

1. Overview of Approach

Company Background

Consolidated Edison Solutions, Inc. (ConEdison *Solutions*) has extensive experience managing energy efficiency projects nationwide and throughout the northeast, with more than \$1.5 billion in revenue (2011) through its primary businesses, including:

- **Energy service performance contracting** (ESPC) to governmental and select commercial customers across the United States. Since 1998, we have implemented energy performance projects paid from savings valued at over \$500 million. ConEdison *Solutions* is one of a limited number of ESCOs who hold master ID/IQ contracts with both the Department of Energy and the Department of Defense to provide ESPC services at a variety of federal facilities including administrative, military, and high security buildings and campus settings. We are experienced in addressing all aspects of a full performance contracting from auditing, engineering, design, financing, construction, commissioning, and measurement and verification services, and always seek to meet our clients' technical and financial goals by delivering a cost effective, comprehensive, and ultimately successful, project.
- **Photovoltaic solar investments of 3.3 MW** of behind the meter installations (i.e., on-site generation of power for use by the site) primarily through structured power purchase agreements wherein we **own, operate, and maintain the systems**; and provide long term electric cost savings to our customers. We maximize those savings by incorporating tax advantages, public and utility incentives, and renewable energy credits, as well as competitive and efficient project development and implementation.
- **Retail electricity commodity** sales to 43,000 commercial/ industrial/ governmental customers and 279,000 residential customers in states with retail choice, including the State of Connecticut.

Market Sectors Served

ConEdison *Solutions* has experience with a diversity of market sectors, including:

- Government
- Municipalities
- K-12 School Districts
- Higher Education



- Military
- Healthcare

Company Strengths and Areas of Expertise

ConEdison *Solutions* is one of the premier Energy Services Companies (ESCOs) in the country, and we established ourselves delivering the highest quality services to our customers in the Northeast. Our strengths and differentiators include:

Experience We have 15 years of experience working with governments and municipalities, school systems, and a wide variety of facility types that uniquely qualify us to serve the State of Connecticut through the DAS ESPC Program.

Local Presence Though we are a national ESCO, and have the depth and breadth of professional staff and resources to support projects of any size, through our fully staffed offices in New York and Massachusetts, we can provide local support to customers throughout Connecticut.

Financial Stability and Longevity ConEdison *Solutions* is an unregulated, wholly-owned subsidiary of Consolidated Edison, Inc. (CEI). ConEdison *Solutions* is part of a well-established family of energy focused businesses with a highly rated surety to support the bonding requirements for the construction efforts needed for this energy project. CEI is focused 100% on energy with \$33 billion of assets and \$13 billion in revenue (2011). We benefit from that longevity through the strength of the financial stability that enables us to provide advantageous financing and strong purchasing power to our clients.

Manufacturer and Technology Independence ConEdison *Solutions* is free from any allegiance to a particular manufacturer or technology. We believe this allows us to remain competitive in the market, and moreover, we approach all projects objectively, enabling us to provide the best, most cost-effective solutions and value to our customers.

Open Book Pricing We believe that transparency and clarity are key to a successful partnership, and a successful project overall. ConEdison *Solutions* considers open book pricing to be a cornerstone of that approach, in that it allows the owner to see the underlying “Hard costs” (i.e. subcontractor materials and labor), and the mark-ups which ultimately make up the final, firm-fixed sell price. Through our extensive work in the government ESPC market, we are comfortable working in the open book manner.

Financing Support ConEdison *Solutions* often provides support and guidance to our clients to identify and procure the most favorable sources of financing for their projects. We can help in the analysis and procurement of financing, as well as the structuring of creative structures that will best serve our clients financial and budgetary needs.

Service Contracts ConEdison *Solutions* does not sell service contracts. This area of the business is not a profit center for us. We understand that there are a variety of approaches to address service, and ongoing operations and maintenance, and we have the flexibility to

Overview of Approach

provide whatever model and level of support our clients prefers to ensure the persistence of savings. In addition to ongoing measurement and verification services, our clients consistently find great value in our ongoing O&M Oversight services.

Renewable Technologies & Solar Power Purchase Agreements We have experience installing a wide range of renewable technologies. We have a special group dedicated to the development of Solar Power Purchase Agreements (PPAs) for municipalities and other entities. We can work creatively with our clients to generate utility savings and extra revenue streams that can augment the energy performance project, ultimately creating a larger project for the Awarding Authority.

Demand Response We have experience in developing strategies and projects that enable our clients to reduce demand, and participate in a variety of revenue producing programs offered by the regional Independent System Operator.

