



**Addendum #2
October 15, 2018**

**Town + Gown Request for Proposals:
Energy Infrastructure – Pathways to Achieve 80x50 Study**

Section I of the New York City Department of Environmental Protection (“DEP”) Request for Proposals (“DEP T+G RFP”), entitled Energy Infrastructure – Pathways to Achieve 80x50 Study, permits, in Paragraph C, Consultants to make an inquiry or request for a clarification or explanation with respect to such DEP T+G RFP in writing no later than 5 P.M., October 3, 2018. Addendum #1 to this DEP T+G RFP, which was issued on October 2, 2018, extended the due date for inquiries and requests from Consultants for Clarification or Explanation to 4 P.M., October 9, 2018. In the event DEP, in consultation with the Mayor’s Office of Sustainability (“MOS”), determined that it is necessary to respond to such inquiry or request in writing, such response will be furnished as an addendum to such DEP T+G RFP to all Consultants as described in Paragraph D. **This Addendum #2 is such an addendum.**

Paragraph D requires that this Addendum #2 become part of the requirements for such DEP T+G RFP, and sent to all Consultants to which such DEP T+G RFP was issued. **In addition, Paragraph D requires each Consultant submitting a Proposal in Response to acknowledge receipt of this Addendum #2 to such DEP T+G RFP, by attaching an original signed copy of this Addendum #1 to its Proposal in Response.**

Questions received and DEP’s responses:

1. RFP states in section 3.1, “Develop and assess at least three (3) paths, optimizing for feasibility, reliability, cost and cumulative emissions reductions to achieve the 80x50 goal.” We wish to clarify what qualifies a path. Are we able to choose a set of levers for a path or they will be given to us by the Study Team?

Response: The levers for each path will be developed based upon what is feasible, and should be done in general coordination with the Study Team. The goal is to develop paths that are distinctive enough from one another so that different implementation, cost and other tradeoffs can be considered (e.g., one potential path could be one where we look at full electrification/no gas; and another that considers a future with more renewable gas).

2. There are different technology options listed, yet each one of them potentially contains many sub-elements. Could a combination of sub-elements be considered a path?

Response: *Yes, in theory, it could be part of one path, but you would need a combination of different technology options to achieve the end goal of 80x50, not just a selection of sub-elements within one technology set (e.g., you will most likely need to pursue significant energy efficiency improvements AND decarbonize on-site heating AND ensure the electricity supply continues to become more renewables-based; and the technology options to do all three of these things will be different).*

3. We have a set of constructed buildings that we wish to include in our research. The outcome will be extrapolated for a wide range of building types, though computer simulation and monitoring. Would this be considered a path?

Response: *This question is not clear, but understanding how buildings can feasibly reduce their greenhouse gas emissions, and at what cost, will be critical to any path.*

4. RFP section D states that there will be tools and data sets, such as Building Energy Model that will be provided by Study Team. We understand that it is critical to use the data sets. Are you able to choose other tools and methodologies that may conform to the provided data set?

Response: *Yes, definitely. The Building Energy Model is a limited static Microsoft Excel tool. The Consultant will need to use other tools/models and methodologies to complete this Study.*

5. In Proposal Form, Article 2. "Proposal in Response to Town+Gown RFP". Do we have a length limit in the proposal writing, especially 2.1 Research Project Objectives, and 2.2 Work Products and Deliverables?

Response: *The curriculum vitae and resumes that are submitted with the Proposals in Response cannot be more than three (3) pages per person for the Senior Personnel on the Academic Team. There are no other page limitations to the Proposals in Response. See Section 3.3 in the Town+Gown Master Academic Consortium Contract for the specific provisions governing Proposals in Response.*

6. Is there any limitation for the amount of proposal that an institution can submit. As well, we would like to know if there is any limitation in the amount of proposal that a faculty or scientist can be part of, either as PI or Co-PI.

Response: *No, there are no limitations to the number of Proposals in Response that a single Academic Partner can submit in response to this DEP T+G RFP. There are also no limitations on the number of Proposals in Response that a faculty member or scientist can be a part of.*

7. Please clarify what information will be considered confidential. Page 10 of the RFP provides a defined list of data that should be treated as confidential, but then Section 5.08 Confidentiality on page 15 indicates that all of the reports, information, or data, furnished to, or prepared, assembled or used by, the Consultant under the Consortium Contract and applicable Task Order shall be considered confidential.

Response: Please see the amendment to Section II, part D of the DEP T+G RFP below. We have attempted to clarify what from the list on p. 10 should be treated as fully confidential in this Addendum #2.

8. Section 5.08 Confidentiality on page 15 speaks to the possibility of receiving personally identifiable information (PII). Please clarify what types of PII will be included and whether those entities providing the relevant information can remove any PII or limit the disclosure of such.

Response: We will try to limit this as much as we can. It is in everybody's best interest to remove any PII.

9. The insurance requirements on pages 18-19 are blank. Please confirm that the Consortium Contract Insurance Requirements apply.

Response: The Consultant and all of its subconsultants will be required to provide Workers' Compensation Insurance, Disability Benefits Insurance, and Employers' Liability Insurance.

Section II, part D of the DEP T+G RFP will be amended as follows:

D. Key Inputs/Data to be Provided by Study Team.

All data from the list below should be treated as confidential. Please see Section IV, part D below regarding treatment of confidential data.

