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June 18, 2021

City of La Crosse Planning and Development Department
Attn: Lewis Kuhlman, Environmental Planner
400 La Crosse Street
La Crosse, WI 54601

Dear Lewis,

The City of La Crosse has ambitious community goals to achieve carbon neutrality by 2050. To meet these goals, the City is working to develop a Climate Action Plan that accounts for the community's carbon impact and determines solutions that are realistic, actionable, and reflects local values. These will improve the quality of life for residents while building an equitable and sustainable economy. Slipstream and WSP are excited to propose technical assistance, facilitation, and partnership to the City of La Crosse in the development of your Climate Action Plan.

La Crosse's climate leadership will serve as an example for other mid-size cities in Wisconsin, the Midwest, and throughout the nation. Our team is ready to support La Crosse in development of an equitable Climate Action Plan that improves the quality of life for residents and creates a strong business ecosystem. Our plan will mobilize community action around climate change and will include:

- Greenhouse gas (GHG) emission inventories
- Climate risk assessments
- Ambitious climate mitigation, resilience, and energy targets
- A 2050 carbon neutrality roadmap
- Zero-waste goals through reduction and reuse

Thank you for your commitment to addressing climate change and the opportunity to collaborate on The City of La Crosses' Climate Action Plan.

Sincerely,

Robin Lisowski

Robin Lisowski
Director of Service Solutions
Slipstream

City of La Crosse

Planning and Development Department

Climate Action Plan

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Overview

The City of La Crosse is set to aggressively target greenhouse gas (GHG) emission reductions through 2030 that align with recommendations from the Intergovernmental Panel on Climate Change (IPCC). A municipal leader in climate change mitigation, the City of La Crosse has spent time and resources over the years to understand how devastating climate impacts can be on the health and well-being of its community's residents and businesses. La Crosse is situated alongside the Mississippi river, making it naturally susceptible to flooding events. Historically, the Mississippi River has been an asset to the community, providing opportunities for commerce and recreation. It has also produced highly destructive flooding events in the community over time. As La Crosse remains the largest City in the region, a robust education system, power plants, and other critical infrastructure are necessary for community and county residents to thrive. These extreme weather events and flooding become especially devastating for the community in terms of health, safety, and economic vitality. To date, the City has spent millions of dollars on flood mitigation and resiliency measures to protect its constituents from flood events. However, as the climate continues to warm and ice melts along the river more quickly than ever, floods continue to pose major risks. In fact, 2019 marked a new reality as flood waters along the Mississippi set a record for duration, remaining at flood stage for more than 40 days[1].

Equity in climate mitigation is an overarching component of the City of La Crosse's initiatives. Per 2019 statistics, 23.0% of La Crosse residents had an income below the poverty level. Of these vulnerable residents, 87.4% were renters.2 La Crosse is also home to many retirement communities, hospitals, and other vulnerable populations. Therefore, equitable consideration for all constituents is required in the new climate plan.

The City of La Crosse, in its latest initiative to combat climate change through a Climate Action Plan (CAP), is set once again to show its bold leadership in making climate change paramount to its overall community planning objectives. Understanding how GHG emissions can be reduced significantly community-wide is a first big step. Reaching the aggressive 2050 net-zero goal depends on accurately understanding GHG emissions throughout municipal and other community operations is paramount to making large reductions by 2030. Engaging the community in this endeavor is as or more important than the GHG emissions inventory work. Support from both residents and businesses is the true pathway to achieving GHG emission reductions. As the City leads by example, the community must also understand how their efforts in GHG emission reductions will improve their overall quality of life and stem the devastating impacts of climate change in their neighborhoods and local economies. Lastly, for a CAP to be truly actionable, it needs to be meaningful, impactful, and accountable to its stakeholders.

Slipstream brings a depth of understanding and firsthand experience bridging future climate scenarios, energy and grid efficient solutions, and health within the built environment. We

[1] https://www.weather.gov/arx/2019Flooding_LaCrosse
[2] https://www.city-data.com/poverty/poverty-La-Crosse-Wisconsin.html

assist municipalities, campuses, and building owners and operators to plan and optimize for a changing climate. We have also helped states and communities assess health impacts from air quality improvements as outcomes from a cleaner grid. Our status as a nonprofit organization compels us to advance economic and environmental sustainability through our engineering, education, and research work to decarbonize the grid. Slipstream staff has expertise that ranges from city energy planning to net zero building design. Our team implements an award-winning commercial, industrial, and residential utility energy efficiency new construction program in Chicago and northern Illinois. We work with architects, engineers, building owners and developers by providing technical assistance on hundreds of high-performance building projects throughout the Midwest. Projects have included the country's first net zero retail store for Walgreens in Evanston, Illinois to the country's first performance-based procurement healthcare project for the Mayo Clinic in Rochester, Minnesota. Energy Finance Solutions, the financial services division of Slipstream, implements PACE Wisconsin, which drives economic development by offering open-market solution for commercial building owners to finance innovative energy solutions.

Slipstream funders include Wisconsin utilities such as Xcel Energy, Focus on Energy, WI PSC Office of Energy Innovation, Minnesota Department of Commerce, US Department of Energy, US Department of Defense, Institute for Market Transformation, Energy Foundation, the McKnight Foundation and many more. Our team is composed of a unique mix of architects, electrical and mechanical engineers, researchers and educators that have a diverse background that ranges from the City of Chicago's first chief sustainability officer to managing building performance projects at architectural and engineering firms. We understand complex buildings energy systems and can convey these concepts to a wide range of audiences. We have extensive experience conducting field research of emerging technologies to measure energy performance. Slipstream leverages this evidence-based research in our programs and education to train thousands of commercial and residential professionals every year. We are actively involved and serve on leadership positions with local and national affiliates of USGBC, ASHRAE, AIA and other industry associations.

Our partner, WSP, believes that for societies to thrive, we must all hold ourselves accountable for tomorrow. That means creating innovative solutions to the challenges the future will bring. It inspires them to stay curious, act locally, and think internationally. WSP's sustainability, energy, and climate change team has provided services related to the City of La Crosse's scope for nearly 20 years. WSP has recent experience in developing climate action plans and zero waste strategies and providing energy and greenhouse gas (GHG) management, goal and target setting, green power and renewable energy procurement, and climate and water risk assessment advisory services. WSP will also add add their extensive expertise in quantifying local and equitable co-benefits, zero waste and circularity, flood mitigation and infrastructure considerations to this work.

Together, our team will collaborate with La Crosse to develop a CAP for achieving the City's 2030 and 2050 emission reduction and equity goals.

Project Scope

Our scope of work is organized into three main sections: 1) Inventory and Assessment, 2) City and Community Engagement, and 3) Plan Development. Each section addresses the tasks outlined in the RFP. The first two sections provide the foundation for a successful CAP that is delineated with actionable priorities. This process includes robust community engagement to ensure the plan reflects the community's culture and priorities authentically and equitably.

Section 1: Inventory and Assessment

Our first step to an actionable plan is to conduct an accurate inventory and assess performance using key metrics. The City of La Crosse has taken several steps to establish, quantify, and track Sustainability Indicators for municipal and community end uses, including energy, carbon, waste, water, and transportation. The 2020 GHG inventory will be the basis to track progress and chart clear pathways towards your zero-carbon goal. In parallel, our team will review related planning efforts to facilitate cohesion among multiple initiatives. Inventory and reduction target pathways are outlined in Tasks 1 through 3.

Task 1.1 Analyze GHG Emissions

The success of the City of La Crosse's CAP depends on an accurate inventory of the 2015 baseline and current GHG emissions levels. The City's CAP will support its carbon-neutral 2050 goals, with significant progress toward that goal by 2030. To inform the development of ambitious, achievable GHG emissions reduction targets and to develop GHG emissions reductions forecast, our team will complete a comprehensive review and update to the City's existing government operations and community GHG emissions inventories. This update will both include the inclusion of any new sources of GHG emissions not previously included in the City's GHG inventory, as well as updated GHG emissions for year 2020.

GHG inventories must provide transparency and actionable insights on emission reductions over time. Our team will collaborate with key City staff to understand the areas of influence within municipal operations and existing structures for community engagement. Based on the information provided by La Crosse, we will prepare an inventory that aligns with the areas of influence in City operations and with the City's department structure so that each team within the City can effectively work toward emission reductions in their area of operations.

The CAP must incorporate baseline (2015) and current (2020) inventories for both municipal operations and for the entire La Crosse community. We will calculate GHG inventories for municipal operations per the guidance outlined in the *Local Government Operations Protocol* (LGOP) and community-wide emissions based on the framework established through the *Global Protocol for Community-Scale Greenhouse Gas Emission Inventories* (GPC) and in alignment with guidance from the most recent recommendations from the IPCC, as applicable. The GPC requires that city GHG inventories estimate emissions using the most accurate available data. However, the GPC also recognizes that direct activity data and emissions factors may not be available for all emissions sources that are within the City's inventory boundary. When direct activity data and local emissions factors are not available, the Protocol allows for methodologies to estimate emissions based on less direct data:

- Tier 1 – Default data and simple equations
- Tier 2 – Uses country-specific emissions factors

- Tier 3 – Direct activity data and local emissions factors – See IPCC Guidelines

To prepare the municipal and community inventories, our team will review City and other data sources and consult with key community and municipal leaders to identify potential sources of Tier 3 data for each emissions source. When direct activity data is not available to estimate GHG emissions from a given source, we will identify the Tier 1 or Tier 2 data source(s) that were used to estimate emissions from that source. The City may improve upon its inventory in future years by enabling data to be collected to directly measure activities that are initially estimated based on Tier 1 or Tier 2 data sources. To facilitate the data collection process and to reduce time required by data providers, we will simultaneously request the data described in Appendix A for both the 2015 and 2020 reporting periods. For purposes of this proposal, we assume that the City and the applicable utility data sources have retained the needed data from 2015. Data that will be requested from external sources, such as providers of delivered fuels, for the 2020 inventory may not be available for 2015. If so, we will investigate alternatives to estimate the emissions levels for which best-practice data is missing.

