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Proposal for Renewable Energy Planning Services

Response to the Buncombe County & City of Asheville, NC request for proposal

August 10, 2018

Prepared for:
Buncombe County Office of Sustainability

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Buncombe County Office of Sustainability
Attn: Mr. Jeremiah P. LeRoy
200 College Street, 4th Floor
Asheville, NC 28801
jeremiah.leroy@buncombecounty.org

Dear Mr. LeRoy,

On behalf of The Cadmus Group LLC (Cadmus), I am pleased to submit this proposal to Buncombe County. Cadmus is an employee-owned technical and strategic consultancy with 35 years of experience serving clients in the areas of energy, transportation, and environment. Cadmus leverages exceptional expertise across a staff of more than 600 scientific, engineering and policy professionals located in a dozen offices across the US. Cadmus is a leader in the development of stakeholder- and data-driven municipal energy planning efforts, and supports governments across the country and around the world in developing and analyzing next-generation energy policies and strategies to promote clean energy market development. Cadmus' expertise includes the capabilities of Meister Consultants Group, which was acquired in 2017 and is now a part of the Cadmus Group.

Cadmus' extensive experience with municipal governments and state agencies nationwide on renewable energy makes us uniquely suited to work within the regulatory policy and planning context of North Carolina and Buncombe County, and enable us to effectively respond to all five services for this RFP – (1) Energy Policy Analysis and Support; (2) Assessment and Identification of Renewable Energy and Energy Storage Opportunities; (3) Quantitative Assessment of Financial and Economic Impacts of any Developed Plans; (4) Development of Community Partnerships; and (5) Stakeholder Engagement. We bring a knowledge of national best practices and work with local officials and stakeholders to develop solutions tailored to their economic, political and social contexts. We are excited for the potential opportunity to support Buncombe County's development of a renewable energy plan and to help the County reach its ambitious renewable energy targets.

For this proposal, Cadmus is proud to partner with Jennifer Weiss, Senior Policy Associate in the Climate and Energy Program of the Duke University Nicholas Institute for Environmental Policy Solutions. Ms. Weiss has extensive experience in local energy and environmental policy, participating in regulatory proceedings, and engaging stakeholders in North Carolina, including Buncombe County and the City of Asheville. Through her expertise and guidance, Ms. Weiss will ensure that our recommendations regarding national best practices are fully reflective of the local context, and that we are conducting stakeholder outreach in a manner that is in line with the norms of the community.

I will serve as the primary point of contact for this proposal. Please feel free to contact me if you have any questions about this proposal, and thank you for your consideration. Please note we did not include a price proposal or budget as it was not specifically required in the RFP. We would be happy to submit a detailed price proposal and budget upon request.

Sincerely,

Chad Laurent

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SECTION 1 BASIC QUALIFICATIONS

The Cadmus Group LLC (Cadmus) is pleased to submit this response to Buncombe County's Request for Proposals (RFP) to provide renewable energy planning services in Buncombe County and develop a customized and achievable Renewable Energy Plan for the County and for its own operations.

Understanding of the Project

Buncombe County, North Carolina, has undertaken a significant step within the past year to improve its energy profile and carbon footprint by passing a resolution requiring the County to utilize 100 percent renewable energy for its operations by 2030, and 100 percent renewable energy for the entire county by 2042. Having completed this initial step towards increasing the County's utilization of renewable energy, the County seeks to formally establish a plan to achieve both targets. Specifically, the County requires that the plan provide them with an understanding of county-wide (including county and city government operations) energy use and related technical solutions, as well as the barriers, legal implications, and potential financial models that may be necessary or helpful in achieving renewable energy penetration. The County will need to ensure alignment among key stakeholders (e.g. policy makers, regulators, local businesses and residents) on the vision for the renewable energy plan, as well as produce a robust energy plan that considers best practices from around the country as well as the local context. These elements will allow Buncombe County to meet the needs of its constituents, and plan policy and capital budgets, and achieve its renewable energy targets.

Cadmus' Qualifications

The Cadmus Group LLC (Cadmus) is a multi-disciplinary consultancy committed to helping clients find innovative solutions that create social and economic value now and for future generations. Our firm has been on the forefront of local-level energy and climate planning in the US, providing municipal clients with a diverse range of expertise on clean energy and climate change planning, policy and strategy development, strategic communications, geospatial analysis, and stakeholder and community engagement. To date, Cadmus has worked with over one hundred local governments across the U.S. (including multiple jurisdictions in North Carolina) and provided clean energy technical assistance and training to over five thousand municipal staff and officials. We understand the evolving landscape of policies for local-level energy planning, and bring deep familiarity with best practices and emerging innovations from sustainability-leading cities in the U.S. and globally.

Cadmus has deep experience with each of the critical components of this project: local energy policy analysis and planning, identification of renewable energy and energy storage opportunities, quantitative assessment of financial and economic impacts of any developed plans, and stakeholder engagement and development of community partnerships. Cadmus seeks to utilize this expertise in its support of Buncombe County and the City of Asheville. Our experience in each of these areas is detailed below, and specific project descriptions are included in the Examples of Work section of the proposal.

In terms of regional experience, Cadmus is working to conduct a critical infrastructure solar PV and resiliency feasibility study for the North Carolina National Guard, and a rest area solar PV and EV charging station feasibility study for the North Carolina Department of Transportation. Cadmus has also provided one-on-one technical assistance to more than a dozen rural electric cooperatives, a number of which are located in North Carolina or southern Appalachia, to develop residential energy efficiency programs that expand access to affordable energy. Through the SolSmart Designation program, Cadmus staff recently delivered a first responder safety and solar PV traning in Asheville, and our technical assistance team has supported Asheville, Orange County, and Carrboro in achieving designation. In addition, Cadmus often

coordinates with a local partner on our community-level energy planning work to ensure that we are conducting stakeholder outreach in a manner that is in line with the norms of the community, that we are attentive to the unique needs and preferences of the community we are working with, and that our recommendations regarding national best practices are fully reflective of local context. Cadmus has staff located in Buncombe county, and for this project, Cadmus will partner with Jennifer Weiss, Senior Policy Associate in the Climate and Energy Program of the Duke University Nicholas Institute for Environmental Policy Solutions. Ms. Weiss has extensive knowledge of North Carolina and Buncombe County energy policy and context, and is also experienced in the regulatory process and stakeholder engagement. Ms. Weiss will assume an advisory role to Cadmus for this project and specifically will support us in the following ways: advising on the development of a stakeholder engagement plan, and attending and supporting key stakeholder events; and reviewing and providing input on all deliverables, with a focus on ensuring the deliverables are appropriate for the North Carolina and Buncombe County context. Ms. Weiss' full qualifications are included in the Staff Qualifications section of the proposal.

