

City of Beacon Street Lighting
TOTAL PROJECT SUMMARY
12/22/2015

(Yes (N)o (O)ption	ECM No.	Energy Conservation Measure	Total Measure Cost ¹ (\$)	Annual Electric Savings (kWh)	Annual Utility Charge Savings (\$)	Average Annual Maintenance Costs (\$)	Annual O&M Savings (\$)	Annual Electric Savings (\$)	Total Annual Savings (\$)	Simple Payback Period ²	Estimated Total Incentive ³
Y	1	Street Lighting with 3% Extra Stock ⁵	\$1,643,798	819,495	\$ 174,542	\$ 34,718	\$139,825	\$63,925	\$203,750	8.1	\$73,755
Y	2	Traffic Signals	\$93,095	61,015	\$ (1,598)	(253)	\$-1,345	\$5,602	\$4,256	21.9	\$5,491
Y	3	Estimated Cost to Purchase Lights from Central Hudson	\$333,450	0			\$0	\$0	\$0	0.0	\$0
PROGRAM TOTALS - Recommended Measures			\$2,070,342	880,510	\$172,945	\$34,465	\$138,479	\$69,527	\$208,006	10.0	\$79,246
Total EPC Contract Amount			\$1,736,892								

NOTES:

- TOTAL MEASURE COST includes direct construction costs (subcontractor material and labor) and DOES include fees for the following services: Energy, Electrical and Mechanical engineering, Construction documents, Financing assistance services, Subcontractor coordination and administration
- SIMPLE PAYBACK periods DO NOT include incentives. Payback is given by the total measure cost divided by total annual savings.
- ESTIMATED TOTAL INCENTIVE is based on NYSERDA's Existing Facilities Program Performance Based Incentive at a rate of \$0.12/kWh and is subject to NYSERDA approval, program rules and modifications, and eligibility. This incentive rate does not account for customer-secured third party firms or their costs to provide program deliverables, such as calculations.
- Costs for make ready of poles and street lighting purchase are estimated and will be finalized during negotiations with CHGE.
- Street Lighting cost are based on moderately priced fixtures. Fixture style and manufacturer will be finalized with the city's input and may increase or decrease the project cost.
- ANNUAL O&M SAVINGS are a summation of the Annual Utility Charge Savings and the Average Annual Maintenance Costs



ASSURED PERFORMANCE CONTRACT

EXHIBIT A-PROJECT SCOPE OF WORK

1. TOTAL PROJECT SUMMARY

- 1.1 See attached to this Schedule, the Total Project Summary dated [December 22, 2015] (the "Summary")
- 1.2 It is understood by and between Wendel and Owner that the Summary sets forth a list of various energy conservation measures, facility improvement measures and operational efficiency improvements (collectively the "Measures and Improvements"), which will result in energy savings, increased revenues or allow the Owner to avoid future capital or operation costs. The parties further agree that the pricing and scope of work set forth in the Summary, is only an estimate, and, at the time of the execution of this Assured Performance Contract, Wendel is in the process of procuring final pricing and that the scope of work may be modified due to the Owner, Wendel or regulatory agency requests.
- 1.3 **Project Modifications.** The parties agree that at the time of the execution of this Assured Performance Contract, (i) Wendel is in the process of procuring final pricing for the Project set forth in the Project Development Letter Agreement and (ii) that the Project Scope of Work may be subject to modification through Project Design Contract or Project Build Contract change orders at the request of Owner, Wendel or regulatory and/or funding entities having jurisdiction. Subsequently, the parties agree that at the time of Contract signing the Project price and scope of work set forth in the Exhibits attached hereto and summarized in the Total Project Summary (Exhibit A, Attachment 1) is a reasonable estimate subject to potential reassessment and modification due to subsequent changes in the Project. When the Project price and scope of work has been finalized, Wendel will timely provide Owner with updated versions of the attached Exhibits to reflect the final Project.
- 1.4 Once the final pricing and scope of work is determined, Wendel will provide Owner with the final pricing and scope of work for all those Measures and Improvements for which the final pricing is in accord with the estimates provided by Wendel. Based on the foregoing, it is agreed by the parties that within fifteen (15) days of Wendel providing Owner with the final pricing and scope of work described in this Exhibit A, Owner shall provide Wendel with its final project selection, which shall include all of the Measures and Improvements for which the final pricing is in accord with the estimates provided by Wendel. Thereafter, the parties will undertake good faith efforts to supplement this Contract within thirty (30) days by written modification, and thereby incorporate any changes to (1) the Project Scope of Work

2. SUMMARY OF MEASURES AND IMPROVEMENTS

The following summarizes the Measures and Improvements applicable to the Project set forth in Section 1 of this Contract. A detailed description of the Measures and Improvements can be found in the Project Documents.

