusetts solar incentive programs, and low interest loan and rebate programs from government and utility agencies. We also routinely contribute to industry publications on new technology and installation practices.

Cadmus's renewable energy consulting services has four key advantages:

- **Extensive experience with public solar PV projects in Massachusetts.** We have provided technical assistance to more than 75 Massachusetts municipalities, and these projects varied in capacity, site type, technologies, and financial approach. For communities pursuing solar Energy Management Services contracts, we have drafted and evaluated solicitation documents, proposals, and contracts following the requirements of Massachusetts General Law Chapter 25A and Chapter 30B. Our interdisciplinary team understands the challenges of public renewable energy projects, and our experience helps our clients clear these hurdles.
- **We are an industry leader in evaluating community shared solar projects.** Cadmus contributes to numerous community solar efforts with the US Department of Energy (DOE) Solar Energy Technology Office, including developing curriculum for the Solar in Your Community Challenge, and administering the SolSmart Designation Program. Cadmus is a member of the National Community Solar Partnership¹ in collaboration with the U.S. Department of Energy, the Department of Housing and Urban Development (HUD), the Environmental Protection Agency (EPA), along with key representatives from solar companies, non-profit organizations, state and community leaders, and financial institutions. As part of DOE SunShot Initiative, the Massachusetts Department of Energy Resources hired Cadmus to develop a report on recommendations for Community Shared Solar in Massachusetts, as well as a series of implementation guidelines for Massachusetts communities.² This report serves as an industry road map to the local solar industry. Cadmus continues to work with municipalities at the local level, gauging CSS feasibility, and aiding in CSS procurement. Most

¹ MCG-Cadmus is a member of the Partnership as of July 29, 2015. See more details at:

<http://www.energy.gov/eere/solarpoweringamerica/national-community-solar-partnership>

² Beavers, David; McGuckin, James; Sweet, Erin. "Community Shared Solar: Review and Recommendations for

Massachusetts Models" <http://www.mass.gov/eea/docs/doer/renewables/solar/community-shared-solar-model-frameworks-032813.pdf>

recently, Cadmus has worked with the Town of Harvard, the City of Somerville, and the City of Newton on developing a CSS procurement pathway.

- **Hands-on and practical experience with Lease Agreements, PILOT agreements, and Power Purchase Agreements (PPAs).** Our team has reviewed and drafted dozens of Lease Agreements, PILOT Agreements, and PPAs. We are well-versed in providing recommendations for desirable contract terms and conditions based on current market conditions. We have assisted in negotiations, supported contract term evaluation and risk, drafted contract language, and ensured term language is consistent with industry trends and the public entity's best interest.
- **Careful monitoring of renewable energy policies, incentives, and markets in Massachusetts.** Cadmus's policy professionals track the shifting landscape of renewable energy and electricity policies, incentives, and markets, allowing us to anticipate project economics and identify the most advantageous pricing for our clients. We are heavily involved in Massachusetts solar policy through our work with the Massachusetts Department of Public Utilities and the Department of Energy Resources. For example, Cadmus serves as the System Administrator for the System of Assurance of Net Metering Edibility in Massachusetts. As the System Administrator, we communicate frequently with net metering incentive recipients, solar developers, and Massachusetts utilities including National Grid. Cadmus also served as an active participant in the Department of Energy Resource's SMART Policy Working Group which supported the development of the next generation of solar incentives in the Commonwealth.

We are well aware of the intricacies of solar PV projects that are of particular concern to both, communities and PV system developers, including the SMART program, Solar Renewable Energy Credits, interconnection, net metering, site impacts, developer default, and more. Our experience working with Massachusetts municipalities allows us to draft project solicitation documents, review vendors' proposals, and evaluate proposed EMS contracts with a focus both on technical and economic benefits, as well as the community's exposure to risk. We strive to help municipalities and local clean energy champions understand the relative risks and rewards of project proposals to support informed solar power purchasing decisions that meet their community's needs.

3. Project Approach

Our project approach is based on our experience supporting solar procurement in over 60 Massachusetts municipalities. As stated in our budget by task, we are able to reallocate task budgets should the Town's project team prefer additional resources dedicated to a specific task.

1. Site Feasibility, Solar Design, and Economic Potential Study

Along with an in-person kickoff meeting to discuss project goals and feasibility with Town officials, Cadmus will coordinate with Town staff and conduct a site visit to both project locations. Cadmus will conduct a shading analysis, desktop fatal flaw analysis, and feasibility study for the proposed sites. The analyses will focus on the usable footprint, site orientation, and possible obstructions. Environmental constraints, remediation factors, and other requirements will also be assessed at each site. Landfill post-closure permit and monitoring documentation will be reviewed as needed. Nearby wetlands and their impact on project development will be also be considered if applicable.