1. Local Energy Analysis and Planning:

Cadmus has developed nationally recognized expertise and thought leadership in the evaluation of renewable energy policy, strategy, and procurement, and combines this strong technical expertise with proven engagement techniques to develop comprehensive policies, programs, and strategies. Cadmus provides clients with expert knowledge on national trends and best practices in clean energy development, which are tailored to the relevant local context. Our work demonstrates an interdisciplinary approach to energy planning at the local level that combines program and policy design, stakeholder and community engagement cost-benefit and economic impact assessments, energy procurement, and implementation support.

Cadmus' approach to local renewable planning is documented in our *Pathways to 100*[1] report that orients cities to assessing their energy policy landscape, and provides a set of policy options and recommendations that are tailored to each city's individual context. Cadmus has put this approach into practice in its work with King County, Washington, where we developed a renewable energy transition plan and identify pathways for the county to meet its goal of 90% renewable electricity community-wide by 2030, and with the City of Bloomfield, Iowa, where we are currently supporting the City's community planning process to achieve 100% energy independence by 2030. In addition, Cadmus worked with a group of 8 cities and counties in Virginia to develop a collective renewable energy action plans based on the Pathways to 100 framework. From a more regulatory perspective, Cadmus has supported clients such as the California Energy Commission, New York State Energy Research and Development Authority (NYSERDA), the Hawaiian Electric Company, the Massachusetts Department of Energy Resources, and the World Bank in the design and implementation of renewable energy development programs. Moreover, Cadmus is frequently called on by networks of cities such as the Urban Sustainability Directors Network, Carbon Neutral Cities Alliance, and Innovation Network for Communities, and foundations to provide best practices guidance on several municipal energy policy and strategy topics related to renewable energy.

2. Renewable Energy Resource Potential

Cadmus has developed experience in identifying renewable energy and energy storage opportunities at the municipal level. We have conducted quantitative geographic analyses of solar PV site feasibility for regions throughout the US, with developed models for states including Washington, Oregon, Idaho, Montana, Colorado and Washington DC. These GIS based analyses draw from physical land cover datasets,

[1] http://www.mc-group.com/wp-content/uploads/2017/08/MCG_Innovations-in-City-Clean-Energy-and-Equity-Planning.pdf

tax and property parcel maps, and utility incentive regions to locate optimal siting zones for development of small-scale community shared solar projects in terms of practicality and cost-effectiveness. Additionally, we have assessed and mapped the total renewable energy potential for the Merrimack Valley Planning Commission, and for Contra Costa County. These analyses included a parcel-level technical and economic resource assessment of solar, wind, biomass, and biogas opportunities, and calculation of subtotals for each major zoning category and other specific locations. We also included an opportunities and constraints analysis to assess the desirability of developing each type of renewable in specific locations, and conducted a zoning review to identify and reduce project development barriers. In addition, Cadmus has organized numerous region-wide collaborative procurements for solar PV, solar hot water, air source heat pumps, and electric vehicles, to offer a substantial reduction in costs for the participating communities.

3. Scenario-Based Energy Modelling (Quantitative assessment of financial and economic impacts of any developed RE plans)

Cadmus regularly supports its community-level planning exercises with custom quantitative models and tools that are used to assess the financial and economic impacts of programs and policies of interest. Cadmus staff have developed models of state and regional power mixes for public and private sector clients in Virginia, Iowa, and Washington State, as well as energy efficiency and renewable energy cost-benefit and rate impact models for dozens of utility and government clients nationwide and internationally, including several in North Carolina. These tools are used to inform planning and tracking of new energy policies and programs. Cadmus' in-house models assess the energy and financial implications of a range of energy programs, and the Team's quantitative analysts are experienced in building customizable tools that fit the unique needs of its clients.

4. Stakeholder Engagement and Development of Community Partnerships

The staff proposed for this project include a team of trained mediators and facilitators. Our team combines content expertise with comprehensive stakeholder engagement services to collaboratively gather input and develop strategies, policies, and programs. Cadmus has used its Impact-Oriented Dialogue process, an approach that combines content expertise with facilitation services to help move a group from vision to action while ensuring all key voices are represented in the process, to support dozens of US communities in identifying and acting towards their collective goals. This is especially true of the Team's work on local energy planning processes. The Team's approach to these processes centers on collaboration with energy and environmental stakeholders, local energy utilities, government staff, and interested citizens.

Cadmus' prior work in local renewable energy planning in Washington State and Iowa have been accompanied by robust engagement of key stakeholders, including local utilities that would be impacted by any resulting programs. Cadmus is also currently conducting structured stakeholder outreach across each community in the state of Hawaii, engaging citizens and key stakeholders (including the state's utilities) in a two-year effort to evaluate policy and regulatory options for the state's utility business model. Cadmus is also currently working with eight Midwestern cities (through the Urban Sustainability Directors Network) on increasing electric vehicle deployment, and is successfully facilitating workshops with policy, utility, industry, advocacy, philanthropic, and equity-focused stakeholders. As mentioned above, Cadmus also frequently works with a local partner for stakeholder engagement and community outreach projects to ensure that we properly understand and incorporate the local context in our work.

By leveraging this depth and breadth of expertise, the Project Team will enable Buncombe County to better assess the technical, economic, and policy barriers related to increasing the market share of renewable energy.

SECTION 2 STAFF QUALIFICATIONS

The staff proposed for this project are outlined in the table and are followed by brief biographies and for core team members below. Full CVs are included in Appendix A, and references for the core team members are included in Appendix B.

Table 1. Summary of Core Project Team and Roles

Team Member	Title and Organization	Project Role / Expertise	Leading Tasks	Supporting Tasks
Chad Laurent	Principal, Cadmus	Project Principal, Oversight & Quality Assurance		1, 2, 3, 4, 5 ,6
Paul Faeth	Principal, Cadmus	Strategic Advisor, Best Practices Reviewer	4, 5	2, 3, 6
Kalee Whitehouse	Senior Analyst, Cadmus	Project Manager, Energy Program and Policy Analyst	1, 2, 3, 4, 5 ,6	
Ryan Cook	Senior Associate, Cadmus	Deputy Project Manager, Energy Modeling & Analysis Lead, Local Government Energy Planning Expert	3, 6	1, 2, 4, 5
Julie Curti	Associate, Cadmus	Stakeholder Engagement and Facilitation Lead	2	6
Jennifer Weiss	Senior Policy Associate, Duke University	Local Policy Expert and Stakeholder Engagement Partner		1, 2, 3, 4, 5 ,6

Table 2. Summary of Supporting Project Team and Roles

Team Member	Title and Organization	Project Role / Expertise	Leading Tasks	Supporting Tasks
Tyler Orcutt	Senior Analyst, Cadmus	Energy Program and Policy Analyst		3, 4, 5
Graham Stevens	Specialist, Cadmus	Energy Modeling Analyst		4, 5
Arielle Magliulo	Fellow, Cadmus	Energy Program and Policy Analyst		1, 2, 3, 4, 5 ,6