Our team will use the City's subscription to the ICLEI's ClearPath platform to complete inventories of the City's government operations and community GHG emissions in compliance with the LGOP and GPC. Based on the City's 2019 GHG inventory, we recommend completing the inventories for 2020 and 2015 in accordance with the GPC's BASIC requirements. However, since the BASIC+ reporting methodology more closely aligns with IPCC recommendations, upon completing the 2020 GHG inventory, we will submit recommendations to the City on steps that the City may take in order to progress instituting the BASIC+ methodology in future years.

To be most useful for forecasting emissions levels for future years, we propose to build upon the framework used for the City's 2019 inventory, while incorporating opportunities to shift from methodologies that estimate emissions based on indirect data (Tier 1 and Tier 2 data) to use of data sources that more directly reflect actual emissions levels (Tier 3 data).

A GHG inventory establishes a boundary that describes the emissions sources that will be included in the inventory, as well as the scope within which each source will be categorized. The GPC guides cities to prepare GHG inventories based on total emissions from sources that are located within the City's inventory boundary ("Scopes" emissions inventory) and to also calculate emissions from all sources that are attributable to activity that takes place within the City's boundary ("City Induced" emissions inventory). The City's 2019 GHG Inventory was prepared in accordance with the GPC standard. Alignment with this standard reflects the City's commitment to the first objective of a community GHG inventory to leverage efforts by other government units to also reduce emissions. We will compile the City's 2015 and 2020 GHG inventories using both the Scopes-based inventory boundary and the City-Induced emissions boundary as the GPC prescribes.

Prior to collecting data to support the inventory, our team will meet with applicable City staff to identify all emissions sources that may be considered for the inventory. To establish the boundary for municipal emissions, we will interview City staff members to identify all applicable utility energy accounts and fuel uses for all facilities, equipment, and property owned or controlled by the City. We will also meet with City administrative staff to complete a review of all possible non-energy process and fugitive emissions sources that should be reported in the inventory. All identified emissions sources and emissions-causing activities will be categorized as Scope 1, 2, or 3 as guided by the GPC. We will also identify each

source and activity based on whether emissions are generated within the City's boundary and by whether the emissions are generated as a result of City activities.

To complete the community emissions inventory, our team will collaborate with the City to collect data from sources such as those described in Appendix A in Table 1 (Municipal Inventory) and Table 2 (Community Inventory). If data is not available from the proposed source, we will pursue alternative data sources, as prescribed by the GPC.

Our team will use the U.S. EPA's most recent GHG Emissions Factors Hub publication to convert the energy inputs to estimates of total emissions quantities of CO_2, CH_4, and N_2O. To support effective analysis and use of the inventory, we will convert all greenhouse gas emissions to metric tons of carbon dioxide equivalents (CO_2e) based on the global warming potential established in the IPCC's Fifth Assessment Report.

Task 1.2 Assess Climate Risks and Vulnerabilities

Mitigating climate risks starts with an assessment of vulnerabilities. La Crosse has incredible natural capital. However, the Coulee region of Wisconsin is forecasted to become hotter, and the area is prone to flooding and longer droughts. Combustion sources greatly impact air quality and the health of residents. These challenges will be faced by the entire community and yet will have the most detrimental effects on the most vulnerable populations. In the assessment we will have an equity focus coupled with a data driven approach that prepares La Crosse to empower all residents to survive, adapt, and thrive.

Our team will look for opportunities to equitability distribute green infrastructure throughout the community creating a network of resiliency interventions. Our initial approach will review progress and preparedness to date and assess key considerations on how climate change will impact community health and wellbeing. This review will identify risks of both climate driven chronic stresses like heat or pests, reducing access to nature, and increased energy bills. These increased risks may erode the city's wellbeing over time and increase the number of weather-related events that threaten the La Crosse community such as flooding or blackouts.

We will gather information to develop key questions for the community and coordinate with ongoing efforts to investigate and develop prioritized approaches to mitigate impact. Areas for investigation and optimization include resident empowerment, stormwater management, grid interactive efficient buildings, transportation reliability, and urban canopy health.

Task 1.3 Review of other Efforts

At the outset of this project, and in parallel with the GHG inventory development and the climate risk assessment, we will conduct a review of the broad array of projects and activities that are underway in the city and in the region. To be effective, the GHG inventory and CAP must connect emissions sources with related past analyses, as well as efforts that are in-progress, or are planned. We work with City staff, representatives of other relevant units of government, and community members to document the relationships between the projects and activities listed below (among others), the GHG inventory, and the CAP. This will also help us prepare for Task 5 when the team coordinates the CAP efforts with these related city efforts.

- Strategic Plan for Sustainability (2009)

- Sustainability Indicators Report (2019 and prior, if available)
- Greenhouse Gas Inventory (2019 and prior, if available)
- Energy service contract projects (ongoing)
- Floor Hazard Mitigation Plan (ongoing)
- Green Complete Streets Ordinance
- City Comprehensive Plan (2002 and ongoing)
- Airport Solar Feasibility Study (2018)
- 2040 Wastewater Strategic Plan (2020)
- XCEL Partners in Energy Report (ongoing)

Within the context of the City's related plans and analyses, we will adapt the inventory to incorporate emissions reduction strategies into already-planned improvement projects. This strategy will allow the City to limit the marginal cost of emissions reduction measures.

Task 2. Recommend GHG Emission Reduction

The City of La Crosse seeks to reduce the risk of catastrophic global climate change by aligning its Climate Action Plan with the recommendations of the IPCC for a global carbon budget. In addition to pursuing carbon neutrality by 2050, the IPCC recommends reducing global emissions by 45% by 2030 from a 2010 baseline. Our team will recommend a portfolio of projects and strategies that the City and community may implement to achieve its 2030 and 2050 emissions reduction goals. We will assist the City in setting emissions reduction goals for 2030 and 2050 that align with recommendations in the IPCC's Fifth Assessment. Emissions levels in 2030 and 2050 serve as significant milestones for the City's CAP. To assist the City in ensuring that it is making adequate progress toward these goals in the intervening years, we will recommend near-term and long-term progress goals and will align specific recommendations with achievement of those goals.

Emissions Reduction Recommendations – Overall Approach

La Crosse can most directly affect global GHG emissions by reducing its energy consumption and through on-site production of renewable energy. Therefore, we will prioritize recommendations for energy efficiency-based strategies and on-site renewable energy systems. Specific recommendations will seek to align input received through the community and stakeholder engagement processes with the emissions reduction opportunities presented by each strategy. Strategic recommendations are likely to include, but not be limited to, the following areas:

Transportation

- Vehicle miles traveled (VMT) reduction
- Electrification of city fleets
- Electrification of consumer light duty vehicles
- Enhancements to public transportation services
- Strengthening of nonvehicular modalities
- Development of public charging infrastructure

Buildings

- Improving building level efficiency, including heating and cooling, lighting, controls, envelope and plug loads.
- Coordination with energy efficiency upgrade plan to be delivered by JCI

- Facilitation of electrification pathways for households
- Grid-interactive Efficient Buildings (GEBs)
- Other responsive demand/demand management

Waste

- Scaling of food waste composting
- Establishment of textile recycling services
- Enhanced recycling of routine household and business waste
- Collection and reuse of durable goods, for example during student move-out
- Reduced use of city waste to energy facility

Renewables

- Increased distributed generation
- Development of geothermal and biogas systems
- Development of battery storage and microgrid capabilities for resilience and economical operation for both municipal operations and commercial/industrial businesses

Analysis and Prioritization

The project team will assess each emissions-reducing opportunity and strategy based on four primary considerations:

1. Community and stakeholder feedback
2. Estimated magnitude of emissions reduction opportunity
3. Incremental cost of the strategy
4. Probability of successful implementation

The project team's recommendations for both municipal and community emissions reduction strategies will prioritize opportunities that present the potential for the greatest emissions reductions with the lowest relative incremental cost, that have a high probability of success, and that community members viewed as being acceptable or attractive.

The team will recommend strategies for a given year, or range of years, so that the strategies maximize synergies with projects that are identified in related community plans, such as those listed under Task 1.3. In the absence of opportunities to align with other planned initiatives, the project team will recommend that those measures that maximize emissions reductions be completed in the next three to five years to maximize the opportunity for the measure to mitigate climate change.

If the City and community are unable to sufficiently reduce energy consumption and install renewable energy production capacity to achieve the emissions reduction goals, the City may consider procuring off-site renewable energy. As a second-level priority, we will recommend strategies through which the City could purchase off-site renewable energy to achieve its target threshold. Additionally, the City and community may consider purchasing verified carbon offsets to further reduce levels of reportable emissions. Our team will include recommendations for purchasing locally produced carbon offsets for any remaining emissions.

GHG emissions reduction goals and CAPs created by local governments frequently establish targets that the local government intends to achieve by a given future year.

However, the target year may extend beyond the term of the government's current administration and beyond the political will of a given moment. Therefore, achievement of emissions reduction goals and compliance with CAPs may be vulnerable to future political changes and/or future budget shortfalls. Establishing a dedicated funding structure to support emissions reduction measures may allow work directed by the CAP to be less susceptible to changes in government administration and fiscal challenges. Slipstream is a leader in deploying solutions for financing emissions-reducing building upgrades. While not requested in the City's RFP, as part of its recommendations for the CAP, we will outline funding structures, such as internal carbon pricing mechanism or an internal revolving loan fund, which the City could use to assure adequate dedicated funding for emissions reducing projects.

Municipal GHG Emissions Recommendations

The City's 2018 Sustainability Indicators Report shows that City operations produced 17,299 metric tons of CO2e in 2010 and 15,150 metric tons of CO2e in the City's baseline year of 2015. As global emissions increased from 2010 to 2015, the IPCC's direction to reduce emissions by 45% from 2010 levels is equivalent to reducing emissions by 47% from 2015 global emissions levels. We will use the results of the 2015 baseline inventory to recommend a 2030 emissions target for the City's municipal inventory that will comply with the IPCC recommendations for a global carbon budget. Our team will apply information gained from the 2020 GHG inventory to prioritize areas of investment to maximize opportunities for emissions reductions.