Grant & Rebate Programs We are proud of our extremely successful and aggressive leveraging and optimization of grant and rebate programs for our clients.

General Approach to Energy-Savings Performance Contracting

Typical Phases for a Project and Ability to Support

ConEdison *Solutions* will follow the approach to an energy-savings performance contract (ESPC) as prescribed by the Connecticut Department of Administrative Services (DAS).

Typical Phases

Energy Auditing Site Survey, Energy and Cost Estimating, Schematic Design, Preliminary Assessment Report

Investment Grade Energy Audit Site Survey, Testing, Computer Modeling, Baseline Development, Costing, Economic Analysis, Investment Grade Audit Report, Financing

Implementation Designs, Submittals, Specifications, Insurances, Construction, Safety, Commissioning, Building Occupant Training

Performance Period Performance/Savings Guarantee, Measurement/Verification, Operation & Maintenance, Training, Post-Construction Maintenance Support

Ability to Support

Project Development

Our team will develop the conceptual designs and the design intent for the project along with a scope of work for each ECM. ConEdison *Solutions*' engineering subcontractors will prepare and stamp all design documents in accordance with state code and industry standards. We will work closely with the Owner from conceptual design through construction completion to ensure the design intent is met and the energy savings are achieved.

Energy Auditing

ConEdison *Solutions* performs two audits for the Owner's ESPC project: an initial proposal and an Investment Grade Energy Audit (IGEA). The initial proposal is the first audit and the first step in evaluating the facilities in order to identify energy conservation opportunities and develop a list of recommended ECMs. The appropriate Owner staff will have the opportunity to review the list of recommended ECMs and have the responsibility to confirm the ECMs which are to be developed further during the IGEA phase. The IGEA is a more detailed audit and will build off of the approved ECMs first identified during the initial proposal.

Performance/Savings Guarantee

ConEdison *Solutions* has responsibility for the delivery and persistence of the savings associated with the projects. Therefore, we self-insure our energy performance contracts. We can assume this risk because we have confidence in the accuracy of our engineering calculations, the quality of the equipment and systems we select for installation, the subcontractors selected to perform the work, and the approach we take to measurement and verification of the energy performance project. Our experience installing dozens of energy performance contracts gives us this confidence.

Financing

ConEdison *Solutions* is actively involved in all phases of its performance contracts, including financing. While we recommend that the Owner use Green Campus Partners to finance this project, we have relations with other equally as qualified firms should the Owner wish to consider alternatives. ConEdison *Solutions* has strong working relationships with several banks, leasing companies and other finance companies. These firms have adequate capital resources and stability, are familiar with energy projects along with local statutes, and are responsive to the complexities of each individual customer/transaction and thus would be appropriate financiers as well.

Construction

ConEdison *Solutions* will provide the scope of work, design intent and the schematic design for all ECMs approved by the Owner for development and installation.

Installation of the ECMs will be subcontracted and provided by contractors that have a proven track record of completing projects on-time and within budget. The Owner can

recommend firms to be included on the list of firms solicited for bids. All potential bidders will be pre-qualified based on their experience, references, financial capability, etc. ConEdison *Solutions* will seek competitive bids by well qualified contractors by preparing a bid package and distributing it to our pre-selected firms. Bids received will be reviewed and evaluated. The Owner will be invited to review the pricing received and terms offered, if any. Selection of subcontractors will be done based on best value: price, schedule, quality and other variables as deemed appropriate. ConEdison *Solutions* executes an industry standard subcontract form (i.e., American Institute of Architects standard subcontract form) with the subcontractors to perform the required work.

Commissioning

Commissioning is a systematic process of testing, calibrating, and verifying the installed ECMs to ensure that building systems perform interactively according to the design intent and the owner's operational needs. Proper commissioning begins in the design phase by documenting the design intent and continues through construction, acceptance, and the warranty period with actual measurement and verification of performance, operation and maintenance, and training of operating personnel. ConEdison *Solutions* coordinates all commissioning related activities with the Owner, the engineer of record, equipment manufacturer, and the installation subcontractors. We will provide an ECM specific commissioning plan that will ensure that all equipment installed is functioning and is functioning as designed. Equipment identified as either non-functioning or as not functioning as designed will be calibrated, repaired, or replaced as appropriate to ensure that the Owner receives a project that is capable of delivering the energy and water saving projected and is achieving the energy and water savings goals.

Building Occupant Training

Proper training is essential to any operation and maintenance and M&V procedure. ConEdison *Solutions* trains facility staff on all new equipment and all equipment modified or effected by the implementation of any ECM. We develop a customized training program and materials for every project.