3.1 Core Staff Overview

Chad Laurent (Principal) Mr. Laurent specializes in renewable energy law, policy, and project development and works from Cadmus' Boston office. On this project, Mr. Laurent will serve as Project Principal and will be responsible for oversight and quality assurance. Mr. Laurent leads the firm's clean energy market development practice. He is a nationally recognized expert in renewable energy market development strategies. Since 2010 he has overseen multiple US Department of Energy SunShot Initiative projects on behalf of Cadmus, is currently working with the EPA Green Power Partnership Program, and has worked on developing renewable energy procurement strategies for clients since 2003. He frequently works with corporate, university, non-profit, and municipal clients to develop renewable energy supply, and

procurement strategies. Mr. Laurent has developed renewable energy policies, and power purchase agreement toolkits and procurement policies both in the US and internationally, and is an on-call legal and policy expert for the Clean Energy Solutions Center. He recently supported Vietnam with their first solar net metering policy, and is the lead author for the Pathways to 100, and Pathways to EV (forthcoming) reports. He holds a Juris Doctor from Suffolk University Law School where he was a Rappaport Honors Fellow in Law and Public Policy (in collaboration with the Rappaport Institute at Harvard University), and a B.S. from the University of Michigan. He is a professionally trained mediator, facilitator, and is admitted to the Massachusetts Bar.

Paul Faeth (Principal) Mr. Faeth works on issues related to energy, water, and climate change, domestically and internationally from Cadmus' North Carolina Satellite Office. Mr. Faeth has over 35 years of experience in environmental research, economic and policy analysis, and outreach, particularly in developing innovative policies that promote sustainable energy development and water resource use. A recent example of his work includes solar PV feasibility studies in North Carolina. Prior to joining Cadmus, Mr. Faeth was director for Energy, Water, and Climate for CNA's Institute for Public Research, where he managed a program that explored the policy synergies among these themes. Before joining CNA, Mr. Faeth was president of Global Water Challenge, a coalition of 24 stakeholders including corporations, nongovernmental organizations, foundations, universities, and health agencies working together to promote and invest in safe drinking water and sanitation for the poor in developing countries. Mr. Faeth worked for 18 years at the World Resources Institute (WRI), the world's top-rated environmental think tank, where he led the Institute's Economics Program and then became its executive vice president and managing director, leading programs, strategic development, and operations. Mr. Faeth's policy research at WRI included topics such as water quality, agriculture, climate change, and trade. He also worked at the International Institute for Environment and Development, where he put together the world's first carbon offset project between a coal-fired power plant in Connecticut and an agroforestry program in Guatemala, and the Economic Research Service of the U.S. Department of Agriculture, where he was an economic policy modeling specialist. Mr. Faeth has a Master's in Engineering from Dartmouth College, and an B.S. from the University of Florida.

Kalee Whitehouse (Senior Analyst) Ms. Whitehouse works from Cadmus' Boston office will serve as the Project Manager for this project, and has experience in renewable energy, climate mitigation policies and strategic planning. Ms. Whitehouse has supported the U.S. DOE SunShot Initiative's SolSmart program by providing one-on-one technical assistance to municipal governments to fulfill designation criteria in the areas of zoning, permitting and community engagement. Through this program and the NY Sun PV Trainers Network, Ms. Whitehouse has presented to local governments, and regional non-profits on local solar policy and solar PV soft costs. She also supports research projects on energy efficiency and resiliency in the commercial building sector and has supported content development for workshops and study tours focused on renewable energy and climate. Previously, she worked in corporate sustainability at Cone Communications helping to identify potential nonprofit partnerships that would support CSR strategies around clean water. Ms. Whitehouse also held a fellowship with The Nature Conservancy of MA, supporting policy research on green infrastructure and stormwater management. Ms. Whitehouse received her MBA and MPP in 2015 from the Heller School at Brandeis University. With a focus in social entrepreneurship and impact management—her studies focused on strategic planning, financial analysis and evaluating the environmental implications for federal and state policies. She holds a B.A. from the University of Vermont.

Ryan Cook (Senior Associate) Mr. Cook works from Cadmus' the Portland Oregon office and will use his extensive experience in policies enabling local energy transitions, with a focus on supporting decision-

makers, to serve as deputy project manager and expert on energy modelling and municipal energy planning. He uses with a combination of energy policy expertise and critical quantitative tools and methodologies. Mr. Cook specializes in public policy planning processes that blend intensive stakeholder engagement and input, qualitative policy research of opportunities and barriers, and robust quantitative analysis of potential outcomes. He has developed local government energy plans with communities as large as King County, Washington (population 2.1 million), and as small as the town of Benham, Kentucky (population 500) and City of Bloomfield, Iowa (population 2,400), and he has expertise in areas that include state and local energy policy, energy efficiency impact analysis and cost-benefit analysis, municipal energy procurement, and community-based energy outreach and engagement programs. Mr. Cook's utility consulting work has included clients in North Carolina, Tennessee, Kentucky and Arkansas, and he has worked closely with regional planning agencies in Missouri and Indiana. In addition to his work with Cadmus, he has held positions with the San Francisco Public Utilities Commission and the White House Council on Environmental Quality. Ryan holds a Master in City Planning Degree from the Massachusetts Institute of Technology and a B.A. from Reed College.

Julie Curti (Associate) Ms. Curti works from Cadmus' Boston office on stakeholder engagement and clean energy strategy, policy and planning in the public and non-profit sectors, and will lead the stakeholder engagement process for this project. Ms. Curti has facilitated stakeholder working groups, including an effort in Massachusetts to develop policy solutions that increase access to clean and efficient energy for low- and moderate-income residents. She also co-facilitated a dialogue for public sector leaders in the City of Cambridge, MA, to develop a long-term renewable electricity supply strategy. Ms. Curti supported strategic planning for the City of San Francisco's Environment Department, helping the department's staff and stakeholders define their goals, strategies, and actions in clean energy, energy efficiency, zero waste, and other priority areas. Prior to joining Cadmus, Ms. Curti worked on MIT's New England Climate Adaptation Project, researching how to build readiness for climate change at the local level and organizing interactive public workshops in coastal communities to help initiate climate adaptation planning. Ms. Curti also served as the Associate Director of the UDSA's Partnership Center in Washington, DC. She provided technical assistance to community organizations to increase participation in food security programs for low-income individuals and families. She is a certified mediator and holds a Master in City Planning Degree from the Massachusetts Institute of Technology, and B.A. from the University of Wisconsin.