The City must strategically focus its investment in emissions-reducing projects to achieve a 47% reduction in emissions by 2030 while maintaining a sustainable city budget and acceptable levels of municipal borrowing. When reviewing the related reports and planning documents listed under Task 1.3, our team will catalogue the City's planned building and infrastructure projects, redevelopments, and equipment purchases that could meaningfully affect the City's total emissions and the community's inventory. We will overlay the City's planned investments with the level of emissions reduction opportunity for each of those investments to identify opportunities to maximize emissions reductions per dollar invested.

The proposed scope of work does not include energy analyses of municipal buildings. Instead of preparing energy analyses of all potential improvements, we will use benchmarking data, market research, and other resources to identify strategies and estimate savings opportunities and incremental costs for each potential investment. We will categorize each strategy as near-term (three to five years for implementation) and long-term (six to eight years) based on the market readiness of technologies, carbon reduction potential and current plans by the City for facility and equipment upgrades.

Increasing energy and emissions efficiency in planned improvements will likely be the most cost-effective strategy to reduce emissions. However, it is probable that the City will be unable to achieve its emissions reductions goals solely through incremental improvement of planned upgrades. To accomplish a goal of 47% reduction, the City must make additional investments in renewable energy systems and advanced efficiency strategies. While optimizing efficiency of investment in planned upgrades, we will recommend measures that the City may use to cover any remaining gap between actual and targeted emissions levels.

Community GHG Emissions Recommendations

The City has limited ability to directly reduce community GHG emissions. Instead of investing in more efficient building equipment and vehicles, to reduce community emissions,

the City must catalyze action by La Crosse's residents, businesses, and institutions. To reduce community GHG emissions by 47% by 2030 from a 2015 baseline and to achieve community-wide carbon neutrality by 2050, the City will need to strategically implement ordinances, zoning strategies, community engagement tools, and funded programs to engage nearly all the City's residents and stakeholders.

Our team will analyze La Crosse's community GHG emissions inventory to identify the sectors and sources that produce disproportionately high levels of emissions. We will complete a targeted literature review to identify strategies that have successfully reduced GHG emissions in other mid-size cities in the United States. We anticipate that measures may include:

- Zoning structures that reduce needs for transportation in personal vehicles
- Streamlining permitting for distributed solar PV systems
- Energy efficiency retrofit funding support for low- and moderate-income households
- Graduated fee structures for solid waste removal
- Energy use disclosure ordinance and building energy performance standards or targets
- Cost estimates and associated GHG savings with each strategy. We will categorize each strategy as near-term (three to five years for implementation) and long-term (six to eight years).

As local, circular economy and zero-waste solutions can introduce economic opportunity, reduce pollution, and create highly visible opportunities for residents to engage in community-wide sustainability initiatives, our team will also support the City of La Crosse in incorporating strategies that can be applied to a zero-waste transition plan.

Leveraging the annual materials quantities and processing rates tracked for La Crosse County since 2007 and best practices from peer cities, our team will surface opportunities for zero-waste solutions related to policy, City-enabled programs and services, or voluntary partnerships with businesses and institutions. From this catalogue of potential actions, the City and key stakeholders will be engaged in identifying priority opportunities for inclusion in the Climate Action Plan, including details for implementation steps, success metrics, GHG and environmental impact estimates, and community benefits.

These strategies will be revised and refined to incorporate existing programs and lessons-learned from past City programs. In this way, we will use both national best practices and local experience to recommend a set of tools and strategies that the City can deploy in the near-term and long-term to achieve 47% community-wide GHG emissions reductions by 2030 and community-wide carbon neutrality by 2050.

Task 3. Forecast GHG Emission Reductions We will create a GHG emissions forecast and determine scenarios that reflect the work outlined in Task 2. Future emission levels for the City and the community depend on certain external and internal variables.

Sample of variables that the City may influence

- Actual energy reductions achieved by facility and equipment upgrades
- Efficiency of operations for city-led programs
- Changes in population and economic characteristics of the City

Sample of external variables

- GHG emissions intensity of the regional electricity grid
- Advancement of clean energy technology
- Cost of clean energy technologies
- State policy change whether legislation, executive order, regulation/orders by the Public Service Commission of Wisconsin or other state agencies, or programmatic interventions that affect emissions statewide (e.g. building code, appliance standards, clean energy financing mechanisms, carbon pricing, clean energy generation and/or efficiency mandates, etc.)
- Federal policy change whether legislation, executive order, federal agency action that affect emissions allowances (e.g. carbon pricing, appliance standards, a national green bank, clean power rules, etc.)

In its "Special Report: Global Warming of 1.5 degrees C", the IPCC outlines four high-level scenarios that will influence actual emissions levels in future years. The IPCC's scenarios consider variables such as levels of economic development in different parts of the world, resource-intensity of production, and advancement of clean energy and carbon capture technologies.

Similarly, our team will outline at least four scenarios that incorporate combinations of the influenced and external variables listed above. For each scenario, Slipstream will forecast emissions levels that the City and community would achieve if the City adopts the measures recommended under Task 2. Based on the outcomes of these forecasts and feedback from City of La Crosse stakeholders on which of the scenarios they see as most probable, we may adapt its recommendations in order to optimize the likelihood that the City and community will achieve their emissions reduction goals.

Section 2: City and Community Engagement

Community engagement is critical to the CAP process. Our team's approach will lift-up the important role of municipal and community engagement and forge a strong partnership to achieve the goals set in this endeavor. The approach is balanced within the timeline and resources for this planning initiative. It calls for the City to show leadership and excitement for the CAP and engage the community by optimizing the places where the City and the community already meet on issues ranging from government activities to neighborhood celebrations.

The insights, values, and priorities of the City and community are essential considerations in municipal climate action planning. Tasks 4.1 and 4.2 summarize the proposed approach for making the CAP a shared vision for the City and community and engaging so the CAP is reflective of La Crosse's identity.

Task 4.1 Engage City Commissions/Common Council and Community City leadership is critically important to the successful development and implementation of the Climate Action Plan. Our team understands that a cross -section of City leaders are already engaged in imagining and planning La Crosse's climate future, and we are excited by the opportunity to partner, advise, and support this important work. Our proposed plan for engaging with City leaders spans the length of the planning process, and specifically includes:

- A kickoff meeting with the Climate Action Plan Steering Committee, Plan Commission members, Common Council members, Planning and Development Department staff, and our team. The objective of this kickoff will be to introduce teams and orient all to the project, identify and underscore key roles, guiding principles, and priorities, specify anticipated challenges, discuss key milestones related to other ongoing initiatives, and bound what a successful process and CAP will look like. This kickoff will best set the stage for the project when held together with all parties and expect that a subset of Plan Commission and Council members will join; however, if there is interest by a majority of Plan Commission and Council members or scheduling constraints are prohibitive, the project team can accommodate a second meeting, e.g. of Plan Commission and Council members in order to capture these important insights.
- A brief monthly check in call between Planning and Development Department staff, the Climate Action Plan Steering Committee, and our team. The objective of these calls will be to discuss data, project status, successes and challenges, and action steps. The monthly call is expected to be 30 minutes in length, and if there is interest the call (or virtual meeting) may be recorded to accommodate schedule conflicts.
- Our team will attend five Climate Action Plan Steering Committee meetings and provide updates at these meetings as requested by the Climate Action Plan Steering Committee.
- Our team will attend one Plan Commission meeting and share CAP information related to possible Comprehensive Plan amendments. The project team will rely on the Climate Action Steering Team for coordination with the Plan Commission in this regard.
- Upon completion of the CAP, our team will attend one Common Council meeting to support adoption of the CAP. Our team can present the CAP to the Council, co-present with City representatives, or support development and be available for questions based on the preferences of the Climate Action Plan Steering Committee.

In addition to the meetings specified above, the project team anticipates supplementary email and telephone correspondence with the Climate Action Plan Steering Committee and Planning and Development Department staff to discuss questions, data, draft analysis, and recommendations, etc.

Task 4.2 Community Engagement

To achieve its goals, the community must inform, see itself in, and feel a sense of ownership for the La Crosse Climate Action Plan and its implementation. Our team is prepared and enthusiastic to combine our technical expertise and rich community engagement approach in collaboration with the City. Our proposed approach for community engagement centers its importance, starts early in the planning process, and envisions sustained community involvement in implementation and progress reporting long after the plan itself is established.

City involvement in community engagement for the Climate Action Plan is expected to be significant—the stakeholders are the City's residents, businesses, and other stakeholders. And, it is both effective and efficient for the City to meet people where they are, and where they are already engaging with each other. For these reasons, our approach leans heavily

on using existing communications platforms and relationships to capture attention where there is already engagement and draw the community into the Climate Action Plan visioning. Key steps to our proposed community engagement approach are:

1. **Identify stakeholders** – Our team members will meet virtually with the Climate Action Plan Steering Committee and Planning and Development Department staff to identify community stakeholders. The outcome of this step will contribute to the design of a public outreach effort that incorporates meaningful involvement and fair treatment of community members regardless of race, color, national origin, faith/worldview, sexual preference, gender identity, or income. Individual contacts and relationships will be identified to enable invitation for public participation. The stakeholder identification process will intentionally include asking and answering, "Whose voices are we missing?" Stakeholders may include, but are not limited to:
    - Individual residents
    - Neighborhood associations
    - Large businesses (e.g. Trane, Kwik Trip)
    - Small and medium-sized businesses
    - Business/trade/economic development associations (e.g. La Crosse Area Chamber of Commerce, La Crosse Area Economic Development Association)
    - K-12 schools (public and private)
    - Higher education institutions (e.g. UW-La Crosse, Viterbo University, Western Technical College)
    - Student groups at K-12 schools and higher education institutions
    - Faith groups
    - Health/medical institutions (e.g. Gundersen Health System, Mayo Health System)
    - Environmental, social justice, and other nonprofit organizationsand unincorporated/grassroots organizations (Couleecap, Catholic Charities, Rotary, Mississippi Valley Conservancy)
    - State and local government representatives (e.g. La Crosse County)

2. **Create engagement hub –** the project team recommends that the City create a microsite on the City website that serves as a one-stop hub of information regarding the Climate Action Plan. The microsite can house background information, virtual and in-person meeting logistics, community survey and feedback summaries, a place to offer additional comments on an ongoing basis, the draft CAP, the final CAP, and ultimately implementation plans and a status reporting dashboard in the future. While the City leveraging the existing website for this engagement hub will be most effective because it already has community traffic, if it is not possible, we could alternatively set up an alternative site where this information can be posted.