Post-Construction Maintenance Support

We will work with the Owner's preference in regards to operations and maintenance of installed equipment. At a minimum, a one-year warranty is standard on all equipment and installation labor. For needs that arise outside the warranty period, ConEdison *Solutions* can develop an operations and maintenance plan that meets the specific needs of the Owner. We are willing to develop a plan along the continuum of accepting full operations and maintenance responsibility to transferring all operations and maintenance responsibilities to the Owner.

2. Project History

2.1 Related Experience

ConEdison *Solutions*' experience with each of the following is described below, respectively:

2.1.1 Design, engineering, installation, maintenance and repairs associated with energy-savings performance contracts

ConEdison *Solutions* in all cases, is responsible for, and typically performs many of these functions with in-house staff on all of our energy-savings performance contracts. Our team of professionals performs design and engineering in order to select and integrate the best, most cost-effective technologies suited to each project. Occasionally, we work with engineers and design professionals particularly in specialty technologies like ground source heat pumps, or cogeneration, however, as the overall general energy savings performance contractor, we are ultimately responsible for all aspects of design and engineering. We rely on subcontractors to perform the installation of equipment associated with the energy conservation measures, however we manage that implementation team with our own staff. Similarly, maintenance and repairs are typically performed by the installing subcontractor, or other service providers, but we work closely with our clients to develop the O&M and repair plan that offers the best value, while ensuring the persistence of savings. ConEdison *Solutions* does not have a separate business unit which seeks to sell service contracts to our clients; however we often provide ongoing O&M oversight services which enable us to provide our clients with ongoing support such as training, troubleshooting, and continuous commissioning in order to optimize to maximize operations and savings benefits.

2.1.2 Conversions to a different energy or fuel source, associated with a comprehensive energy efficiency retrofit

With the input and approval of our clients, ConEdison *Solutions* always considers or evaluates conversions to different energy or fuel source, keeping in mind existing supply and ultimate cost savings for the customer. We are mindful of applicable rebates. In addition, to standard energy and fuel sources we look for the most cost-effective energy sources, including but not limited to renewable (i.e. solar photovoltaic or solar thermal, biomass, etc.). We have experience evaluating factors such as cost per unit of energy, reliability, and overall feasibility to identify the fuel source of best value economically, operationally, and environmentally. We have experience negotiating with local gas distribution companies on behalf of our clients to provide new service to facilities, and we always seek to maximize incentives and rebates as part of any fuel switching and energy efficiency project.



2.1.3 Post-installation project monitoring, data collection and reporting of Savings

ConEdison *Solutions* often includes O&M Oversight on our energy-savings performance projects. Typically, we provide quarterly, or semi-annual services, in addition to project M&V, where we spend time reviewing trend log data and other information from the energy management system such as system alarms, set point overrides, and general operations of the project ECMs. We also interview facility operations staff and building occupants to understand problems and issues, both operational, and environmental, and also to identify any needs for additional training or system calibration. We provide written documentation of any findings as part of our O&M Oversight Reports, and any necessary operational changes which have savings impacts are highlighted for correction. Our M&V report is the culmination of our annual effort which documents the actual energy savings generated by the project. It is the result of intensive data collection and monitoring, and the findings are typically fed back into our original energy model to determine the savings. The M&V plan is developed with a focus on using the most cost effective protocols necessary to verify savings based on each ECM and technology.

2.1.4 Overall project management and qualifications

Our project management approach and qualifications are detailed in this response. We establish a single point of contact who serves as the overall account manager for each project. In addition, we typically assign an experienced Project Manager, as well as an on site Construction Manager. The Project Manager works with our development and engineering team, as well as our construction team, to provide the client contact and continuity throughout all phases of the project. While there is generally a transition from our development and engineering team to our construction team, both sides have ongoing input into the project, coordinated by the Project Manager. The development and engineering team focuses on conceptual, technological, and financial aspects of the project, and the construction team focus on feasibility, implementation and execution of ECMs. The development team must stay involved to ensure design intent is met, and to evaluate any savings impacts that occur due to field conditions and scope modifications. The construction and commissioning team must be involved during development in order to understand the design intent and to provide input on technical and implementation feasibility, as well as equipment and contractor selection. We have developed numerous systems and report formats to document and communicate the project details to the relevant participants and stakeholders. Communication is critical to a successful project. Weekly team progress meetings with the client and building staff, to review project status and progress, problems, issues and the look-ahead schedule are all part of effective management and communication. Meeting minutes, to-do lists, and a dynamic working schedule are also critical to effective communication and documentation.