Jennifer Weiss (Senior Policy Associate) At Duke University as a senior policy associate in the Climate and Energy Program of the Nicholas Institute, Ms. Weiss engages relevant decision makers in the private and public energy sectors, provides information and research on a variety of intersecting renewable energy investment and conservation practices, conducts market research, explores financing mechanisms for renewable energy, and analyzes the impact of new energy policies, mandates, and programs on new and existing energy projects. Ms. Weiss will be a subcontractor-advisor for local context and issues, as much of her work experience and relevant knowledge are specific to North Carolina, including Buncombe County and the City of Asheville. In her position at Duke, she participated in the North Carolina Leadership Forum, where she provided local stakeholders with information about North Carolina's current and future energy needs. She is also a Member of Asheville/Buncombe County Energy Innovation Task Force Programs Working Group, where she participated as a North Carolina EE regulatory and policy expert to advise and educate the EITF group on Duke Energy's energy efficiency programs. Moreover, Ms. Weiss is a founding member and co-lead for multiple North Carolina Energy Efficiency Working Groups and collaborations including NC On-Bill Working Group, Multifamily EE working group, and the EE Policy Stakeholder group.

Prior to her work at Duke University, Ms. Weiss was an energy efficiency policy manager for the Southern Alliance for Clean Energy, a senior finance analyst for the Environmental Finance Center at the University of North Carolina at Chapel Hill, a carbon offset analyst for the Duke Carbon Offset Initiative at Duke University, and a Climate Corps Public Sector Fellow at the Environmental Defense Fund. Ms. Weiss holds a master's degree in environmental management from Duke University's Nicholas School of the Environment, a master's degree in business administration from the University of Michigan, and a bachelor's degree from the University of California at San Diego.

SECTION 3 PROJECT APPROACH

The following section describes the Cadmus team's approach to accomplishing the tasks laid out by Buncombe County in its RFP. The Project Team will focus on lessons learned and best practices from prior policy efforts both nationally and internationally, including key economic and non-energy tradeoffs that different policy pathways hold for the County, its residents, utilities, and other stakeholders.

TASK 1 SCOPING, & COMMUNITY ADVISORY INTAKE

Subtask 1.1 Project Scoping Meeting

At the outset of the project, the team will first conduct a scoping call with Buncombe County and the City of Asheville to further hone the scope of the project together and to better understand the Department's vision, objectives, and constraints. The scoping call will include the County's preferences on key aspects of the project, such as the process for community feedback (described below), as well as the core components of the benchmarking tool (described in Task 3). In addition, the Project Team will discuss logistical items such as project schedule, the timing of regular check-ins, and the degree of stakeholder participation desired by the County in this project. The Project Team will provide a summary memo following the meeting to capture key takeaways.

Subtask 1.2 Initial Research

Second, the team will undertake preliminary background research on the current energy context in Buncombe County. This will involve collecting data on past and active programs, energy consumption and supply, and information on pending programs/initiative to inform the benchmarking process.

Subtask 1.3 Initial Stakeholder Outreach

Third, per the County's guidance, the Project Team will set up a feedback process (suggested as a Community Advisory Group). The Project Team will work with the County to determine the best way to gain local feedback as part of the scoping call. One option discussed in the proposal for illustrative purposes is working with the County to identify a Community Advisory Group, or a small group (3-5) of key stakeholders who would provide input on core deliverables. Note that a broader group of stakeholders can still be invited to participate in stakeholder meetings. The scoping call will allow for the Project Team to understand the County's preferences around engaging which stakeholders and in what manner. For instance, the County may prefer to engage its own councilors on the Community Advisory Group or separately through additional interviews. The Project Team will adapt the engagement model per the initial scoping discussion with the County.

As part of this initial outreach, the Project Team will conduct individual "intake interviews" with each selected key stakeholder or advisory group member. The intake interviews will focus on understanding

directly from key stakeholders what their priorities, concerns, and preferences are for renewable energy implementation. The individualized nature of the interviews will allow for insights to be shared that might not otherwise be discussed at a meeting with additional stakeholders. These conversations can serve to build initial stakeholder support as well as demonstrate inclusion by inviting stakeholders to interview who may not be strong supporters of the renewable energy plan. It can allow stakeholders to air their concerns in a format that will not detract from a larger group discussion. Overall, the intake interviews will inform the development of the kickoff event or first community meeting.

After completing the above steps, Cadmus will provide the County with an inception memo to document the primary objectives of the scoping call and community advisory group intake interviews.

Task 1 Deliverables:

- Initial kick-off call with City
- Invitations to Advisory Group members
- Initial in-take interviews with Advisory Group members
- Inception memo

TASK 2 COMMUNITY LAUNCH & VISIONING

Following this initial preparatory research, the team will publicly launch the project with a pair of workshops held in Buncombe County. The first session will be an internal discussion between the Project Team, County representatives, and the stakeholder advisory committee, and the second will be a public meeting open to all interested community members and stakeholders.

Subtask 2.1 Small Group Meeting

In this first session, the Project Team will meet with Buncombe County and the City of Asheville, and selected stakeholders (potentially Community Advisory Group and others). This meeting would involve reviewing the agenda for the broader stakeholder meeting and to solicit detailed feedback from the County and City on discussion topics in advance of the larger meeting. The small group would discuss topics likely to be raised by attendees at the broader meeting and strategize as to how to frame the conversation most productively. Holding this meeting in advance of the public workshop will allow the Project Team to review material with the advisory group before making a full public presentation, and will allow for a more detailed discussion as a small group.

Subtask 2.2 Launch Meeting with Invited Stakeholders

Later in the day (likely in the evening to allow for greater community attendance), the County, City, and Project Team would hold an launch meeting with invited stakeholders and with the Buncombe County and City of Asheville staff and Community Advisory Group.[2] This professionally-facilitated workshop will seek to identify different community perspectives on municipal energy goals and priority, and to discuss the community's specific needs, challenges, and goals for the project. Holding this stakeholder meeting at the outset of the project will ensure the team can best align tasks with goals. Discussion questions and

[2] It is anticipated that Buncombe County will work closely with the Team to identify and invite relevant stakeholders to participate in the kickoff meeting. In addition, the Project Team will rely on the County to provide meeting space, A/V equipment, coffee and snacks, and other relevant expenses associated with the stakeholder meeting.

presentation topics will be developed with the Buncombe County and the City of Asheville in advance of the meeting.