Street Lighting Upgrades

The City is currently billed by Central Hudson Gas & Electric (CHG&E) for a street lighting inventory of approximately 1,452 fixtures, which is made up of mostly high pressure sodium, metal halide, and mercury vapor lighting fixtures. The City owns and maintains approximately 36 of these fixtures (Rate C), the City owns while CH&G maintains approximately 402 of these fixtures (Rate B), and Central Hudson owns and maintains the remaining 1,014 Rate A fixtures. All of the Rate C fixtures will be replaced with new LED fixtures to improve energy efficiency. All of the Rate B fixtures will also be replaced with new LED fixtures to improve energy efficiency but will no longer be maintained by Central Hudson and will instead be maintained by the City under a separate agreement. In addition, the Rate A fixtures will be purchased by the City from Central Hudson Gas & Electric, and maintained by the City under a separate agreement. The City will be responsible for

ASSURED PERFORMANCE CONTRACT

EXHIBIT A—PROJECT SCOPE OF WORK

future maintenance costs of the purchased fixtures, but will save on existing Central Hudson fees and charges.

LED Traffic Signals

The City is currently billed by Central Hudson Gas & Electric for an inventory of traffic and pedestrian signals of approximately 17 intersections or 112 Signal Faces. The traffic signals are a combination of incandescent and LED lamps for red, yellow, and green lights as well as pedestrian signals. Traffic and pedestrian signals that are still incandescent will be converted to LED. Metered services at each intersection will also be installed at all intersections that have been converted to LED and do not currently have a metered service. Additionally the City will continue to maintain the traffic signals.

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**ASSURED PERFORMANCE CONTRACT
EXHIBIT A—PROJECT SCOPE OF WORK
ATTACHMENT 1 – TOTAL PROJECT SUMMARY**

{Refer to Total Project Summary Table on the Next Page}

PROJECT BUILD CONTRACT (FOR STREET LIGHTING)

This Project Build Contract (for Street lighting) ("Contract"), effective as of this January 4, 2016 by and between Wendel Energy Services, LLC ("Wendel") and the City of Beacon ("Owner"), collectively herein the "Parties", is for construction services for the following facilities improvement project:

Project Name, Location and Description

Name: City of Beacon Address: 1 Municipal Plaza,
Beacon, NY 12508

Description: Performance Contract – LED Street Lighting & Traffic Signals

Estimated Construction Duration

Start Date	<u>1/18/2016</u>
Substantial Completion Date	<u>9/30/2016</u>
Final Completion Date	<u>10/31/2016</u>

Architect-Engineer

Wendel WD Architecture, Engineering, Surveying,
and Landscape Architecture, P.C.
Centerpointe Corporate Parkway
375 Essjay Road, Suite 200
Williamsville, New York 14221

Contract Documents

Upon signing, this Contract and any documents listed below constitute Contract Documents

- Exhibit A – General Terms and Conditions
- Exhibit B – Supplemental Terms and Conditions
- Exhibit C – Owner Bonding Requirements
- Exhibit D – Certificate Of Substantial Completion
- Exhibit E – Certificate of Final Completion
- Exhibit F – Design Documents

Required Approvals

Owner's rights to terminate this Contract in the absence of obtaining Required Approvals are set forth in Section 1.1 of the General Terms and Conditions. Applicable Required Approvals are as follows:

Municipal Financing

Deliverables

As described in Exhibit F - Design Documents.

Project Build Contract Amount

Estimated:\$1,291,756

Unless otherwise specifically set forth herein, progress payments shall be made in accordance Section 7 of the General Terms and Conditions. Purchase of Rate A Street Lights is not included in this Contract. Owner is directly responsible for this purchase.

1. SCOPE OF SERVICES

- 1.1 Wendel shall construct the Work in accordance with the Design Documents and as required by the Contract Documents. The Owner is the Authority having jurisdiction over the city street lights. The Owner has reviewed the proposed LED street prototypes and the associated design documents (Basis of Design Manual and Project Manual) included in Exhibit F. The Owner has found that the lighting quality and light levels from the proposed LED street lights are acceptable and approves the proposed lights for all city owned street lights

PROJECT BUILD CONTRACT (FOR STREET LIGHTING)

2. CERTIFICATE OF SUBSTANTIAL COMPLETION

A Certificate of Substantial Completion (Exhibit D) shall be submitted by Wendel to Owner upon the substantial completion of the Work, or a logical portion thereof if applicable. The Certificate of Substantial Completion acknowledges that the applicable Work has been completed such that the benefits of the Work have begun to accrue to the Owner and applicable warranties thereupon have commenced, but does not constitute an acceptance of the Work by the Owner. Owner shall within thirty (30) calendar days of receipt of a Certificate of Substantial Completion either (a) execute the Certificate of Substantial Completion or (b) inform Wendel in writing of any applicable Work issues that would preclude Owner from executing the Certificate of Substantial Completion. In the event Owner fails to exercise either option within the thirty (30) days, the Work will be deemed accepted by Owner.