2.1.5 Securing long-term financing

Our interest is aligned with our clients' interest to identify the best least expensive source of project financing. Typically in the case of a government, municipal or school entity, that is usually through a public bond issuance or through a tax free municipal lease. Our

Project History

Commercial Finance Manager, along with our project team often works together with our clients to conduct a competitive procurement of financing, and to evaluate and select the best finance provider. We have experience structuring those procurements to best suit the need of our clients, by accommodating their cash flow requirements, budget cycles and scheduling. We are also mindful of the need to accommodate budgetary issues, such as fiscal year timing, and “color of money” requirements.

2.1.6 Financial stability

ConEdison *Solutions*’ is a wholly-owned subsidiary of Consolidated Edison, Inc., one of the oldest, largest, and most stable utilities in the country. Based on our corporate longevity, and stability, as well as our financial soundness and credit, we typically derive the best most competitive financing rates for our projects. In addition our financial stability gives us considerable buying power, as well as the ability to maintain project momentum, and minimize the impacts of small schedule irregularities and project deviations.

2.1.7 Projects of similar size and scope

ConEdison *Solutions* is a prequalified Energy Services Company (ESCO) offering comprehensive Energy Savings Performance Contracting services, on many reputable lists, including those of the federal Department of Energy, Department of Defense, and General Services Administration. In addition, we are similarly prequalified on numerous State lists, including those of The Connecticut DAS, Massachusetts, and Rhode Island. Under such programs, ConEdison *Solutions* has completed a wide range of energy performance projects of all sizes and facility types, including administrative, municipal, educational, school, military, residential, and industrial. We have the experience, as well as the depth of personnel and systems to support projects of any size and scope under the Connecticut DAS initiative.

2.1.8 In-state projects and Connecticut-based subcontractors

Windham Public Schools – Willimantic, CT

Windham Public Schools is a six facility (583,076 square foot) K-12 School District in Willimantic, CT. Their student body encompasses approximately 3,500 students. The energy performance upgrades project was completed in December 2009. This project capital cost was approximately \$5.3 million. ConEdison *Solutions* and the School District engaged in an energy performance contract to implement the Investment Grade Audit Report completed for the District. The projected and achieved annual energy cost savings was \$523,000.

For this energy performance contract, ConEdison *Solutions* performed scoping and investment grade audits; procured subcontractors and equipment; provided construction management, commissioning, training, measurement and verification services, as well as a long term service agreement (LTSA). Construction management included document

control, approval of as-builts, environmental, health, safety, and quality controls. Receiving and storing of equipment and supplies was arranged to limit disruption to school operations and uphold school safety standards. During the repayment period, we have provided annual review of maintenance practices, equipment performance data collection, and M&V reports. Our comprehensive energy performance contract included a synchronous cogeneration system that provides electricity and thermal heating, while addressing the town's need for back-up emergency power for first response emergency shelter services.

Measures Installed

- Dual Fuel, High Efficiency Boiler
- Building Envelope Upgrades
- Cogeneration System
- Cooling System Improvements
- Upgrade and Expand Energy Management System
- Lighting Upgrades
- Natatorium Upgrades
- Plug Load Controls
- Water Conservation

Other Connecticut Projects

United States Postal Service

In addition, ConEdison *Solutions* has completed a number of energy projects for the United States Postal Services in Connecticut through an existing IDIQ contract. These energy upgrade projects were completed at various times, but no later than January 2012. The scope of work throughout the postal facilities included both lighting and HVAC upgrades. Their total project values are approximately \$3.4 million¹. A list of Connecticut-based Postal Services locations include:

- Bristol
- Fairfield
- Hartford Elmwood St.
- Hartford Washington St.
- Manchester
- Meriden
- Monroe
- Naugatuck
- New Britain
- Torrington
- Wallingford

¹ This project value includes some Massachusetts USPS projects.