Visioning. At the stakeholder workshop, a group visioning exercise will guide the process for establishing a community-wide vision for achieving the County's Renewable Energy Targets. Preliminarily, discussion topics will include:

- **Priorities: What are the group's key drivers and priorities for renewable energy implementation?**
  Communities are motivated to transition to 100 percent renewable energy utilization for a variety of reasons. Identifying which one or more of these are key drivers is a critical step in determining the most effective path for implementation of renewable energy for the community. For instance, a few potential priorities may include reducing energy costs, reducing GHG emissions, and strengthening local economic development.
- **Collective Vision of Success: What tangible changes would be evident in our community if the County were successful in achieving its 100 percent renewable energy goals?**
  This might include increased financial strength (e.g. average reduction in energy bills for households and businesses), greater resilience (fewer power outages during storms), and economic or other co-benefits (local energy jobs).
- **Obstacles: What have been obstacles to implantation of renewable energy thus far? What would mitigate these obstacles?**
  This may include policy constraints, stakeholder opposition, or other challenges. Clarifying these upfront allows the community and Project Team to learn from past pitfalls and focus efforts on moving forward.

Following this round of stakeholder engagement, the Project Team will prepare a memo that discusses and summarizes the topics discussed in these meetings, and will use these outputs to inform later tasks.

Task 2 Deliverables:

- Small group meeting with County and Advisory Committee
- Open community visioning meeting
- Meeting summary memo

TASK 3 POLICY & STRATEGY OPTIONS

Subtask 3.1 Compilation of Policy Options

Based on the initial community visioning workshop with Buncombe County and the City of Asheville, as well as Cadmus' prior work with municipal governments nationwide, the Project Team will compile a **list of strategy options** that were either directly identified by County and City staff and other relevant stakeholders or are based on best practices that could align with the County's goals.

Based on its *Pathways to 100* report and prior local energy planning projects, Cadmus has developed a preliminary list of more than two dozen actions that may be included in such a roster of potential policy actions across multiple technologies. Cadmus will revise this list based on stakeholder feedback and the County and City's interests to develop a custom set of policy options for evaluation in this effort. In addition, as one of the key partners in the U.S. Department of Energy SolSmart Designation Program (and having previously worked on numerous SunShot Initiative projects since 2010), Cadmus is involved in the latest research and actions available to local governments looking to promote solar PV.

Subtask 3.2 Barriers and Opportunities Assessment

For each policy or program option of interest, the team will conduct desk research to evaluate relevant barriers and opportunities, consulting regional installation databases, integrated resource plans, and other independent studies where available. Considerations for the barriers and opportunities research may include the type and scale of each action and strategy, and county cost-effectiveness and general effectiveness (low to high) and feasibility of the policy options. We may also consider scenarios such as base and aggressive local government action scenarios, a voluntary action scenario, a carbon price scenario, and a 100 percent clean energy scenario. This work will be done in consultation with the project advisory group to provide additional insights related to key barriers, potential existing gaps, and opportunities for continued renewable energy penetration. The Project Team will coordinate with the County to conduct any necessary outreach to key stakeholders, and will utilize the deep local knowledge of its project partner Jennifer Weiss (and other local stakeholders as identified by the County) to ensure that local policy issues are fully reflected in the assessment of barriers and opportunities.

Subtask 3.3 Policy and Strategy Analysis Matrix

Additionally, the Project Team will build a policy and strategy analysis matrix which will be used to assess the strength of each option against several criteria. In past similar projects, such criteria have included local impact, feasibility, cost to city, overall cost, and equity considerations. The specific criteria used to evaluate strategies will be tailored based on the community workshop. The matrix will help consolidate information on which strategies align with the community's goals.

Task 3 Deliverables:

- Analysis matrix and summary of research findings on potential pathways well-suited for Buncombe County
- Interviews with additional stakeholders as needed

TASK 4 IMPACT ASSESSMENT

In Task 4, the Project Team will identify the likely energy and financial impacts of a set of programs of interest to the County by developing a dual baseline of projected power mixes in Buncombe County and the City of Asheville, as well as a range of scenarios that reflect high concentrations of renewable energy and their associated costs. The outputs from the Task 3 Barriers and Opportunities analysis will be useful as inputs in this work.

Subtask 4.1 Develop Baseline Power Mix Projection and Model

The Project Team would first conduct research on the City and County's current mix of electric power sources and will develop a baseline projection of how the County's electricity mix is expected to change over time based on planned generating plant closures and additions, the North Carolina Renewable Energy and Energy Efficiency Portfolio Standard, and other relevant requirements. This baseline projection would purposefully make minimal departures from these published plans, and would demonstrate the County's current and expected future power mix in the absence of additional state or local policy action.

Cadmus, in conjunction with Buncombe County, would seek to engage utilities in this process to ensure that baseline projected power mixes are reasonable and appropriate.

Subtask 4.2 Develop High-Renewable Energy Power Mix Projections

Based on Task 3 Analysis, the Project Team would then work with the County, City, and advisory group to select a range of policy options for further quantitative assessment. The project team expects to bundle these selected policy options into one or several packages could demonstrate different policy approach (for example, a scenario that emphasizes in-county generation and one that emphasizes partnership with utilities to expand renewable energy purchasing programs). Cadmus expects to develop up to four distinct policy modelling scenarios in collaboration with the County and City.

For each scenario, the Project Team will draw upon Task 3 outputs, a review of available literature and prior programs, and original analysis to identify the expected impact that a given policy could have on the energy mix of city and county operations as well as the county-wide energy mix. In addition, Cadmus would provide estimates of the costs of each selected policy option to the County, as well as an estimate of local county economic impacts. Cadmus will also discuss the potential impacts of various policy options on power prices.

Cadmus would then develop a wedge analysis which displayed the results of this energy impact assessment and which discussed the contribution that each specific action within a policy scenario would have in bringing Buncombe County and Asheville towards their renewable energy goals. Cadmus would then provide an analysis memo which discussed the results of this analysis, and which characterizes the expected energy, financial, and economic impacts of each policy and scenario.

Task 4 Deliverables:

- Analysis memo summarizing (1) Buncombe County's current energy mix and expected baseline power mix forecast, (2) policy actions and scenarios selected for quantitative impact assessment, (3) expected energy, financial, and economic impacts of various policy actions and scenarios, and (4) wedge analysis demonstrating progress towards 100% renewable energy goal of each policy scenario.

TASK 5 SITE IDENTIFICATION FOR RENEWABLE ENERGY AND ENERGY STORAGE

Task 5 consists of identifying potential renewable resource project sites in Buncombe County. In this task, Cadmus will conduct an analysis of the renewable resources physically available in Buncombe County and assess the sites' eligibility for applicable incentives (e.g. tax incentives). Identification of such sites will enable Cadmus to determine the available renewable resources in the County, and will assist the County in achieving its renewable energy goals. Technologies considered include solar, wind, biomass, and biogas energy generation, at commercial to utility scale. We will recommend minimum sizes to be assessed for each technology, and will weigh the County's input.

Subtask 5.1 Collect Mapping Data

Through conversation with the County and stakeholders, a review of the County and City tax data and other available GIS sources such as the County's GIS website,[3] Cadmus will develop a short list of high-interest sites for large-scale renewable energy development or for energy storage facilities Cadmus estimates this short list will include roughly 15-20 potential high-interest sites.