Leveraging these results and using a design tool called HelioScope, we will provide preliminary system designs using satellite images. This tool allows us to incorporate the shading analysis conducted, generating site-specific system capacity potential, and estimated annual production. Cadmus will evaluate ownership options, including participant and 3rd party-owned community solar, and discuss the findings with the Town to inform a procurement strategy.

For the Water / Sewer – South Street Water Recharge Area project development will be prioritized at Zone 1. Any preliminary site designs for Zone 2 will limit visual impact and this factor will be communicated to developers. The placement of construction and operating equipment (including transformers and inverters) will be considered during the initial site walk and secondary site walk with developers.

Deliverable: A brief report for each site analyzed, documenting solar PV potential, estimates of solar PV production, preliminary system design, challenges, and opportunities for project implementation, and potential next steps.

3. RFP Development

The Cadmus team will work with the Town to develop a procurement strategy. Through this process, Cadmus will support the Town develop and release of a Request for Proposals (RFP) or Request for Qualifications (RFQ). Procurement documents will be developed with input from the Town and based on MGL Ch. 25A guidelines to reflect appropriate terms relevant to public sector procurement, specific evaluation criteria, timelines, and pricing scenarios. Cadmus will support the Town in identifying and gathering the necessary in-house documentation to be provided in an RFP or RFQ.

The Request will focus on project approach, vendor experience, and financing capabilities, among other factors – while keeping in mind the current state of net metering and Federal incentives, specifically the ongoing solar trade case and the transition to the Solar Massachusetts Renewable Target (SMART) program. The Request will be published on COMMBUYS and the Central Register by the Town, and will be advertised with the Solar Energy Business Association of New England by Cadmus.

Cadmus will then coordinate, schedule, and participate in one pre-bid site visit meeting with the Town and potential bidders. During this conference, Cadmus will provide technical support, gather questions asked during and after the meeting, and suggest answers, as appropriate. In addition, Cadmus will assist with answering written questions received from potential bidders. Cadmus will provide guidance and offer draft language for the Town's response to bidder' questions.

Deliverable: A Draft RFP.

Deliverable: Responses to clarifying questions for developers.

4. Bid Review and Economic Analysis

Cadmus will use the evaluation criteria established in the RFP/RFQ to assist in the review, evaluation, and ranking of proposals submitted, and will report all findings to the Williamsburg Selection Committee. Cadmus will provide guidance to the Town's Selection Committee, as needed. In conjunction with the review of bids, Cadmus will develop clarifying and interview questions to pose to bidders. Cadmus will review answers provided to these clarifying questions. Lastly, Cadmus can participate in in-person interviews with potential developers to provide technical support. Cadmus assumes that there will be approximately four interviews.

Cadmus will evaluate the developer's financial and projected solar generation analysis to confirm the proposed financial savings and electricity generation calculations are reasonable given the proposed system design and technologies utilized. If warranted, Cadmus will coordinate with the selected developer to remedy any inaccuracies identified. Any necessary pre-construction regulatory requirements to be completed by the Town will be initiated and completed by Cadmus.

Deliverable: Bid Evaluation Summary and Economic Benefit Memo.

5. Contract Negotiations

Cadmus will advise in the negotiation, preparation, and award of a solar EMS agreement and associated documents, including land lease, PILOT agreement, or Power Purchase Agreement (PPA). Cadmus will review the developer's proposed document and identify language that may not be in the Town's best interests or inconsistent with current industry best practices. If the selected developer and the Town do not reach an agreement, the Cadmus team can provide continued contract negotiation services for any of the other developers evaluated in Task 4.

Deliverable: Provide redlined comments to contractual agreements.

4. Sample Qualifications

Solar Net Metering Credit Agreement Consulting

Client: Town of Andover, Massachusetts

The Town of Andover hired Meister Consultants Group, A Cadmus Company (MCG-Cadmus) to provide procurement guidance and evaluation for a solar net metering credit agreement request for proposals released by the Town. In addition, MCG-Cadmus reviewed the model contract/net metering credit agreements and multiple net metering credit agreement proposals from developers. MCG-Cadmus also analyzed the potential cost savings from developing a solar PV project on the Town's capped landfill. MCG-Cadmus met with local Town officials and the Town Selectmen to evaluate cost scenarios and solar net metering credit arrangements and cost saving potential. Based on MCG-Cadmus's recommendation, the Town selected a developer to supply up to 4.5 million kWh annually with the savings of over \$6 million.