In-State Subcontractors

We have worked with Connecticut-based subcontractors on past Connecticut projects. It is always the goal of ConEdison *Solutions* to use prequalified subcontractors that are local to the project site. A sample representation of Connecticut-based subcontractors we have worked with previously include:

Table 2.1 Connecticut Based Subcontractors

Vendor	City, State
Advanced Power Systems International, Inc.	Torrington, CT
Joseph Merrit & Company	Hartford, CT
M&O Corporation	Bridgeport, CT
Practical Energy Solutions, LLC	Wallingford, CT
Sensor Switch Installations, LLC	Wallingford, CT
Sustainable Engineering Solutions, LLC	Wethersfield, CT
WESCO Distribution, Inc.	Hartford, CT
ConServ	Tolland, CT

2.1.9 United States Department of Energy programs

The following projects were completed by ConEdison *Solutions* under our ESPC master ID/IQ contract with the United States Department of Energy (DOE):

- Federal Aviation Administration - Northeast Region
- General Services Administration - Northeast Region
- US Army – Fort Hamilton, NY
- National Archives and Records Administration – JFK Presidential Library, Boston
- US Coast Guard – Integrated Support Command, Boston
- US Coast Guard – Fort Wadsworth and Rosebank, NY; Sandy Hook, NJ

2.1.10 Professional certifications

The ConEdison *Solutions*' staff includes a diverse spectrum of qualified, educated, and professional people. Our project development team is staffed with a lead engineer who is a Connecticut licensed PE. Furthermore, the professional certifications of our development team include the following:

- LEEP AP
- CEM
- CMVP
- PE
- PhD
- CCA

Our corporate industry accreditations are listed in Section 3 of our submission.

2.2 Market Sector Involvement

ConEdison *Solutions*' expertise in each of the following market sectors and facility types is described below, respectively:

2.2.1 State Agencies

ConEdison *Solutions* has performed work for the following State Agencies:

Table 2.2 State Agencies

State Agency	Project Name & Location	Project Size (S)
New York Power Authority ²	PS 32 (Belmont) Bronx, NY	\$225,260
	PS 62 (Ditmas School) Brooklyn, NY	\$310,000
	PS 92 (H.T. Stewart) New York, NY	\$207,390
	PS 147 (I. Remsem) New York, NY	\$332,400
	PS 250 (G.H. Lindsey) Brooklyn, NY	\$225,626
	PS 275 New York, NY	\$393,000
	PS 430 (Walton High School) Bronx, NY	\$300,100
	IS 27R, (A.S. Prall) Staten Island, NY	\$410,000
	IS 34R (Tottenville) New York, NY	\$300,000
	IS 49R (B.A. Dreyfus) New York, NY	\$311,000
	IS 51R (Edwin Markham Jr. High School) Staten Island, NY	\$288,000

² Only includes recently completed projects. There are a number of additional NYPA projects completed.

Project History

State Agency	Project Name & Location	Project Size (S)
	IS 61R (W. Morris) Staten Island, NY	\$101,000
	FDNY 42 Bronx, NY	\$20,612
	FDNY 45 Bronx, NY	\$20,612
	FDNY 206 Brooklyn, NY	\$38,000
	FDNY 207 Brooklyn, NY	\$52,000
	FDNY Fleet Long Island City, NY	\$3,131,000
	Port Richmond HS	\$542,685
	NYC DOE Bureau of Supplies New York, NY	\$731,000
	NYC Department of Sanitation Bronx, NY	\$496,000
Rhode Island Airport Commission	T.F. Green Airport Warwick, RI	\$5,217,670

2.2.2 Boards of Education

The following Boards of Education have completed energy performance projects with ConEdison Solutions:

- New York State Education Department (NYSED)

In addition we have provided Energy Savings Performance Contracting Services to the following school districts:

- Windham Public Schools; Windham, CT
- Foster Glocester Regional School District; Chepachet, RI
- Newport School District; Newport, RI
- Northampton School District; Northampton, MA

2.2.3 Higher education institutions – universities, colleges, and community Colleges

ConEdison *Solutions* has the following higher education experience:

Table 2.3 Higher Education Experience

Project Name	Higher Education Institution Type
Penn State University - Abington	University
Penn State University – Beaver	University
Penn State University – Brandywine	University
Penn State University – Great Valley	University
Penn State University – The Behrend College	University
Penn State University – West Halls Residential Housing Complex	University
Penn State University - Harrisburg	University
City University of New York	University
Massachusetts Institute of Technology	University

2.2.4 Municipalities with population between 100,000 and 150,000

ConEdison *Solutions* does not have any local experience with a municipality that has a population between 100,000 and 150,000.

2.2.5 Municipalities with population under 100,000 population

The following municipalities have completed work with ConEdison *Solutions* and have a population under 100,000³:

- **City of Northampton, MA:** 28,501
- **City of Concord, NH:** 42,733
- **Village of Scarsdale, NY:** 17,293
- **City of Mount Vernon, NY:** 67,780

2.2.6 Specific government building types – K-12 school buildings, correctional facilities, hospitals, laboratories, dormitories, office buildings, recreational centers, libraries, and multi-family buildings

The following table captures specific government building types and project names associated with construction completion.