[3] https://gis.buncombecounty.org/buncomap/

Subtask 5.2 Feasibility Study

Following the collection of Buncombe County's mapping data and identification of high interest sites, Cadmus will then conduct a remote initial feasibility study of these sites to determine viability for project development, and to identify any immediate concerns. Cadmus will first conduct an initial desktop fatal flaws study to determine whether any of the proposed sites present an immediate fatal flaw for renewable energy or energy storage installation. Then, using the list of sites that pass the fatal flaws process, Cadmus uses industry-standard tools such as Helioscope and PVSYST (e.g. for solar PV) to create preliminary array layouts and accompanying preliminary system economics, based on relevant local costs, available incentives, and the regulatory climate in Buncombe County. Cadmus brings expertise in feasibility assessments for multiple technologies, including, but not limited to solar PV. Cadmus will summarize the results of the mapping data and feasibility study in a written summary report to the County.

Task 5 Deliverables:

- A Feasibility Study of the identified high interest sites to determine possible locations for renewable energy and/or energy storage
- A summary memo of the results of the feasibility study

TASK 6 RENEWABLE ENERGY PLAN

Subtask 6.1 Second Round of Community Workshops

At this point, the Project Team will hold a second round of community engagement to present and discuss the preliminary findings of Task 3, 4, and 5 work, and to solicit stakeholder input on specific potential policy and program options. Using a similar approach as the first set of meetings, this would involve an internal meeting with the County, City, and Community Advisory Group, followed by a second meeting with select stakeholders. These meetings will be structured to allow for both detailed presentation and detailed feedback from participants.

The overarching objective is to be able to identify and select sets of policy options that hold broad appeal to the community and that are well-aligned with stakeholder perspectives. At these meetings, the Project Team will:

- Present the findings of work done to date under Tasks 3, 4, and 5, including details on Buncombe's energy supply and consumption trends, and information on a range of policies and strategies potentially suitable for Buncombe.
- Structured facilitation of community views and feedback, including both large group discussion and breakout groups, designed to solicit stakeholder views on the policies and strategies presented by the Project Team.

Subtask 6.2 Buncombe Renewable Energy Plan

Based on the outcomes of the above research tasks and stakeholder feedback, the Project Team (with the advice and review of the local Community Advisory Group) will develop a roadmap for Buncombe County's 100 percent utilization of renewable energy for government operations by 2030 and for the entire county by 2042. This plan will use the conclusions of the policy research and community planning process to identify actions of broad interest in Buncombe, and utilize the results of the impact assessment and

feasibility study to identify the projected energy impacts, costs, and savings of these actions. The process for input on the plan will have the following major steps:

- **High-level plan:** The Project Team will select the strategies from the matrix that appear to align with local goals. For each strategy selected, the team will identify key steps in execution and produce a summary document that outlines the major strategies and associated action steps.
- **Input from City and Community Advisory Group:** The Project Team will share the high-level summary document with the Community Advisory Group to ensure that the overall direction aligns with local needs and challenges. Additionally, this step will also build community support for the renewable energy implementation plan.
- **Full action plan:** The Team will make final adjustments to the presentation and facilitation plan based on input from the Community Advisory Group and compile a full action-plan for Buncombe's transition to utilizing 100 percent renewable energy with two levels of information. The top level will summarize high-level steps needed to create the environment to move forward with increasing renewable energy sources (e.g. establishing an on-going commitment from a broadened Community Advisory Group, passing additional local legislation). The detailed level will provide action-steps for the selected strategies such as directed guidance on engaging residents, securing funding, and adjusting program policies.

Upon review of the action plan by the Buncombe County and the City of Asheville and key stakeholders, the Project Team will address any feedback and develop a final deliverable. The project will conclude with a presentation (either in-person or remote) to present the final results and recommendations.

Task 6 Deliverables:

- Small group meeting with city and Advisory Group
- Large group public forum
- Draft and Final Renewable Energy Plan for Buncombe County
- Final Presentation of results and recommendations

SECTION 4 EXAMPLES OF WORK

The Project Team has developed a range of policy analyses, barriers and opportunity assessments, scenario analyses, and public-facing materials for a range of cities, public agencies, and non-profits. The following examples have been selected to showcase analyses, programs, and work products developed by the Project Team that illustrate the wide range of capabilities and experiences that will be deployed in this project and which are of similar scope and size to those requested by Buncombe County. Additional project detail or client references are available upon request.

Pathways to 100 Report Assistance to Leading US Cities, *Kresge Foundation and USDN*
Cadmus developed an energy primer on transforming city energy systems, published by the Kresge Foundation and Urban Sustainability Directors Network in May 2017. This primer presents a menu of approaches cities can pursue alone or in collaboration with key stakeholder partners to transform local energy systems. It also describes how the options available to cities vary based on state-level regulatory and policy actions and utility ownership models.
http://www.mc-group.com/wp-content/uploads/2017/08/MCG-Pathways-to-100_Energy-Supply-Transformation-Primer-for-Cities.pdf

Energy Transition Planning, *King County, Washington*
Cadmus developed and energy transition plan for King County, which included an analysis and recommendation for achieving the county's 2030 energy targets. Cadmus combined in-depth policy research, scenario modelling on the regional power mix, and engagement of key stakeholders to identify distinct sets of strategies that the county could pursue to meet its long-term energy goals. The plan is finalized, and publication is forthcoming, likely on the King County website. PDF copy available upon request.

Community Energy Independence Process, Guidebook, and Toolkit, *City of Bloomfield, Iowa*
Cadmus is supporting the City of Bloomfield, Iowa, in creating an energy independence planning process and the concurrent development of a community-wide energy independence process guidebook and toolkit that other communities can use as a template for their own energy independence processes. The guidebook and toolkit are being designed to emphasize green infrastructure, integrated solutions best practices, and expanded energy efficiency programming. Cadmus is combining in-depth policy research, scenario modelling on the regional power mix, and active and inclusive engagement of all community stakeholders to create a shared understanding of goals, develop local capabilities, and identify appropriate strategies and procedures that Bloomfield and the greater community can purse to achieve their energy independence goals.