3. CERTIFICATE OF FINAL COMPLETION.

A Certificate of Final Completion (Exhibit E) shall be submitted by Wendel to Owner upon final completion of the Work for the entirety of the project build. Owner shall within thirty (30) calendar days either (a) execute the Certificate of Final Completion or (b) inform Wendel in writing of any Work issues that would preclude Owner from executing the Certificate of Final Completion. In the event Owner fails to exercise either option within the thirty (30) days, the Work will be deemed accepted by Owner.

4. BONDING REQUIREMENTS

Wendel shall furnish applicable construction bonding as required by Owner and set forth in Exhibit C.

5. PROJECT CLOSE OUT FEES

If decision making by the Owner necessary to close out the Project is not forthcoming through no fault of Wendel or its subcontractors, or change orders that extend the Project Date of Final Completion, commencing Date Owner will be assessed a project management continuation fee of two thousand five hundred dollars (\$2,500) per month.

PROJECT BUILD CONTRACT (FOR STREET LIGHTING)

Wendel Energy Services, LLC

Joseph DeFazio
Signature

Joseph DeFazio
Printed Name

Vice President Energy Services
Title

Date 1/21/2016

Owner

Anthony Ruggiero
Signature

Anthony Ruggiero
Printed Name

City Administrator
Title

Date 1-12-16

Acknowledgement taken in New York State

State of New York, County of Erie, ss:

On the 21st day of January, in the year 2016,
before me, the undersigned, personally appeared
Joseph DeFazio

personally known to me or proved to me on the basis of satisfactory evidence to be the individual(s) whose name(s) is (are) subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their capacity(ies), and that by his/her/their signature(s) on the instrument, the individual(s) or the person upon behalf of which the individual(s) acted, executed the instrument.

Carol L. Wittcop
Notary Public

CAROL L. WITTCOP
No. 01WI6182183
Notary Public, State of New York
Qualified in Niagara County
Commission Expires February 19, 2016

Acknowledgement taken in New York State

State of New York, County of Dutchess, ss:

On the 12th day of Jan, in the year 2016,
before me, the undersigned, personally appeared

Anthony Ruggiero
personally known to me or proved to me on the basis of satisfactory evidence to be the individual(s) whose name(s) is (are) subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their capacity(ies), and that by his/her/their signature(s) on the instrument, the individual(s) or the person upon behalf of which the individual(s) acted, executed the instrument.

Iola C Taylor
Notary Public

IOLA C TAYLOR
Notary Public - State of New York
NO. 01TA6154600
Qualified in Dutchess County
My Commission Expires 10/23/18

ASSURED PERFORMANCE CONTRACT EXHIBIT C – STIPULATED SAVINGS/COSTS

The savings identified below shall be Stipulated Savings under this Exhibit. Stipulated Savings are mutually agreed upon by the Owner and Wendel as set forth below to be achieved upon execution of the applicable Certificate of Substantial Completion and shall not be measured or monitored during the Term. Refer to the Comprehensive Energy Audit for the detailed calculations used to estimate these savings. The Stipulated Savings shall be deemed to follow the below table.

Source of Savings	First Year Savings	Escalation
LED Traffic Signals (Energy and Utility Charges)	\$4,004	3%
TOTAL STIPULATED SAVINGS (Year one)	\$4,004	3%

Stipulated Savings Description

LED Traffic Signals

This measure involves retrofitting existing incandescent traffic and pedestrian signals with LED retrofits. Savings are based on converting from Service Classification 9 to a metered (non-demand) service. The following savings are agreed upon by the Owner and Wendel:

	<u>Savings(\$)</u>	<u>Units</u>
• LED Traffic Signals Energy	\$5,602	61,015 kWh
• LED Traffic Signals Utility Charge	(\$1,598)	
 NET TOTAL	 \$4,004	

Stipulated Costs Description

Street Lighting and Traffic Signal Maintenance Costs

The project upgrades includes the City purchase of Rate A fixtures and conversion of Rate A and Rate B fixtures to Rate C, and thus assuming the responsibility for the maintenance costs associated with these fixtures. In addition, for existing HID street lighting fixtures and incandescent traffic signals that are converted to LED technology, extended rated life spans are expected and a warranty period which will in turn reduce costs required to maintain the proposed system. These savings are also incorporated into this cost/savings associated with this measure. Proposed maintenance costs assume that the City would use a qualified electrical contractor for the newly converted street lights. The following costs are mutually agreed upon by the Owner and Wendel:

**Assured Performance Contract
EXHIBIT C – STIPULATED SAVINGS/COSTS**

Year	Proposed Maintenance Costs
1	\$(3,864)
2	\$(1,943)
3	\$(1,984)
4	\$(2,026)
5	\$24
6	\$15
7	\$4,331
8	\$4,393
9	\$8,927
10	\$9,067
11	\$61,699
12	\$62,865
13	\$64,055
14	\$65,268
15	\$66,505
16	\$67,767
17	\$69,055
18	\$70,368
19	\$71,707
20	\$73,073
AVG.	\$34,465

Authorized Owner Representative: _____