³ The approximate population sizes are from 2011. The Village of Scarsdale, NY and the City of Mount Vernon, NY were projects undertaken through our contract with the New York Power Authority.

Project History

Table 2.4 Specific Building Types

Building Type	Project Name
K-12 School Buildings	Foster-Glocester Regional School District Windham Public School Mahopac Central School District Newport Public Schools – Rogers High School Haldane Central School District Garden City School District Valley Stream Union Free School District # 13 Blind Brook-Rye Public Schools City of Northampton, MA (part of the scope was school buildings) City of Concord, NH (part of the scope was a Regional Vocational High School)
Correctional Facilities	Lansing Correctional Facility Hutchinson Correctional Facility Norton Correctional Facility Winfield Correctional Facility
Hospitals	New York Presbyterian Hospital Brooklyn Veteran Affairs (VA) Medical Center Bronx VA Medical Center Queens VA Medical Center Montrose VA Medical Center Hudson Valley Health Care System Manhattan VA Medical Center New York Harbor Healthcare System Northport VA Medical Center <i>Healthcare Corporation of America HCA is the largest private operator of health care facilities in the world; HCA owns and operates approximately 179 hospitals and approximately 104 freestanding surgery centers in 21 states. In 2003, BGA (currently owned by ConEdison Solutions) was selected by HCA as one of only two companies to assist HCA in identifying and ultimately implementing facility improvement measures under HCA's National Programs at its hospitals throughout the United States. To date, BGA has been awarded \$50 million worth of work under HCA's National Program at more than 30 hospitals owned and/or managed by HCA. BGA provided all labor, equipment, materials and incidentals required to complete the scope of work, including providing related project engineering, design, construction administration and construction inspection services. BGA has provided a wide range energy and water cost reduction projects involving all major building systems.</i>
Laboratories	U.S. GSA, Food and Drug Administration; Queens, NY

Building Type	Project Name
	MIT Lincoln Laboratory; Bedford, MA
Dormitories	US Coast Guard; Staten Island, NY and Sandy Hook, NJ Hanscom Air Force Base; Bedford, MA Fort Wadsworth; Brooklyn, NY
Office Buildings	Camp Dresser McKee; Cambridge, MA Numerous other Federal, State and Municipal facilities
Recreational Centers	City of Northampton, MA City of Concord, NH
Libraries	John F. Kennedy Presidential Library City of Northampton, MA (part of the scope was 2 libraries) City of Concord, NH (part of the scope)

2.2.7 Other non-buildings, including but not limited to wastewater treatment facilities, water meter projects, traffic signals, and street lights

Table 2.4 Non-Building Experience

Non-Building Type	Project Name & Location
Street Lighting	New York Power Authority, City of New Rochelle City of Concord, NH
Wastewater Treatment Facilities	Alexandria Sanitation Authority Alexandria, VA City of Concord, NH (part of the scope)
Water Treatment Plant	City of Northampton, MA (part of the scope) City of Concord, NH

2.3 Project List

ConEdison *Solutions'* energy-savings performance contract projects developed and implemented within the past five years are shown in table 2.5. The table follows the suggested format, per the bid documents.

ConEdison *Solutions* subcontracted some scope of work on many of these listed projects. However, it was ConEdison *Solutions* who had overall responsibility for that project.

Project History

Table 2.5 Project List

Project Name	Facility Type	City & State	Project Size (Dollars)	Project Size (Square Feet)	Year Completed
Jefferson County Sheriff's Department	Sheriff's Department	Golden, CO	\$1,484,677	394,000	Est. 2012
Queen Creek Unified School District	K-12 School District	Queen Creek, AZ	\$3,348,200	788,688	Est. 2012
Fairfield Unified School District 310	K-12 School District	Langdon, KS	1,370,917	71,136	2011
Goshen County	Municipality	Torrington, WY	\$1,461,046	244,811	2011
Sedgwick County	Municipality	Wichita, KS	\$1,337,730	1,406,543	2011
Miami-Dade County	Municipality	Miami, FL	\$20,310,700	100,000	2011
US Coast Guard Sector New York	Various	Sandy Hook, NJ Staten Island, NY	\$12,900,000	755,830	2011
Alexandria Sanitation Authority	Municipal	Alexandria, VA	\$5,949,588	708,495	2010
Emporia Unified School District 253	K-12 School District	Emporia, KS	\$4,346,209	737,233	2010
Loudon County	County Facilities	Leesburg, VA	\$1,077,139	528,724	2010
Mahopac Central School District	K-12 School District	Mahopac, NY	\$10,187,880	336,765	2010
TF Green Airport	Airport	Providence, RI	\$5,364,820	--	2010
Arlington County	Municipality	Arlington, VA	\$5,390,201	156,307	2009
Bluestem Unified School District 205 – Phase 2	K-12 School District	Leon, KS	\$1,565,676	60,980	2009
City of Charlottesville	Municipal	Charlottesville, VA	\$1,835,893	1,428,945	2009
Foster-Glocester Regional School District	K-12 School District	North Scituate, RI	\$12,818,525	371,000	2009
Penn State Abington	University	Abington, PA	\$866,586	313,515	2009
Penn State Beaver	University	Monaca, PA	\$1,163,403	248,907	2009
Penn State Brandywine	University	Brandywine, Pa	\$280,553	168,410	2009