Solar Net Metering Credit Agreement Consulting

Client: Oak Bluffs Water District, Massachusetts

The Oak Bluffs water district hired MCG-Cadmus to provide procurement guidance and evaluation for a solar PV project to be located on Water District property. The MCG-Cadmus team worked with Water District officials and other relevant parties to develop a procurement strategy process, conduct site assessments for technical and economic feasibility and managed the procurement process. The MCG-Cadmus team also facilitated negotiations between the developer, and the Water District of a Site Lease and Power Purchase Agreement.

Community Shared Solar Analysis and Program Design Options

Client: City of Cambridge, Massachusetts

As part of the U.S. Department of Energy's SunShot Initiative Rooftop Solar Challenge, MCG-Cadmus analyzed Community Shared Solar models for the City of Cambridge. This analysis included demographics, marketing, financing options, program design, and public procurement pathways. As a result of this study the City hopes to launch a Community Shared Solar initiative to its residents and businesses.

Merrimack Valley Regional Renewable Energy Manager

Client: Merrimack Valley Planning Commission, Massachusetts

MCG-Cadmus was selected by the Merrimack Valley Planning Commission to be the Regional Renewable Energy Manager for fifteen communities in the Merrimack Valley region of Massachusetts. In this role, MCG-Cadmus assists communities in identifying suitable sites for renewable energy installations, preparing procurement documentation for developers, evaluate proposals and monitor implementation. In addition, MCG-Cadmus is exploring the opportunity to organize a region-wide collaborative procurement of solar net metering credits, offering a substantial reduction in electricity costs for the participating Merrimack Valley communities.

Solar PV Procurement Services

Client: North Bennet Street School

NBSS hired MCG-Cadmus to support the procurement of a photovoltaic (PV) installation for its new academic campus in Boston. MCG-Cadmus provided technical expertise to NBSS staff throughout the project and served as a liaison between the school, PV installers, the utility, and city government. MCG-Cadmus developed an RFP to procure PV installation services, evaluated PV proposals from multiple developers, advised NBSS staff on PV grid connection and policy strategies, and reviewed PV procurement contracts. NBSS successfully procured a 38 kW solar PV system.

Solar PV Procurement Services

Client: City of Newton, Massachusetts

MCG-Cadmus has supported two procurements for the City of Newton. One was for a project on the City's landfill and the other for a mix of rooftop and carport/parking canopy structures at seven locations across the City. MCG-Cadmus worked with procurement staff to write and publish the RFPs, conducted site visits, evaluated bids, and worked with City legal staff to negotiate the land leases and power purchase agreements.

New Bedford Solar Energy Program

Client: City of New Bedford, New Bedford Economic Development Council

The City of New Bedford set a goal of becoming one of the leading solar cities in the Northeast by opening several city-owned landfill and brownfield sites to solar development. As part of the Mayor's sustainability initiative, MCG-Cadmus coordinated a multi-megawatt solar procurement for New Bedford's Energy Office. MCG-Cadmus provided solar surveys for both brownfield and building sites, a Massachusetts procurement pathways analysis, procurement document drafting, bid review services and power purchase agreement negotiations. The successful procurement attracted the interest of nine national and regional solar financing firms and resulted in the City signing long-term power contracts that meet the City's sustainability goals and reduce municipal energy bills.

Solar PV Owner's Agent Services

Client: Town of Boxford, Massachusetts

MCG-Cadmus worked with the Town of Boxford to procure a one megawatt, third-party owned solar system for the Town's closed landfill. MCG-Cadmus developed a consensus RFP based on Massachusetts law that integrated feedback from multiple stakeholder within the Town. After publishing the RFP, MCG-Cadmus supported the evaluation and contractor selection process by developing financial savings models and interviewing developer references. After selecting a bidder, MCG-Cadmus worked with the town to negotiate a final power purchase agreement.

Solar PV Owner's Agent Services

Client: Town of Norton, Massachusetts

MCG-Cadmus worked with the Town of Norton to procure a 1.5 megawatt, third-party owned solar system for the Town's closed landfill. MCG-Cadmus developed a consensus RFP based on Massachusetts law that integrated feedback from multiple stakeholder within the Town. After publishing the RFP, MCG-Cadmus supported the evaluation and contractor selection process by developing financial savings models and interviewing developer references. After selecting a bidder, MCG-Cadmus worked with the town to negotiate a final power purchase agreement.

Solar Net Metering Credit Procurement

Client: Town of Medway, Massachusetts

MCG-Cadmus provided drafting guidance for a solar net metering credit agreement request for proposals put out by the Town of Medway. In addition, MCG-Cadmus reviewed the model contract and reviewed a solar net metering credit agreement proposal from a solar developer. MCG-Cadmus also met with local Town officials and the Town Energy Committee to evaluate cost scenarios and solar net metering credit arrangements and cost saving potential.