3. **Raise awareness about the Climate Action Plan –** Our team members will collaborate with the Climate Action Plan Steering Committee and Planning and Development Department staff to raise awareness about the planning process and opportunity for public participation. Tactics like these will be used to familiarize the community with the Climate Action Plan, share specifics for getting involved, and drive them to the engagement hub microsite where they can learn more and follow progress. Promotional tactics may include:
    - Posts on the City's social media accounts

- Alerts on the landing page of the City's website, discussion on the microsite, and listings on the City Events Calendar and City Meetings List
- Podcast episode (e.g. by member(s) of the Climate Action Plan Steering Committee and/or Planning and Development Department staff) as part of the City's existing podcast series
- Outreach to parties identified in Step 1 to ask not only that they participate, but that they make their stakeholders aware of the opportunity for public participation as well, for example:
    - Gundersen and Mayo could post the microsite URL and urge public participation in their electronic or other building signage, or a medical doctor at each system might pen a short article about the connection between human health and climate change in their respective system's newsletter or other communications and encourage patients to get involved in the process
    - A school principal or science teacher could nudge students to get involved in the Climate Action Plan as part of related curriculum or as a special interest, thus bringing youth voices into the process.
    - The local community action agency could highlight the opportunity for public participation to its clientele, thus increasing the messaging to those fighting poverty and seeking social justice.
    - The HMOOB Cultural and Community Agency might promote CAP involvement to its all ages and youth program participants, as well as supporters and broader community.
    - The Greater La Crosse Area Diversity Council might broadcast information about CAP process participation to its membership, and through its website, newsletter, and social media posts.

- Earned media or regular City spots on local radio and television can also be leveraged to encourage community involvement in the CAP.

4. **Survey the community –** Our team will develop and administer an electronic community survey. We will use the survey to collect information regarding attitudes and priorities related to a wide range of elements in the Climate Action Plan scope. The project team will work closely with the Climate Action Plan Steering Committee and Planning and Development Department staff to distribute the survey widely and equitably, drawing on the stakeholder identification in Step 1. The survey will be prepared in plain language and avoid jargon to make it accessible to as many respondents as possible (e.g. youth, people with different job experiences, people with different educational levels). The survey will be developed in a mobile-friendly tool to enhance accessibility beyond those with home computing access. Survey promotion will also remind potential respondents of mobile accessibility and that computing access is available at public libraries. We will analyze survey results and prepare and deliver a summary report of the findings, which may be housed on the engagement hub microsite as noted previously.

5. **Facilitate community meetings** – Our team members will facilitate two in-person and two virtual community meetings, for a total of four meeting opportunities for public participation. These meetings will orient participants to the Climate Action Plan initiative and create space for moderated discussion that reveals ideas, questions, concerns, attitudes, and priorities regarding climate planning options. Like the

survey, these meetings will be facilitated using plain language and avoid jargon and acronyms to make the discussion as accessible and meaningful to as many as possible. Our team members will coordinate with City Planning and Development Department staff to identify and secure City meeting space for in-person meetings. Zoom will be used for virtual meetings. The project team will summarize individual meetings and synthesize comments and themes in a brief report, which may be housed on the engagement hub microsite as noted previously.

6. **Publish draft CAP** – to engage the community throughout the process the project team recommends the draft CAP be published on the engagement hub microsite for public review and comment. A comments tool on the engagement hub microsite can be used to collect comments and take forward to determine how best to address.

7. **Publish final CAP** – to elevate familiarity and ongoing engagement the project team recommends publishing the final CAP, implementation plans, and a dashboard and/or other plain language reporting that shows CAP progress overtime. Even though the plan will be complete at this stage, the City will need to sustain the community's engagement toward the plan's north star goals and discrete implementation strategies. This will also give the City and the community opportunity to celebrate key milestones, goal achievements, and other successes.

By its nature, community engagement for the CAP relies significantly on City resources. Our team members will prepare, analyze, and report findings for the community survey and community meetings, and facilitate, advise, and assist with content development for proposed outreach activities. This proposal imagines the City will have responsibility for contact database management and use, individual stakeholder outreach, and creation, maintenance, and posting of tools like the microsite used as an engagement hub and social media sites.

Task 5. Coordinate with Related City Efforts

The City of La Crosse continues to make strides in creating a sustainable and livable community. In recognition of the connectedness that this Climate Action Planning process has to other previous and ongoing efforts in La Crosse, our team will coordinate with City staff leading these efforts to ensure optimal integration.

The most recent Sustainability plan, adopted in 2019 by the City and County of La Crosse, reemphasizes the Natural Step framework as a driving force in the City's sustainability efforts. All four of the system conditions defined in the Sustainability Plan will naturally align with the efforts of this CAP development: 1) reduce the City's dependence on fossil fuels 2) reduce dependence on chemicals that can accumulate in nature, 3) reduce dependence on activities that harm ecosystems, and 4) meet the hierarchy of present and future needs fairly and efficiently. Our project team will develop the CAP in such a way that a direct connection can be made between the system conditions and actions recommended to reduce GHG emissions.

With the City's update to the Comprehensive plan and its desire to adopt the CAP as an amendment, we will work closely with the City's Planning and Development Department to identify ways that synergies can be made between the two efforts. This is especially important in considering how new development is made to the City; as La Crosse considers

its vision for growth in the Comprehensive Plan, we want to also ensure that future growth will align with goals of the CAP. Both plans will be more effective as guiding documents if they do not contradict each other; on the contrary, we see this opportunity to align with the Comprehensive Plan to strengthen each plan's goals and ensure that both will be successfully implemented.

The Our team will also incorporate strategies that have been developed through the Xcel-based Partners in Energy program. We are familiar with that program's process to develop energy plans and understand the value that the partnership with the utility brings. We will review planning documents, policy support, and toolkits that were developed through the Partners in Energy program to identify ways to elevate and leverage the work already done to strengthen the CAP process.

Additional La Crosse efforts, such as the Bicycle & Pedestrian Master Plan, and the Parks, Recreation, and Forestry Strategic Plan and the Green Complete Streets Ordinance, will also be reviewed to understand potential synergies with the CAP process. We will reach out to appropriate staff for these existing efforts to ensure alignment with our process.

Section 3: Plan Development

The activities and results of Tasks 1-5 will be synthesized in a CAP document. The following section describes the approach to developing the CAP, the specific deliverables, and an example of what the CAP layout might include.

Task 6. Draft Climate Action Plan

Our team will incorporate strategies identified by municipal leadership and staff during our strategy development of Task 2 and initial project engagements from Task 4. The priorities revealed during community engagement sessions and the community survey will also be incorporated into the CAP.

We will apply the experience and expertise of Slipstream and WSP from extensive energy and climate research, programming, and energy and climate action planning. The project team will review climate action plans of other communities and lift-up measures and strategies known to be successful in other communities and/or of interest to the City team (for example, we anticipate that City leadership will be familiar with other municipal climate action plans and wish to explore or emulate strategies therein). Our team will coordinate with the Climate Action Plan Steering Committee to clarify, synthesize, and prioritize climate action strategies for inclusion in the CAP. The project team will then develop a CAP framework to delineate prioritized strategies that:

- Summarize the GHG inventory that make clear the current state of GHG emissions, goals, and the gap to be addressed through the strategies of the CAP.
- Discuss detailed strategies and priority actions recommended to achieve necessary emission reductions.

A key deliverable in this phase will be a CAP outline approved by the Climate Action Plan Steering Committee. The following outline is an example layout that could be used to convey the information and priorities of this effort.

Example CAP Outline

- Letter to the community signed by City leadership
- Executive Summary
- Introduction
- Current state of emissions and sources
- Summary of process to develop the CAP
- Strategic recommendations
    - Strategy area (e.g. transportation, buildings, waste)
        - Recommendation summary
        - Specific goals and underlying strategies to achieve them (will generally be enumerated in emission reduction, though other guidance on assessing progress and indicators of success will be included where applicable)[3]
        - Equity and/or environmental justice implications (indicators of measuring progress will be suggested)
        - Policy pathways and dependencies
        - Partnership identification, if applicable, noting how community members can engage with partners to amplify climate action
        - City agencies/departments responsible for implementation
        - Implementation actions and associated timeline
        - Benefits framing (this subsection for each category will be a discussion of the non-GHG reductions, and may include health and well-being impacts, job impacts, high level cost estimates for implementation and inaction, etc., and indicators for measuring progress will be suggested)
        - Background information and discussion, including reference to intersecting initiatives, as applicable)
- General Discussion of next steps
- Conclusion
- Appendices
- Glossary

Our team will collaborate with the Climate Action Plan Steering Committee to refine the plan framework and outline for the Steering Committee's approval. The project team will use the approved framework and outline to prepare and deliver a draft CAP document to the Climate Action Plan Steering Committee for review and comment. A virtual meeting will be held between the Climate Action Plan Steering Committee, Planning and Development Department staff, and the project team to address questions and refinements necessary to finalize the CAP. The project team will refine and finalize the CAP pursuant to the conclusions of this virtual meeting. As noted in Task 4 the project team can present, co-

[3]For each prioritized strategy or measure identified we will quantify costs and emission impacts. We will be transparent in the assumptions made for each measure and how the sensitivity of those assumptions may affect the overall impact.

present, or support preparation of and be available for a presentation of the final CAP to the Common Council, based on the City's preference.