Project Name	Facility Type	City & State	Project Size (Dollars)	Project Size (Square Feet)	Year Completed
Penn State Great Valley	University	Great Valley, PA	\$246,131	276,313	2009
Piper Unified School District 203 – Phase 1	K-12 School District	Kansas City, KS	\$4,880,629	164,200	2009
Piper Unified School District 203 – Phase 2	K-12 School District	Kansas City, KS	\$2,632,098	104,100	2009
Windham Public Schools	K-12 School District	Willimantic, CT	\$5,160,057	583,076	2009
Columbia Public School District	K-12 School District	Columbia, MO	\$14,109,853	246,077	2008
Haven Unified School District 312	K-12 School District	Haven, KS	\$3,455,214	271,966	2008
Missouri State Fairgrounds	State Fairgrounds	Sedalia, MO	\$1,726,280	342,895	2008
North Jackson Unified School District	K-12 School District	Holton, KS	\$2,229,010	87,284	2008
City of Parsons	Municipal	Parsons, KS	\$6,978,119	588,256	2008
Penn State Erie, The Behrend College	University	Erie, PA	\$3,612,905	1,105,275	2008
City of Pittsburg	Municipal	Pittsburg, KS	\$1,786,435	274,808	2008
Raymore-Peculiar School District – Phase 2	K-12 School District	Raymore, MO	\$3,516,090	918,544	2008
Washington Navy Yard	Military	Washington, DC	\$1,928,469	1,500,000	2008
Baltimore City Fire Stations	Municipal	Baltimore, MD	\$2,047,103	475,000	2007
Bluestem Unified School District 205-Phase 1	K-12 School District	Bluestem, KS	\$833,508	159,989	2007
Harrisonville Cass R-IX School District	K-12 School District	Harrisonville, MO	\$3,953,985	393,423	2007
Independence Community College	College	Independence, KS	\$2,663,987	168,564	2007

Project History

Project Name	Facility Type	City & State	Project Size (Dollars)	Project Size (Square Feet)	Year Completed
The Pennsylvania State University - West Halls Residential Housing Complex	University	University Park, PA	\$2,000,474	488,460	2007
Penn State Harrisburg	University	Middletown, PA	\$1,741,242	643,274	2007
Raymore-Peculiar School District – Phase 1	K-12 School District	Raymore, MO	\$1,875,429	292,633	2007
Smithville R-II School District	K-12 School District	Smithville, MO	\$1,932,576	305,066	2007
Springfield Public School District	K-12 School District	Springfield, MO	\$3,723,489	3,486,613	2007
Wichita State University	University	Wichita, KS	\$12,316,614	1,976,646	2007

2.4 Project References

Detailed information on completed energy-savings performance contract projects that can be used for references are described within this Section. These projects were mentioned in previous sections, but are given in more detail here.