Solar Boston I & II

Client: City of Boston

MCG-Cadmus coordinated Solar Boston, the City's solar partnership with the U.S. Department of Energy through the Solar America Cities Initiative. Under Solar Boston, MCG-Cadmus supported the City's efforts to align its clean energy permitting, zoning, and procurement processes with national best practices, and to facilitate the competitive procurement and installation of solar electric and solar thermal installations. MCG-Cadmus has served as the independent technical advisor (drafting RFPs, reviewing bids, and providing technical oversight, etc.) for the following projects:

- Boston Latin Academy 25 kW photovoltaic (PV) system: MCG-Cadmus wrote a grant to secure \$250,000 from the Massachusetts Technology Collaborative's (MTC) Community Choice Low Income program
- Franklin Roosevelt School 30 kW PV system: MCG-Cadmus worked with the City to secure MTC Community Energy Choice funds and coordinate funds from the U.S. Green Building Council
- Boston Water and Sewer Commission 240kW system: MCG-Cadmus coordinated federal technical assistance and worked with BWSC to navigate the new state solar renewable energy credit market
- Camp Harborview 18kW PV system: MCG-Cadmus helped select a vendor and oversaw the development of the system, which was funded by a corporate donor
- Dudley Village 8 kW system: MCG-Cadmus helped select a vendor and oversaw the development of the system on a City-funded affordable housing development. MCG-Cadmus facilitated and coordinated funding for the system, which was provided by a private corporate donor
- Boston Public Health Commission (BPHC) Solar water heating system: MCG-Cadmus secured a \$50,000 grant from the Massachusetts Department of Energy Resources to build a solar water heating systems on the BPHC's Long Island social services campus.

Solar Renewable Energy Credit Modelling

Client: Massachusetts Department of Energy Resources

The Massachusetts Department of Energy Resources (DOER) contracted MCG-Cadmus to build a system dynamics computer simulation model of DOER's solar renewable energy credit (SREC) program, part of the Massachusetts Renewable Portfolio Standard. Model results led DOER to make fundamental changes to the SREC program design, which were eventually written into the regulations DOER issued in January 2010.

Massachusetts Net Metering Task Force

Client: Massachusetts Department of Energy Resources

MCG-Cadmus supported the Massachusetts Net Metering Solar Task Force, providing technical and financial analysis services to DOER and the Task Force members. These services included profiling incentive policies in other states, modeling minimum bill and fixed charge financial scenarios for PV users in Massachusetts utility territories, developing policy recommendations related to net metering, and co-authoring the final report to the Legislature.

Massachusetts Solar Permitting Analysis and Case Studies

Client: Clean Energy States Alliance

MCG-Cadmus supported CESA and the DOER in assessing the permitting process of 25 municipalities in Massachusetts as part of the New England Solar Cost-Reduction Partnership (under the U.S. Department of Energy SunShot Initiative Rooftop Solar Challenge II). MCG-Cadmus evaluated each jurisdiction's permit fees, processes, and times associated with Solar PV permitting and compared them to past surveys and national best practices. MCG-Cadmus, CESA, and the DOER selected four case studies detailing the cost savings and best practices associated with those municipalities' permitting processes. The case studies highlight how the selected jurisdictions are part of a national movement through the Rooftop Solar Challenge II and SPARC SunShot Initiative designation programs for reducing solar soft costs and creating

solar friendly communities. MCG-Cadmus developed and designed case studies highlighting the permitting processes of the four selected jurisdictions (Boston, Northampton, Wellfleet, and Pittsfield). The project culminated in a Green Communities webinar that presented the findings of the analysis as well as the four case studies.

Green Communities Technical Consulting

Client: Massachusetts Department of Energy Resources

MCG-Cadmus provided technical assistance for the Commonwealth's Department of Energy Resources (DOER) to support renewable energy and energy efficiency planning in 26 Massachusetts cities and towns (including the City of Boston) as part of the Green Communities designation and Grant Program. MCG-Cadmus provided hands-on technical assistance to communities working to become Designated as Green Communities by adopting 5 criteria: 1) provide as-of-right siting for renewable/alternative energy generation; 2) adopt expedited permitting processes for as-of-right facilities; 3) establish an energy use baseline and develop a plan to reduce energy consumption by 20% within 5 years; 4) purchase only fuel-efficient vehicles; and 5) adopt the advanced energy efficiency building code appendix ("stretch code"). MCG-Cadmus assisted Communities in meeting the 5 criteria which included attending and presenting to City and Town official, Town Councils, Planning Boards and at Town Meetings. 14 of the communities MCG-Cadmus worked with (including Boston) have become Green Communities and as a result these communities have received over \$3.3 million in State grant funding.