Task 7. Support City in Adoption of the Climate Action Plan and General Plan Amendments

We are committed to working with City staff to ensure the CAP is an accepted and effective planning document for La Crosse. As part of our deliverables and beyond the plan itself, our team will assist City staff in preparing presentations and short reports to obtain approval of the finalized CAP from the Climate Action Plan Steering Committee. The team will attend Climate Action Plan Steering Committee meetings to guide the committee through any questions or comments they have on the CAP components. Additionally, we will work with the Plan Commission to ensure that the CAP is approved as an amendment to the Comprehensive Plan; through our engagement with the Plan Commission early in the process, the final CAP document will be easily able to be incorporated into that Comprehensive Plan.

Finally, our team will help City staff prepare an Administrative Report to Common Council and present the finalized CAP and Comprehensive Plan Amendments for the Common Council to ultimately adopt the plan.

Timeline

The City of La Crosse's Climate Action Plan preparation will occur within approximately 18 months, as shown in the following timeline.

Task	Year 1												Year 2					
	September 2021	October 2021	November 2021	December 2021	January 2022	February 2022	March 2022	April 2022	May 2022	June 2022	July 2022	August 2022	September 2022	October 2022	November 2022	December 2022	January 2023	February 2023
Kickoff	■																	
Task 1 – GHG Inventory	■	■	■															
Task 2 – GHG Target			■	■	■													
Task 3 – GHG Forecast				■	■	■			■	■								
Task 4 – Engagement		■	■	■	■	■	■	■	■	■								
Task 5 – Coordination		■	■	■	■	■	■	■	■	■	■	■						
Task 6 – Draft Plan											■	■	■	■	■			
Task 7 – Adoption																■	■	■

Qualifications

Slipstream Qualifications

Slipstream's mission is accelerating climate solutions. For everyone. This compels Slipstream to find ways to drastically cut carbon to help fight climate change and improve

the quality of life for the residents of the communities they serve. These values align with the City of La Crosse's vision of drastically reducing environmentally detrimental carbon through community engagement, GHG inventories, and an achievable Climate Action Plan. Slipstream has facilitated sustainability planning for municipalities, researched and field-tested emerging technologies, and performed extensive work in smart, high-performance buildings and smart cities. The following examples demonstrate Slipstream's work on projects involving community-level planning; community-level programs; and policy and research. Expertise in these three areas will prepare Slipstream to effectively complete the tasks in the City of La Crosse's scope of work.

Community-Level Planning

Energy Planning Collaboration Office of Energy Innovation

Slipstream works with seven Wisconsin cities in Dane County as part of the Wisconsin Office of Energy Innovation's Energy Innovation Grant Program. Slipstream provides baseline energy assessments of governmental agencies and community resources better understand their energy usage and to address impacts of future climate change through resiliency of energy systems. This transparency in performance has led to the development of better goals and tools to assist them on a pathway for improvement.

Energy Planning Lac Courte Oreilles Band of Lake Superior Chippewa Indians

In partnership with the Wisconsin Office of Energy Innovation, the Indian Land Tenure Foundation, and St Croix Institute, Slipstream supports the Lac Courte Oreilles community in comprehensive energy planning. The goal for this effort is to develop actionable steps resulting in long-term energy sovereignty through on-site renewable generation, power purchase agreements, battery storage, and energy efficiency improvements.

UW River Falls Campus Energy Plan; River Falls, WI

Slipstream performed an extensive multi-building campus wide energy study for the University of Wisconsin–River Falls. The goal of the study was to find least-cost paths to net zero energy consumption for the entire two million square foot campus. The study narrowed the field of potential energy efficiency and renewable energy approaches, quantified the energy and carbon reduction for each proposed measure, and estimated the life cycle cost of the reductions. This study was the first step meeting a State of Wisconsin government mandate to become energy independent and the school is serving as a pilot project for the rest of the UW system facilities.

Sustainable City Planning; Middleton, WI

Slipstream provided consulting services for the City of Middleton to support updates to its 2010 Sustainable City Plan. Slipstream evaluated the City's progress toward the metric and action goals that Middleton set forth in the 2010 plan. To assist the City in setting updated sustainability goals, Slipstream incorporated the progress of clean energy technologies and markets, as well as the applicability of new sustainability strategies, into a set of recommendations for the City's updated sustainability plan. The recommendations included

both actions that the City could implement to improve its sustainability performance and aggressive, yet achievable, target metrics for the City to pursue in future years.

NASA Future Climate Study

Climate impacts on NASA facilities. Slipstream led a successful analysis of the impacts of future climate on the energy use of buildings at the NASA Stennis Space Center in Mississippi. Slipstream studied the impacts of climate variability on energy consumption, demand, and operating costs to help NASA plan for future capital expenditures and mitigate the impacts of climate change. The team collected facility property and energy consumption data for 142 buildings to characterize the energy consumption of the entire campus. The team developed an aggregate model of the campus under future climate conditions using energy models constructed and calibrated to project energy consumption of 32 buildings. The project identified specific and the most effective energy efficiency measures to adapt buildings to the projected climate impacts.

Community-Level Programs

BIT Building Neighborhood Project

Partnering with the Chicago Housing Authority (CHA) and ComEd, Slipstream is working on a pilot program to reduce energy, water, and waste consumption across the 1,000 public housing properties. To undertake this effort, Slipstream is training CHA residents as BIT Aides to assist properties in a continual performance benchmarking and improvement process. This initial pilot is be carried out across 45 CHA sites by three BIT Aides. Ultimately the goal for the project is to test the viability of community-based energy efficiency training resulting in improved building operation and creation of economic drivers for these services.

Accelerate Performance

This U.S. Department of Energy funded initiative, in partnership with the National Renewable Energy Lab, empowers owners and developers to achieve desired energy performance goals. It changes the way owners procure their buildings. Building owners prioritize project goals, specify an energy performance requirement (EUI target) and select the design and contractor teams based on their ability to meet the target. Then they measure energy performance to verify that the contract requirement is met. Slipstream has scaled this approach across the country working with partners from the Energy Trust of Oregon, Mayo Clinic in Minnesota, University of Chicago, and various commercial and educational developers in the North East.

Environmental Defense Fund Climate Corps Fellowship Technical Assistance

Slipstream has supported the Environmental Defense Fund's (EDF) Climate Corps Fellowship since 2015. Each year, the program recruits more than 100 graduate fellows and places them in various host organizations to support sustainability planning efforts and implementing a pathway to low carbon operations. Slipstream has been the technical resource for the Climate Corps Fellows and has supported sustainability master planning, emission reduction practices, quantifying energy and emissions reductions for various host organizations such as real estate portfolio owners, universities, cities, and retail chains. Slipstream supported the fellows through online discussion forums and through weekly

phone conversations to define scope of work, identify analytical tools, implement energy efficiency upgrades, and review savings estimates.

Policy and Research

Minnesota Tribal Energy and Food Sovereignty

Across multiple initiatives and partnerships with Indian Land Tenure Foundation and St. Croix Institute Slipstream, supports Tribal Communities through decarbonization and resiliency planning. This includes an ongoing study funded by the State of Minnesota to assess potential needs, a holistic view of the culturally diverse food web in Minnesota Tribal Communities on how utility CIP participation pathways can support the energy/food security nexus. Slipstream is also working on a Bush Foundation grant to develop a first of its kind a resiliency hub for First Foods aligned with modern agriculture and wildlife management practices in an ever-changing climate.

Multifamily Health and Resilience

Slipstream and their partner, Three-3, are conducting a multi-year field study to measure the health and climate resilience benefits of improving the energy efficiency of affordable multifamily buildings. Improving the energy efficiency of this key U.S. housing stock helps reduce energy costs and improve comfort for low income residents. Opportunities exist for advancing resilience of buildings against a wide range of risks, including extreme temperatures, storms, and floods. Multifamily weatherization is an important pathway to preserve affordable housing stock and reduce environmental emissions.

Stretch Codes and Building Performance Standards

Slipstream and MEEA are conducting a two-phase study on developing and implementing stretch codes and building performance standards in Illinois municipalities funded by utility stakeholders. Phase 1 developed technical and program concepts and determined program potential and feasibility by engaging with four Illinois municipalities. Slipstream found significant energy savings and interest across utility and government stakeholders in Illinois. In Phase II of the study, and are currently engaging with organizations such as the Metropolitan Mayor's Caucus, Illinois Savings Advisory Group, and with individual municipalities, to develop a path for cities to implement stretch codes and retrofit codes with the aid of utilities. Slipstream is developing savings and attribution methodologies for utility building energy code programs for SC and BPS.

WSP Qualifications

WSP's sustainability, energy, and climate change team has provided services related to the City of La Crosse's scope for nearly 20 years. WSP has recent experience in developing climate action plans and zero waste strategies and providing energy and greenhouse gas (GHG) management, goal and target setting, green power and renewable energy procurement, and climate and water risk assessment advisory services. WSP's multi-disciplinary team of 85 professionals supports clients across sectors and geographies. Over the past year, WSP has assisted more than 120 organizations on sustainability topics and are proud of the services provided and the recognition clients have received for their sustainability efforts. WSP supports many local government clients in the areas of climate

action planning, carbon reduction strategy, climate adaptation, and stakeholder engagement. Below, is a sampling of WSP's direct local government experience and further details are available upon request. Also highlighted are the relevant experiences of the proposed team's leadership roles across sustainability topics through partnerships, board appointments and speaking roles. The City is invited to contact any of the references below for information regarding the proposed team's professional service delivery on projects.