Solarize Asheville, *City of Asheville, North Carolina*
As a member of the U.S. Department of Energy Solar Outreach Partnership (SolarOPs) team, Cadmus provided technical assistance to support the Blue Ridge Sustainability Institute's effort to develop and implement a Solarize campaign in the City of Asheville, North Carolina. Specifically, Cadmus provided guidance in drafting and issuing a Solarize Program installer/contractor RFP, and in creating structure and design of the Asheville Solarize program. Cadmus reviewed installer/contractor proposals and offered advice on the selection and terms of contract(s), provided recommendations on the program database and website development, and advised the Project Director on solar policy, practices, equipment, regulations, financing, and incentives. Cadmus also participated in educational workshops and events.
https://icma.org/sites/default/files/307438_Sunshot%20Solar%20Outreach%20Partnership%20Case%20Study_Solarize%20Asheville%20NC.pdf

Critical Infrastructure Solar PV and Resiliency Feasibility Study, *North Carolina National Guard*
Partnering with the Environmental Defense Fund, Cadmus has been working with the North Carolina National Guard (the Guard) since 2017 to analyze the feasibility of solar PV installations at six of the Guard's facilities across the state, all within Duke Energy's service area. Cadmus is evaluating each site both for the technical feasibility of solar PV, but for energy storage applicability as a part of a vision for resiliency. As part of the study, Cadmus has conducted an initial desktop fatal flaws study to determine whether any proposed sites present an immediate fatal flaw for a renewable energy installation. Using the list of sites that pass the fatal flaws process, Cadmus used industry-standard tools such as Helioscope and PVSYST to create preliminary array layouts and accompanying preliminary system economics, based on relevant local costs, available incentives, and the regulatory climate in Duke Energy's service area. Cadmus developed a custom and detailed economic modeling tool, incorporating the Guard's priorities, North Carolina's regulatory requirements, Duke Energy's current and projected electricity rates, and industry-standard financial inputs to accurately and holistically provide financial projections for each of the Guard's prospective sites. Cadmus will use this technical and economic analysis to recommend applicable sites for the development of solar PV and solar+storage.

Rest Area Solar PV and EV Charging Station Feasibility Study, *North Carolina Department of Transportation*

Partnering with the Environmental Defense Fund, Cadmus began working with the North Carolina Department of Transportation (DOT) in July 2018 to analyze the feasibility of solar PV installations and electric vehicle charging stations at six rest stops throughout the state. As part of the study, Cadmus will conduct an initial desktop fatal flaws study to determine whether any proposed sites present an immediate fatal flaw for a renewable energy installation. Using the list of sites that pass the fatal flaws process, Cadmus will use industry-standard tools such as Helioscope and PVSYST to create preliminary array layouts and accompanying preliminary system economics, based on relevant local costs, available incentives, and the regulatory climate in Duke Energy's service area. Cadmus will incorporate EV requirements and DOT's priorities into our custom economic modeling tool, that currently includes North Carolina's regulatory requirements, Duke Energy's current and projected electricity rates, and industry-standard financial inputs to accurately and holistically provide financial projections. Cadmus will use this technical and economic analysis to recommend applicable sites for the development of solar PV and electric vehicle infrastructure.

Energy Innovation Task Force Programs Working Group, *Buncombe County, City of Asheville and Duke Energy*

The Energy Innovation Task Force researches and recommends energy efficiency and demand side management in Buncombe County, and seeks input from all relevant stakeholders in its process to create recommendations. The Project Team's North Carolina Energy Policy Advisor Jennifer Weiss participated in the EITF as a regulatory and policy expert to advise and educate the EITF group on Duke Energy's energy efficiency programs.

Energy Policy Specialist, *Duke University (Sanford School) North Carolina Leadership Forum*

The Project Team's North Carolina Energy Policy Advisor Jennifer Weiss provided a group of 37 participants – including members of the General Assembly, state and local officials, leaders of non-profit and philanthropic organizations, and business leaders from across the political spectrum - with information about North Carolina's current and future energy needs.

Founding Member and Co-Lead, *various North Carolina Energy Efficiency Working Groups*

The Project Team's North Carolina Energy Policy Advisor Jennifer Weiss founded and co-leads several NC Energy Efficiency working groups and collaborations, which include, for example: The NC On-Bill Working Group, which is a collaborative partnership between Appalachian Voices, the Environmental Defense Fund, the Southern Environmental Law Center, the Environmental Finance Center at UNC-Chapel Hill and the Southeastern Energy Efficiency Alliance to work with North Carolina electric member cooperatives and community stakeholders to provide education and support resources to establish on-bill financing programs for their members and expand access to energy efficiency across North Carolina; and the Multifamily Energy Efficiency Working Group, which works to gain an understanding of barriers and potential solutions that exist to improve the programs and policies that allow for energy efficient investments in multifamily buildings.

Energy Efficiency Financing Program Analysis, *Various Rural Electric Cooperatives*

Cadmus has collaborated with more than a dozen utilities in North Carolina, southern Appalachia, and the broader southeast to conduct financial analysis and program design support for on-bill financing programs that aim to increase access to residential energy efficiency retrofits. Utilities and stakeholders that

Cadmus has supported include Roanoke Electric Cooperative (NC), Lumbee River Electric Membership Corporation (NC), Appalachian Electric Cooperative (TN), and the Mountain Association for Community Economic Development (KY).

Innovations in City Clean Energy & Equity Planning, *The Summit Foundation and The Kresge Foundation*
Cadmus (formerly MCG, for this publication) produced a white paper with input from the Innovation Network for Communities (INC). The report summarizes the emerging strategies of city leaders to transform their energy supply to renewable and low-carbon sources, and improve social equity in the process. The purpose of the report is to establish a baseline understanding of the current stat e of practice in municipal energy supply transformation, and complements Cadmus' *Pathways to 100* report.
http://www.mc-group.com/wp-content/uploads/2017/08/MCG_Innovations-in-City-Clean-Energy-and-Equity-Planning.pdf

Road to Renewable: A Needs Assessment for North American Cities Leading on Energy Supply Transformation Cadmus (formerly MCG, for this publication) produced a report in partnership with the Innovation Network for Communities (INC) and with input from the Carbon Neutral Cities Alliance (CNCA) and the Urban Sustainability Directors Network (USDN) through the support of the Summit Foundation and the Kresge Foundation. This report seeks to illuminate the support needs of North American Cities by identifying the current strategies cities are using to transition to renewable energy, the barriers faced by cities in these planning processes, and the support they need to accelerate, scale, and replicate their efforts.
https://cadmusgroup.com/wp-content/uploads/2018/07/Road-to-Renewable-A-Needs-Assessment-for-City-Energy-Supply-Transformation-April-2018.pdf?hsCtaTracking=2e880cb5-541a-47d4-b43a-d4b5bb2e4440%7Cd44a8aad-4a98-4500-8553-9692b9cd4cb3