- MOS to provide:
 - Outputs from the City's Roadmap to 80x50 study including:
 - Building Energy Model: An Excel-based model that scales the deep energy retrofit paths identified in the Buildings Technical Working Group across all buildings citywide and allows users to change the percentage of buildings that pursue different paths, as well as the number of buildings that convert to biofuel, impact of energy code updates to reduce energy use in new construction, adoption of distributed solar PV, and district thermal systems to calculate the 2050 emissions and energy use by building sector.
 - 2050 Decision Model: An Excel-based model that scales the 80x50 strategies across Buildings, Energy Supply, Transportation and Waste sectors, and allows for users to change the adoption rate of those strategies to understand the GHG impact through 2050.

- Community Energy Planning Model: A geospatial assessment of the technical potential of a range of energy resources (e.g., combined heat and power (“CHP”), combined cooling, heating and power (“CCHP”), solar, wind, water source heat pumps, geothermal) and incorporates a prioritization methodology that considers electricity, heating and cooling density at the block level in addition to social risk and vulnerability factors.
 - Energy supply outputs, generated from a least-cost economic dispatch model, including fuel mix and carbon intensity of the New York Independent System Operator (“NYISO”) and the energy supply for NYC every five (5) years between 2016 to 2050 across eight (8) scenarios.
 - Outputs of transportation model scenarios and impacts of different “action bundles” (developed via the NYMTC Best Practice Model), such as:
 - City-controlled transit expansion and access improvements
 - Transit expansion and service investment outside City control
 - Walking investments
 - Biking investments
 - Prioritization of street space to low-carbon modes
 - Technology (user side): transportation demand management and increasing travel choices
 - Technology (City side): data analytics, network efficiency and congestion relief
 - Pricing strategies: parking, new tolls and/or discounts and/or taxes and/or cordon charges
 - Shared mobility and reduced private vehicle ownership
 - Autonomous vehicles and limiting vehicle miles traveled (“VMT”)
- Inputs and outputs to the City’s Buildings Technical Working Group, as discussed in the report, *One City Built to Last*, including:
 - Deep energy retrofit paths that achieve 40% to 60% energy reductions in eight (8) typologies representing about 65% of the building area. Four (4) paths for each typology were developed with industry experts that emphasized optimizing existing systems, converting to hydronic distribution, electrifying heating, and recladding.
 - Assumptions for population and building area growth by building typology by 2050.
- Data on vehicle miles traveled, number of vehicles, occupancy of vehicles, gasoline/fuel consumption of vehicles, mode share, number of trips, and projected EV adoption needed to achieve the 80x50 goal.
- Data related to EV adoption and projected utilization
- Other data as determined by Research Project needs

- National Grid to provide, subject to the terms and provisions of the Non-Disclosure Agreement in Attachment B:
 - Gas consumption data for National Grid’s service territory in New York City, including a proxy for hourly peak demand and average gas consumption for different customer segments and geographies as determined to be relevant by the Study Team
 - Long-range planning forecasts for the City for gas consumption
 - Energy efficiency potential and projected uptake/adoption data (gas), if available and deemed valid by National Grid
- Con Edison to provide, subject to the terms of the Non-Disclosure Agreement in Attachment C:
 - 2018-2038 base forecasts for electric (winter and summer), gas (daily) and steam (winter and summer), including peak demands and projected sales volumes for NYC
 - Reserve requirements for electric supply, incremental generation, transmission and distribution capital and operations and maintenance cost assumptions, and levelized costs of energy (“LCOE”) for renewable energy resources
 - Average energy consumption (gas, electric, steam) for small, medium, and large commercial and residential customers for Con Edison’s NYC service territory
 - Energy efficiency potential and projected uptake/adoption data (gas, electric), if available and deemed valid by Con Edison

All data from the list below are not confidential, and therefore, not subject to the confidentiality requirements in Section 5.08 of the Town+Gown Master Academic Consortium Contract as indicated in the earlier version of Section IV, part D of the DEP T+G RFP. However, any published materials that use this data must not include any personal identifying data. This specific requirement may be subject to a separate non-disclosure agreement.

- MOS to provide:
 - Inputs and outputs to the City’s Buildings Technical Working Group, as discussed in the report, *One City Built to Last*, including:
 - Development of 21 building typologies based on building use, height, and age assigned by Borough, Block, and Lot to all properties in NYC as of 2015. These typologies indicate a higher likelihood of certain building systems.
 - Assumptions of energy use by type and end use for each building typology using the 2014 GHG Inventory and Local Law 87 energy audit data.
 - Energy savings, costs, and GHG savings for nearly 100 low to medium Energy Conservation Measures (“ECMs”) as developed by a team of engineers, architects and industry experts.
 - Outputs from the *Deep Energy Retrofit Analysis Tool* Study
 - City datasets, including:

- Local Law 84 Benchmarking Data (2010-2016) - energy use by type for all properties required to benchmark, which generally includes all properties over 50,000 square feet and City buildings over 10,000 square feet.
- Local Law 87 Energy Audit Data (2013-2016) - data collected for all properties that have been required to complete energy audits. Properties, generally over 50,000 square feet, are required to complete energy audits once every ten (10) years. This data includes building systems, energy use by end use, and recommended energy conservation measures.
- Department of Citywide Planning PLUTO dataset with Borough Block and Lot, Building Classification, Building Area, etc. for NYC properties.

All other terms and conditions in the DEP T+G RFP remain unchanged.

Institution Name: _____

Acknowledged by: _____

Title: _____

Date: _____

[NOTE: to be attached to Proposal in Response]