Local Government Expertise

City of Bethlehem

WSP developed the City Operations GHG inventory process and completed the annual inventory from 2006 through 2013. They identified the opportunity and supported City Council Karen Dolan in 2006 to advocate for Bethlehem to join the Mayor's Climate Protection Agreement. This effort led to the Three City Proclamation that included Allentown and Easton. They participated in the City of Bethlehem's Climate Action Working Group.

City of Allentown

WSP developed Allentown's city operations GHG inventory process and completed the City's inaugural 2007 inventory.

City and County of Boulder, CO

WSP Completed GHG emissions inventories for county- and city-wide GHG emissions from industrial, transportation, commercial and residential buildings, agriculture, and waste sectors. They developed Inventory Management System to track emissions on an annual basis and provided technical and financial analyses to assess a variety of GHG emissions reduction strategies within each economic sector. They also led a stakeholder engagement process that included stakeholders from each of the 15 municipalities in the County.

Washington Climate and Legislative Executive Workgroup

WSP examined the efficacy of existing policies for reaching the State's statutory greenhouse gas reduction goals, the potential for economy-wide policies like a cap and trade program, the impact of potential biofuels program and the interactive effects of Federal programs like tightening CAFE standards and various stationary combustion rules such as the Mercury and Toxics standards and the proposed GHG regulations on new sources.

City of Chicago

WSP USA is actively working with the City of Chicago on energy management and renewable energy procurement services. They work closely with the Department of Fleet & Facilities Management (2FM) to augment their energy management, analysis, and planning capabilities. Key activities include developing enhanced database tools that allow for informed analysis and planning, as well as evaluating multiple scenarios for achieving the City's 100% renewable energy commitment in an equity manner that generates local co-benefits from job creation to neighborhood resilience. They analyze and develop decarbonization road map, with focus on devising the optimal mix of efficiency, onsite renewable generation, and offsite renewable procurement. WSP provides renewable energy procurement advisory services, including RFI and RFP technical advisement, and transition

planning to achieve 100% renewable energy. They integrate resiliency, social equity, and environmental justice into clean energy strategy.

New York City

WSP completed a multi-year engagement with New York City's Mayor's office, beginning in 2006 developing and implementing PlaNYC, a long-term sustainability plan consisting of 127 initiatives, affecting 8.5 million people at the time of development and 9.5 million people at its completion in 2030. WSP's staff's support to New York continues, having led development of 10 greenhouse gas inventories and providing advisory services for the City's 80x50 Climate Action Plan. Through a Columbia University graduate project, WSP delivered comprehensive research and report on improving the resiliency of energy systems in the built environment of New York City for the New York State Energy Research and Development Authority (NYSERDA).

Climate Action Leadership

Greenhouse Gas Protocol

WSP served on the technical working group of the World Resources Institute (WRI) and World Business Council for Sustainable Development's (WBCSD) GHG Protocol's Scope 2 and Scope 3 Standards. They delivered numerous presentations and trainings on the GHG Protocol, including at the annual Climate Leadership Conference, which is attended by many leading cities engaged in Climate Action. A WSP team member was a contributing author of the Global Protocol for Community-Scale Greenhouse Gas Emission Inventories (GPC), the global standard guidance for community-scale GHG inventories.

Science-Based Targets Initiative (SBTi)

WSP Serves on the technical advisory group of the Science Based Targets Initiative (SBTi), advising SBTi on appropriate methods for setting and validating science-based GHG reduction targets

CDP

In 2019, WSP was selected as a CDP accredited consultancy partner for a ninth year, supporting CDP across its many programs including the CDP Cities program. WSP conducted a training on the GPC at the 2016 CDP Cities North America workshop. They participated in multiple science-based targets panels at CDP Workshops, including the 2016 CDP Cities North America workshop.

Climate Leadership Conference

WSP spoke on a range of topics at this annual conference, including on several topics specifically relevant to this scope of work: setting Scope 3 supply chain goals, cultivating climate-resilient and low-carbon supply chains, and the GHG Protocol Scope 2 Guidance. WSP has helped define the eligibility criteria for the Climate Leadership Awards, and has served as a judge for the awards for multiple years.

References

Reference 1	
Company:	City of Middleton
Name:	Kelly Hilyard
Title:	Sustainability Coordinator
Phone:	(217) 357-1860
Email:	khilyard@cityofmiddleton.us
Project Description:	Slipstream developed an energy plan for the City of Middleton municipal operations. The plan analyzed and prioritized near-term investment such as HVAC building upgrades, fleet electrification, street lighting upgrades, and distributed energy generation. Through separate engagements, Slipstream assisted the City in developing and implementing a municipal Sustainable Purchasing Policy and to update the City's Sustainable City Plan.
Reference 2	
Company:	City of Milwaukee
Name:	Matt Donath
Title:	Sustainability Program Coordinator
Phone:	(262) 483-7967
Email:	Matthew.Donath@milwaukee.gov
Project Description:	The City of Milwaukee hired Slipstream to update and administer the City's Property Assessed Clean Energy (PACE) program. Slipstream worked with City staff and engaged external stakeholders in order to implement a program structure that achieves the City's sustainability objectives, while also being accepted by the market.
Reference 3	
Company:	City of Fitchburg
Name:	Phil Grupe
Title:	Sustainability Specialist
Phone:	(608) 270-4259
Email:	Phil.Grupe@fitchburgwi.gov
Project Description:	Slipstream developed an energy plan for the City of Fitchburg municipal operations. The plan analyzed and prioritized near-term investment such as HVAC controls, converting police vehicles to hybrid motors, street lighting upgrades, and additional on-site solar energy production.

Reference 4	
Company:	City of Chicago
Name:	Angela Tovar
Title:	Chief Sustainability Officer
Phone:	312-744-9193
Email:	Angela.tovar@cityofchicago.org
Project Description:	WSP is actively supporting the City of Chicago's clean energy transition, including advising on renewable energy procurement strategies, next generation GHG emissions reductions targets, and an updated Climate Action Plan centered around equitable opportunity and benefits for low-income households.
Reference 5	
Company:	Arlington County, VA
Name:	John Morrill
Title:	(Former) Energy Manager
Phone:	703-223-2987
Email:	John.Morrill@FairfaxCounty.gov
Project Description:	WSP worked closely with Arlington County on their climate change and sustainability programs for many years, developing Arlington County's historical GHG inventories and emission forecasts that were integrated into the county's Community Energy Plan and led to the formulation of their GHG targets. Most recently, WSP developed the county's 2016 community-wide GHG inventory, which conformed with the GPC protocol requirements and provided added detail necessary to help the County with reduction strategies and goal tracking, such as a government operations GHG emissions subtotal.
Reference 6	
Company:	City of Bethlehem, PA
Name:	Matt Dorner
Title:	Deputy Director of Public Works/Chief of Engineering
Phone:	610-865-7051
Email:	MDorner@bethlehem-pa.gov
Project Description:	WSP's Sustainability, Energy, and Climate Change (SECC) team developed a justice and equity-focused community-wide Climate Action Plan (CAP) for a mid-sized American city with a population of 70,000. WSP managed all aspects of plan development, including stakeholder and public engagement, mitigation target setting and achievement roadmap, climate vulnerability assessment, and drafting of the plan.

Cost Proposal

This CAP process may be completed within 18 months for a total of $187,500. This cost proposal delineates our estimate by major task and key personnel.

Task	Key Personnel	Fee
Task 1 GHG Inventory	Dan Streit, Jonathan Dickinson	$ 45,000
Task 2 GHG Target	Dan Streit, Connor Jansen, Jenny Carney, Jeannette LeZaks, Robin Lisowski	$ 22,000
Task 3 GHG Forecast	Dan Streit, Jonathan Dickinson, Jeannette LeZaks	$ 22,000
Task 4 Engagement	Robin Lisowski, Jeannette LeZaks, Dan Streit	$ 40,000
Task 5 Coordination	Connor Jansen, Jeannette Lezaks	$ 15,000
Task 6 Draft Plan	Connor Jansen, Robin Lisowski, Jeannette LeZaks, Dan Streit	$ 34,000
Task 7 Adoption	Jeannette LeZaks, Connor Jansen, Dan Streit	$ 9,500
Total	**18 months**	**$ 187,500**

Conclusion

Slipstream and WSP are excited to propose technical assistance, facilitation, and partnership to the City of La Crosse in the development of your Climate Action Plan.

La Crosse's climate leadership will serve as an example for other mid-size cities in Wisconsin, the Midwest, and throughout the nation. Our team is ready to support La Crosse in development of an equitable Climate Action Plan that improves the quality of life for residents and creates a strong business ecosystem. Our plan will mobilize community action around climate change and will include:

- Greenhouse gas (GHG) emission inventories
- Climate risk assessments
- Ambitious climate mitigation, resilience, and energy targets
- A 2050 carbon neutrality roadmap
- Zero-waste goals through reduction and reuse

Thank you for your commitment to addressing climate change and the opportunity to collaborate on The City of La Crosses' Climate Action Plan.

Appendix A – Potential GHG Activity Data Sources

Table 1 - Municipal Inventory

Emissions Source	Data Quality	Proposed Data Source
Scope 1 Emissions		
Building/facility natural gas use	Tier 3	Utility Billing data for municipal facilities
Municipal fleet vehicles	Tier 2/Tier 3	• Invoices for fuel deliveries to municipal fleet centers (if applicable) • City fleet card purchase records (if applicable) • City fuel cost budget expense for 2020 (if other data sources are not available.
Public transit vehicles	Tier 2/Tier 3	• Invoices for fuel deliveries to vehicle fueling center (if applicable) • City fleet card purchase records (if applicable)
Process and fugitive emissions from wastewater treatment	Tier 2[4]	• Gallons processed • Gallons of liquid biosolid processed • Pounds of cake biosolids processed
Scope 2 Emissions		
Building/facility purchased electricity or district heat/cooling	Tier 3	Utility Billing data for municipal facilities
Streetlight and traffic light purchased electricity	Tier 2/Tier 3	• Utility Billing data • (If lights are not metered, use annual hours of operation and power ratings)

Table 2 - Community Inventory

Emissions Source	Direct/Indirect Data	Proposed Data Source
Scope 1 Emissions		
Residential natural gas use	Tier 3	Utility data aggregate residential natural gas sales to City of La Crosse service locations
Commercial and Industrial natural gas use	Tier 3	Utility data – Aggregate commercial and industrial natural gas sales to City of La Crosse service locations
Residential fuel oil use	Tier 2	Sales volume survey of suppliers serving the La Crosse region – adjusted based on estimated percent of sales to City addresses.