Northeastern Regional Assessment of Strategic Electrification Cadmus (formerly MCG, for this publication) co-authored this report for Northeast Energy Efficiency Partnerships (NEEP) together with Synapse Energy Economics. The report examines electrification in detail; showing how it can work with efficiency and clean electric supply to drive deep decarbonization. The purpose of the report is to inform the development of regional activities in New York and New England states, and provide a resource to stakeholders across the region as they develop electrification that allows them to base their planning on qualitative and quantitative analysis.
http://neep.org/sites/default/files/Strategic%20Electrification%20Regional%20Assessment.pdf?__hssc=121325015.3.1533759591329&__hstc=121325015.40079330c4053b28e0c5e726dd8e690f.1531744051927.1532025263908.1533759591329.3&__hsfp=1574966616&hsCtaTracking=d1a91494-00ec-4c98-a1ac-c7c7591b93d6%7C1355fdb4-3278-4508-81a9-f07238d52885

Green Ribbon Commission – Commercial Real Estate Working Group Energy Analysis and Real Estate Stakeholder Engagement, *A Better City, Massachusetts*
Cadmus, working in collaboration with local non-profit A Better City (ABC) since 2011, coordinates the Commercial Real Estate Working Group on behalf of the Boston Green Ribbon Commission. The Commission is a group of leaders from Boston's largest commercial and residential property owners, health care organizations, and institutions of higher education that have organized to assist the City in meeting its goal of reducing greenhouse gas emissions 25 percent by 2020. In 2018, Cadmus developed and draft a briefing booklet for the commercial real estate community analyzing the changing policy landscape and emerging opportunities in Massachusetts. The report was released at an energy storage

event for the commercial real estate community in April 2018, for which Cadmus provided content development and speaking support. In addition, Cadmus has advised the Boston Green Ribbon Commission on opportunities for demand management and energy storage under the Massachusetts Energy Efficiency Plans, and has participated in storage policy roundtables for the state of Massachusetts on behalf of the Boston Green Ribbon Commission.
http://www.abettercity.org/assets/images/An_Overview_of_Energy_Storage_Opportunities.pdf

Benham, Kentucky Municipal Power Plan and On-Bill Financing Program Development *Benham Power Board*
Cadmus staff collaborated with the Benham Power Board, Kentuckians for the Commonwealth, and the Mountain Association for Community Economic Develop to develop a municipal energy plan in Benham, Kentucky, a small town in the struggling economic region of Eastern Kentucky. Cadmus staff provided program design support, conducted financial analysis of expected program performance, and participated in a stakeholder-based program planning process. The resulting plan focused on energy improvements in municipal buildings and an on-bill financing program targeting low-income residential energy retrofits, including a discussion of likely funding sources.

Ensuring Equity in Energy Transformation and Innovation, *Urban Sustainability Directors Network (USDN)*
Cadmus is leading a project with USDN, eight core cities, and 12 additional cities in the U.S. and Canada to build knowledge, tools, and partnerships that will increase equitable access to clean energy for low- and moderate-income households through innovations in local-level program design. Project outputs include a program design guidebook and checklist for local governments, and an inventory and in-depth case studies of best practices. To reflect and apply project findings, Cadmus will organize and facilitate a two-day workshop for core cities and partners to collaboratively develop equity-oriented program solutions.

Technical Assistance and Dissemination of Best Practices for Regional Solar Policy, *U.S. Dept. of Energy*
Through the U.S. DOE SunShot Program, Project Team members have provided trainings and direct technical assistance to hundreds of municipal, county, and regional government organizations nationwide. Cadmus collaborated as part of the DOE-funded Solar Outreach Partnership, Solar Ready II, and Solar Market Pathways programs, all of which were dedicated to identifying and spreading national best practices in local solar policies and programs. Work included close collaboration with regional planning commissions in Indiana and Missouri, and a stakeholder workshop on local solar policy in Des Moines.

Solar Powering America by Recognizing Communities (SPARC): SolSmart Designation Program, *U.S. Department of Energy, International City County Managers Association, The Solar Foundation*
Through the Solar Powering America by Recognizing Communities (SPARC) grant, CADMUS has collaboratively developed an innovative and prominent national recognition program called SolSmart that energizes local solar markets and advances soft cost reductions by recognizing community efforts to make communities solar PV friendly. CADMUS led the development of designation criteria by convening and facilitating a Criteria Advisory Committee made up of key stakeholders. CADMUS is assisting in the development of an interactive web portal for the designation, and the design and implementation of special awards for non-local stakeholders. To reach our goal of enabling more than 300 communities across the U.S. to become SolSmart designated, the team provides technical assistance to participant communities via a four-pronged approach: 1) offering one-on-one technical assistance from a team of experienced national experts, 2) deploying full time temporary grant-funded positions embedded in

selected local communities (SolSmart Advisors) to provide more tailored assistance, 3) facilitating peer mentorship and peer learning among participant communities, and 4) creating and curating an online set of technical resources on reducing solar soft costs, including case studies, model solar permitting processes, technical training powerpoints, and videos, and more. CADMUS is providing expertise and project coordination across all SolSmart technical assistance delivery mechanisms.

Solar in Your Community Challenge Project Administration and Training, *U.S. Department of Energy*
Cadmus is currently working with ICMA to administer the Solar in Your Community Challenge. The Solar in Your Community Challenge is a $5 million competition amongst over 100 community teams across the country aimed at bringing solar access to underserved communities via innovative community solar models and programs. Cadmus is providing technical review of team applications, review of continuation funding proposals, reviewing and verifying technical assistance, coordinating a series of 10 webinars, and developing a delivering a series of general curriculum materials for participating teams.

In addition, Cadmus planned and executed an in-person training for over 120 participants to accompany the existing technical assistance and education provided as part of the Solar in Your Community Challenge. The purpose of the Solar in Your Community Challenge Training (SYC Training) was to bring together team participants, team coaches, and other solar experts for a 2-day training to educate, empower and connect Solar in Your Community (SYC) Challenge teams. The objectives of the SYC Training included educating, training, and empowering teams with the knowledge, skills and attitude they need to be successful in the challenge; providing opportunities for teams to workshop their projects in group settings with peers, solar experts, and trainers; and building collaborative networks and partnerships between challenge teams that are within similar regions or topical affinity groups to share best practices, trouble-shoot challenges, and further develop strategies to grow the solar market. Cadmus managed and delivered the entire scope of the training including: registration and outreach of the event, participant travel reimbursement, coordination with the event venue to determine functional spaces and audio & visual needs, coordination with solar experts and trainers involved with the Challenge to develop relevant and useful content for the teams, delivery of technical trainings, and the development of a practical agenda for the 2-day event including structured and unstructured networking time as well as engaging and interactive training sessions. Overall, the SYC Training met and exceeded these objectives for participants and trainers within a 6-week timeframe.

Community Energy Strategies Pilot, *Massachusetts Clean Energy Center*
Cadmus developed and implemented a community dialogue process for 16 communities across Massachusetts to develop community clean energy roadmaps. The process included conducting a series of workshops to engage each community in dialogue to identify and prioritize energy efficiency goals and programs.
http://www.masscec.com/community-energy-strategies