[4] Wastewater treatment plant serves multiple municipalities. If inputs from each municipality are not separately measured, may allocate emissions on a per capita basis.

Emissions Source	Direct/Indirect Data	Proposed Data Source
Commercial and industrial fuel oil use	Tier 2	Sales volume survey of suppliers serving the La Crosse region – adjusted based on estimated percent of sales to City addresses.
Residential propane use	Tier 2	Sales volume survey of suppliers serving the La Crosse region – adjusted based on estimated percent of sales to City addresses.
Commercial and industrial propane use	Tier 2	Sales volume survey of suppliers serving the La Crosse region – adjusted based on estimated percent of sales to City addresses.
Gasoline use from on-road vehicles	Tier 2	Sales volume survey of gasoline retailers in City; VMT (downscaled from state/county data)
Diesel use from on-road vehicles	Tier 2	Sales volume survey of diesel retailers in City; VMT (downscaled from state/county data)
Gasoline use from off-road vehicles	Tier 1	Default estimates as recommended by the GPC
Diesel use from off-road vehicles	Tier 1	Default estimates as recommended by the GPC
French Island waste incinerator	Tier 2	Utility data on mass of waste incinerated
Solid waste sent to La Crosse County landfill	Tier 3	Mass of waste sent to La Crosse County landfill, waste characterization
Diesel fuel for marine navigation	Tier 1	Default estimates as recommended by the GPC
Jet fuel and aviation gasoline from aviation	Tier 1	Default estimates as recommended by the GPC
Scope 2 Emissions		
Residential purchased electricity and district heat/cooling	Tier 3	Utility data - Aggregate residential electricity sales to City of La Crosse service locations
Commercial and Industrial purchased electricity and district heat/cooling	Tier 3	Utility data – Aggregate commercial and industrial electricity sales to City of La Crosse service locations

Resumes

ROBIN LISOWSKI

Slipstream | P: 608.729.6918 | rlisowski@slipstreaminc.org

Director of Research & Innovation

Robin is an operational and sustainability leader with more than 20 years of experience guiding governmental, utility, nonprofit, and commercial organizations to greater levels of efficiency and financial success. She leads Slipstream's new product development practice to innovate and operationalize new programs and services and is passionate about centering people in clean energy initiatives.

Previous employment

Slipstream | Madison, Wisconsin | 2008-present
Director of Research & Innovation, Director of New Business, Director of Client Services Support & Portfolio Management, Assistant Director of Business Programs

Directs the development of emerging products and services to deliver on Slipstream's mission while meeting the needs of the organization and greater community. Leads a team to conduct research, analysis, and strategy development necessary to support ideation, design, and pilot programs. Performs business modeling and prepares business cases for product and service selection, builds partnerships with complementary service providers and industry experts, and tracks market trends. Key accomplishments at Slipstream:

- Designed emerging energy and sustainability services to catalyze greenhouse gas emission reduction using carbon offset strategies and a diverse set of financing streams.
- Serves as the organization's sustainability officer, leading sustainability policy, planning, implementation, and reporting. Developed and implemented a net zero policy, including energy management planning, green energy purchase, and offset strategy.
- Developed new infrastructure for managing client program portfolios of more than $150 million.
- Designed and implemented key performance indicators for monitoring business development functions, including a system for maintaining and reporting results.
- Led a team to achieve more than 100 percent of its annual energy savings goals multiple years.

Education, Affiliations, and Awards

- Master of Arts Degree in International Public Affairs, University of Wisconsin—Madison
- Bachelor of Arts Degrees in Political Science and Spanish, Augsburg College
- GHG Inventory Quantifier Certification, HRCarbon, 2015
- Lean Six Sigma coursework, 2006
- President, Sustain Dane, 2018-present; Board of Directors, 2015—present
- Member, RE AMP, 2016—present and Wisconsin Climate Table leadership team member 2018-2019
- Member, Association of Energy Services Professionals (AESP), 2008—present

CONNOR JANSEN, PE, LEED AP BD+C

Slipstream | P: 608.210.7168 | cjansen@slipstreaminc.org

Slipstream—Technical Services Director
Connor Jansen has more than 14 years of leadership experience in the development of energy-efficient and sustainable buildings. His approach focuses on the engagement of stakeholders and the integration of technical strategies to achieve high-performance outcomes. Passionate about combining his deep knowledge of building design and utility programs, Connor develops innovative processes and collaborative partnerships that advance measurable impacts in energy equality through efficiency.

Selected projects

ComEd Energy Efficiency Program affordable housing new construction
Connor managed the delivery of the ComEd affordable housing new construction offering from 2017 to 2021, which supports long-term affordability and healthy homes for low-income residents. Connor was responsible for program KPIs, portfolio energy savings, technical leadership, forecasting, evaluation, and customer satisfaction. Currently, Connor is leading the development of a Passive House Pilot Program.

Tribal Energy Sovereignty – Various
Working with tribal communities in Wisconsin and Minnesota, Connor is providing technical capacity building and design advice for energy planning and net zero building design.

ComEd Pilots – BIT Neighborhood Program
The BIT Neighborhood pilot program, designed and overseen by Connor, creates job opportunities and reduces barriers for low-income participation in utility programs. This pilot trains Chicago Housing Authority residents on benchmarking and continuous improvement strategies in the BIT platform, which assist existing buildings in better operation.

Minnesota CARD – Passive Building Advancement
Connor works with the University of Minnesota, and key stakeholders, to characterize and advance the uptake of Passive buildings within the state. Connor is also working with that team on panelized over-cladding for existing housing to improve conventional weatherization.

Building Performance Consulting – Various
Connor helps lead Slipstream's high-performance building practice through consulting, design advice, and analysis, which helps clients achieve exceptional performance within the built environment. His areas of expertise include energy, indoor environmental quality, water, passive systems, and daylighting. His work ranges from net-zero campus planning for communities to the design of sustainable national museums and stadiums to grid-independent orphanages. Accolades include LEED Platinum, Well Building, PHIUS+, and Living Futures certifications.

Selected engagements

Illinois Green Alliance—Board of Directors (2017-2021)
The Illinois Green Alliance is a membership-driven non-profit that works to promote green buildings and sustainable communities. Connor has served as a volunteer, strategic advisor, and financial officer for the organization.

Midwest Building Decarbonization Coalition—Leadership (2020- Present)
The Midwest BDC seeks to develop equitable strategies to achieve zero emissions from the building sector by 2050. Connor serves as a technical advisor and team leader.

JEANNETTE LEZAKS

Slipstream | P: 608.210.7156 | jlezaks@slipstreaminc.org

Slipstream—Interim Director of Research and Innovation

Jeannette has 15 years of experience developing and managing residential, commercial and industrial energy efficiency research and planning projects. She applies technical research to examine how people use energy and combines skills in billing analysis, planning and econometrics to identify energy impacts and opportunities. Jeannette also develops survey and interview instruments, conducts interviews, and analyzes energy data to develop advanced program approaches that help utilities and government entities reach their energy and efficiency goals. Jeannette also co-chairs the Sustainable Madison Committee where she works to advance local environmental policy.

Selected Projects

Saving energy and carbon emissions with load shifting. Jeannette led a project to gather load shape data for 14 measures and integrate them into a model of Midwestern time valuation of energy efficiency, to understand the energy, energy cost, and emissions impacts of load shifting.

Energy planning for municipalities. Jeannette led a municipal energy planning effort with seven communities in Dane County, Wisconsin. Slipstream managed the project, provided analytical support to develop an energy profile for each community and identified near-term opportunities for energy and cost reductions. The project also leveraged collaborative opportunities.

Commercial benchmarking analyses. Jeannette led two innovative studies for Midwestern utilities that paired monthly electricity and gas data with publicly available data to help identify under-performing buildings. The goal of these studies was to provide utilities with more detailed information of their customers' buildings to support future energy efficiency programming.

Minnesota commercial energy baseline and market characterization study. Jeannette led a study to characterize the energy efficiency of new and renovated commercial building and identify specific opportunities for increased energy savings through and beyond existing commercial energy codes. The study included detailed plan reviews and site visits of recently renovated or constructed buildings. Jeannette managed the project and conducted analysis of the data collected.

Education

- Master of Science, environment and resource, energy analysis and policy concentration, University of Wisconsin—Madison.
- Bachelor of Science, natural resources, Cornell University, Ithaca, New York.

Memberships and associations

- Co-Chair, City of Madison's Sustainable Madison City Commission

DAN STREIT

Slipstream | P: 608.729.6954 | dstreit@slipstreaminc.org

Product Developer – Finance, Renewable Energy & Sustainability Services
Dan is an experienced product developer with expertise in municipal energy planning, as well as residential and commercial clean energy financing. He has assisted seven Wisconsin communities in developing municipal energy and/or sustainability plans and has advised communities on policy issues related to sustainability. Dan represents Slipstream as an advisory member of the Wisconsin Green Tier Legacy Communities and has assisted that network in creating a robust mechanism to track progress of member communities on a broad array of sustainability metrics.

Dan also drives the development of Slipstream's commercial clean energy financing service line. In this role, he supports Slipstream's administration of PACE programs in four states and has experience developing new PACE programs. He seeks to poise the organization to provide financing solutions, consulting services, and software that enable households, property owners, businesses, and local governments to operate more efficiently and reduce negative environmental impact.

Professional Experience

Slipstream | Madison, Wisconsin | 2006-present
Product Developer – Sustainability Services, Finance & Renewable Energy, Program Manager—Energy Finance Solutions, Process Manager, Program Supervisor, Program Coordinator
Leads the development of Slipstream's Finance, Renewable Energy, Regenerative Agriculture Financing, and Sustainability Services product lines. The services within the product lines include GHG inventory development, sustainability planning and reporting, C-PACE program development, Lender Referral Service, sustainable purchasing, and financing technical assistance service offerings. To advance these offerings, Dan defines and develops technical assistance service, consulting strategy, and software products to meet market needs. He conducts research to understand the competitive landscape and identifies opportunities for Slipstream's product offerings to accelerate the world's transition toward clean energy. In previous roles, Dan managed day-to-day operations of financing programs, provided consulting and support services to clients and trade allies, and oversaw loan origination, underwriting, and income qualification processes. Key accomplishments at Slipstream:

- Initiated and led the development of Slipstream's Sustainability Services product line.
- Assisted seven Wisconsin municipalities in creating municipal energy and/or sustainability plans.
- Supported the development of C-PACE programs in Illinois, Virginia, and Pennsylvania.
- Co-managed the PACE Wisconsin program
- Conducted market research to identify financing strategies for energy improvements to multifamily buildings.
- Engaged a national network of financing providers to create the Lender Referral Service.
- Advanced Slipstream's thought leadership in the field of sustainable purchasing.
- Tripled Slipstream's Energy Finance Solutions (EFS) volume of funded loans in three years.
- Presented at the following industry events and conferences as a subject matter expert:
  - ReCONNECT, the conference of the American Institute of Architects Illinois chapter, 2020
  - Growing Sustainable Communities Conference, 2018 and 2019
  - Michigan Sustainability Conference, 2018
  - Milwaukee Sustainability Summit, 2018
  - Michigan Green Healthcare Conference, 2017

Twin Cities Habitat for Humanity | Minneapolis, Minnesota | 2001-2006
Family Services Senior Associate
Oversaw pre-qualification and approval processes for Habitat for Humanity homes. Led task forces to design new program policies, and to identify and analyze trends impacting the program. Monitored

performance of a $36 million loan portfolio. Set lending terms, conducted loss mitigation, and provided training.

Education, Affiliations, and Awards

- Bachelor of Arts Degrees in Political Science and French, St. Olaf College
- GHG Inventory Quantifier Certification, CSA Group, 2016
- GRI Certified Training Program, Deloitte & Touche, LLP, 2015

MADDIE KOOLBECK

Slipstream | P: 608.210.7128 | mkoolbeck@slipstreaminc.org

Slipstream – Research Analyst
Maddie provides analytical support for projects relating to energy efficiency, market characterization and potential, and emerging technology. She utilizes her economics and policy background to perform statistical analyses of programs and emerging technology. She is also actively involved in work related to community energy planning and greenhouse gas tracking. She also develops survey instruments and conducts surveys to further understand the current state of the market and stakeholder viewpoints.

Selected projects

Energy Planning for Municipalities. Maddie assisted with a municipal energy planning effort with seven communities in Dane County, Wisconsin. She provided analytical support to develop an energy profile for each community and identify near-term opportunities for transportation and streetlighting energy and carbon reductions.

Market Potential for Saving Energy and Carbon Dioxide with Load Shifting Measures. Maddie was a key member of a CARD-funded project focused on understanding the energy, energy cost, and carbon emissions impacts of measures that both save electricity and shift the time that load occurs. She was actively involved with mining existing data sources to estimate cost and emissions savings as well as developing the analytical framework.

State energy policy analysis support. Maddie has been involved in Slipstream's support of the development of a clean energy plan for the state of Wisconsin and the analysis of the impacts of a proposed clean energy bill in another Midwest state. Maddie supported analysis of the impacts of various policy options, including the impact on carbon emissions and health.

Low-income community solar journey map. Slipstream conducted research on low-income community solar programs with a specific focus on the customer's process and the intersection with other forms of income and energy assistance programs. Maddie completed the research on existing programs, including secondary research and interviews with stakeholders that successfully administer existing programs.

Columbia Gas of Ohio impact evaluation. Maddie leads the impact evaluations of six residential and commercial efficiency programs for Columbia Gas, including their low-income weatherization program. The evaluations include analysis of pre/post billing data, and the application of engineering calculations from the state technical resource manual. She also performs cost-effectiveness calculations for each of the programs. Lastly, she performs ad-hoc analyses on potential programs to help Columbia Gas determine the viability of new programs or changes to program design.

Education

- Master of Public Affairs, energy analysis and policy concentration, University of Wisconsin—Madison
- Bachelor of Arts, economics and environmental studies, Coe College, Cedar Rapids, Iowa

JENNY CARNEY, LEED Fellow, LEED AP O+M

Vice President, Sustainability, Energy and Climate Change

14 years with the firm

18 years total

Professional qualifications

LEED Fellow

LEED AP O+M

Education

Master of Science, Forest Ecosystem Ecology, University Wisconsin, Madison, WI, 2004

Bachelor of Arts, Biology and Environmental Science, Lawrence University, Appleton, WI, 2000

Professional memberships

LEED Project Reviewer

RESET ASP

Fitwel Ambassador

CAREER SUMMARY

Jenny is a Vice President of WSP's Sustainability, Energy and Climate Change team. She's been working in the realm of sustainability in the built environment since 2004, pivoting from her early work as a field ecologist. Prior to joining the green building community, Jenny worked as a terrestrial ecology and climate change researcher, environmental program developer and manager, and community-based environmental outreach specialist.

Jenny oversees WSP project work related to enhancing the performance of building portfolios, including standardizing and documenting O&M best practices, performance-based benchmarking, sustainability programming and reporting, and green building labeling and certification. Building off her early work in field science, Jenny has extensive experience working with large, longitudinal empirical data sets, including collecting and scrubbing datasets to ensure root data quality; using advanced statistical analysis such as multivariate regression to elucidate patterns, relationships, and opportunities in building performance data; and communicating analysis results to a variety of stakeholders.

PROFESSIONAL EXPERIENCE

Select Volunteer / Industry Leadership Experience:

Adjunct Faculty, Circulary Economy, Northwestern University	2021 to Present
Co-founder and Advisory Board Member - BIT Building Program	2014 to Present
Chair, Carbon Drawdown Advisory Board, USGBC-Illinois	2017 to Present
Member, USGBC Social Equity Working Group	2016 to 2020
Chair, Board of Directors, USGBC-Illinois	2013 to 2016

Select Project Experience:

Zero Waste Strategy & Program Development for Confidential Global Technology Company: Subject matter expert and lead waste auditor for global energy, water, and waste assessments. Provided audits at more than 10 large international campus locations to identify operational and capital improvements in support of corporate efficiency and zero waste objectives. Led strategy and implementation of zero waste strategy for data centers, leading to succesfull facility-level certification via UL Zero Waste to Landfill standard.

Renewable Energy Strategy and Climat Action Plan Devleopment for the City of Chicago: WSP USA is actively working with the City of Chicago on climate action planning and renewable energy procurement services. Key activities include updating the City' emissions reduction targets and climate action plan, and evaluating multiple scenarios for achieving the City's 100% renewable energy commitment in an equitable manner that generates local co-benefits from job creation to neighborhood resilience.

JON DICKINSON

Practice Leader, Sustainability, Energy and Climate Change

Years with the firm

3

Years total

19

Areas of Practice

Climate Change Mitigation and Adaptation Planning, Greenhouse Gas Measurement and Reporting, Sustainability Strategy

Languages

English

CAREER SUMMARY

Jon Dickinson is a Practice Leader on WSP's Sustainability, Energy and Climate Change team, with experience in in climate change mitigation and adaptation planning, greenhouse gas emissions measurement and reporting, and comprehensive sustainability plan development and implementation. Over the last 19 years, he has supported climate change mitigation and adaptation initiatives for New York City, completed community-scale and government operations greenhouse gas inventories for numerous U.S. cities, developed corporate carbon management strategies, and provided technical support for the development of city climate change mitigation plans. Additionally, Jon is a Lecturer at Columbia University's Master of Science in Sustainability Management program, where has taught 16 semesters of a graduate course on greenhouse gas measurement and mitigation strategy development.

EDUCATION

Master of Marine Affairs, Coastal Zone Management, University of Rhode Island, Kingston, Rhode Island	2001
B.A., English, Hobart College, Geneva, New York	1993

ADDITIONAL TRAINING

GBCI-certified Urban Greenhouse Gas Inventory Specialist	2018

SELECT PROJECT EXPERIENCE

- **Sidewalk Labs, Toronto, Canada, Sustainability Pillar of Master Innovation and Development Plan:** project manager for assessment of greenhouse gas emissions implications for new and developing technology usage at city level. Analyzed feasibility of public greenhouse gas emissions commitments from a suite of interdependent technologies managing electricity generation, building energy use, water, waste, and transportation.
- **C40 Cities Climate Leadership Group Climate Adaptation and Mitigation Interaction Assessment Tool:** project manager for project to develop tool to assess complementary and conflicting interactions between current and proposed climate adaptation and mitigation initiatives in cities.
- **City of New York Greenhouse Gas Emissions Inventories, New York, NY**: senior policy advisor and consultant, responsible for completing all phases of New York City's annual community-scale and government operations greenhouse gas emissions inventories from 2007-2013, 2015-2016, provided technical assistance supporting 2017 and 2018 greenhouse gas inventories.
- **City of New York 80x50 Action Plan:** consultant to New York City Mayor's Office of Sustainability, provided advisory services to the City of New York's 80x50 Action Plan development, managing the integration of greenhouse gas mitigation strategies across buildings, power, transportation, and waste sectors.
- **C40 Cities Climate Leadership Group Technical Assistance**: consultant to C40 Cities Climate Leadership Group, provided technical support and training to 12 North American C40 cities in updating their community greenhouse gas emissions inventories to meet Global Protocol for Community-Scale Greenhouse Gas Emission Inventories (GPC) standards.