Project History

Project Reference 1: Windham Public Schools

No.	Item	Description	
2.4.1	Project Identification	Owner Name: City/State: Facility Type:	Windham Public Schools Willimantic, CT K-12 School District
2.4.2	Contact Information	Name: Contact Information:	Paul Perzanoski 860.465.2310
2.4.3	Project Type	--	Energy Savings Performance Contract
2.4.4	Project Size	Number of Buildings: Total Square Footage:	6 583,076
2.4.5	Project Dollar Amount	Total Contract Amount: \$ Total Project Capital Expenditure Amount: \$	\$5.29 Million \$5.29 Million
2.4.6	Source of Funding	Source of Funding: ConEdison <i>Solutions</i> ' Role:	Bank of America ConEdison <i>Solutions</i> solicited bids on behalf of the District from several competitive and reputable financial institutions. ConEdison <i>Solutions</i> collected and summarized the bids for Windham Public Schools and provided a recommendation. After review of our presented documentation, Windham chose to follow our recommendation. Bank of America provided financing for a term of 14 years, plus the construction period.
2.4.7	Project Dates	Audit Start: Acceptance: Actual Construction Start: Actual Construction End:	November 2006 May 2007 May 2007 May 2009
2.4.8	Contract Terms	Type of Contract: Financing Agreement: Contract Term:	Energy Savings Performance Contract Third party financing May 2007-May 2020
2.4.9	Project Personnel	Name, Role, Will be Assigned to CT ESPCP Projects:	Ken Nathanson, Sales Executive Louqmane Tidjani, Project Manager Robert Torre, Director of Operations Kevin Venturini, Commissioning Mike Smith, LTSA & Construction Manager Ronald Burke, M&V
2.4.10	Project Schedule	--	On Schedule
2.4.11	List of Improvements	--	Dual Fuel, High Efficiency Boiler Building Envelope Upgrades

No.	Item	Description	
			Cogeneration System Cooling System Improvements Upgrade and Expand Energy Management System Lighting Upgrades Natatorium Upgrades Plug Load Controls Water Conservation
2.4.12	Project Performance	--	The amounts of projected annual savings, guaranteed annual savings, and actual energy savings for each project are presented in the table shown below, per the bid documents
2.4.13	Measurement & Verification	M&V Approach Description: Stipulated Savings:	Direct measurement or calculation as defined by the IPMVP/FEMP method. None-all measured
2.4.14	Performance Guarantee	Savings Guarantee Description:	Guaranteed savings were achieved.
2.4.15	Additional Comments	Special features, services, conditions, create approaches, special needs of customer, etc. that are relevant to the ESPCP and clientele:	The energy performance contract with this Client included a synchronous cogeneration system that provides electricity and thermal heating, while addressing the District's need for back-up emergency power for first response energy shelter services.

Utility Type	Units	Projected Annual Energy Savings	Guaranteed Annual Energy Savings	Actual Energy Savings Year 1 (2009)	Actual Energy Savings Year 2 (2010)	Actual Energy Savings Year 3 (2011)	Actual Energy Savings Year 4 (2012)	Actual Energy Savings Year 5 (2013)
Electricity	kWh	2,183,658	1,768,763	2,183,658	2,265,085	2,265,085	TBD	TBD
Firm Nat Gas	Therms	-2,131	-1,726	-2,131	531	651	TBD	TBD
Interr Nat Gas	Therms	-60,578	-49,068	-60,578	-67,533	-67,533	TBD	TBD
Fuel Oil	Gallons	130,800	105,948	130,800	135,716	135,716	TBD	TBD
Propane	Gallons	-3,000	-2,430	-3,000	-3,000	-3,000	TBD	TBD
Water/Sewer	Gallons	2,742,378	2,221,326	2,742,378	2,742,378	2,742,378	TBD	TBD
Optg & Maint	\$	\$11,178	\$9,054	\$11,175	\$10,844	\$10,670	TBD	TBD

Project History

Project Reference 2: Foster-Glocester Regional School District

No.	Item	Description	
2.4.1	Project Identification	Owner Name: City/State: Facility Type:	Foster-Glocester Regional School District Chepachet, RI K-12 School District
2.4.2	Contact Information	Name: Contact Information:	William Abt 860.400.242
2.4.3	Project Type	--	Energy Savings Performance Contract
2.4.4	Project Size	Number of Buildings: Total Square Footage:	2 371,000
2.4.5	Project Dollar Amount	Total Contract Amount: \$ Total Project Capital Expenditure Amount: \$	\$12.8 Million \$11.7 Million
2.4.6	Source of Funding	Source of Funding: ConEdison <i>Solutions</i> ' Role:	Third party financing Assisted in the arrangement of project financing
2.4.7	Project Dates	Audit Start: Acceptance: Actual Construction Start: Actual Construction End:	June 2006 January 2007 October 2007 December 2009
2.4.8	Contract Terms	Type of Contract: Financing Agreement: Contract Term:	Energy Savings Performance Contract Third party financing July 2006-April 2022
2.4.9	Project Personnel	Name, Role, Will be Assigned to CT ESPCP Projects:	Ken Nathanson, Sales Executive Robert Torre, Director of Operations John Johnson, Senior Energy Efficiency Engineer Steve Manwell, Energy Efficiency Engineer Kevin Venturini, Commissioning Mike Smith, Construction Manager Ronald Burke, M&V
2.4.10	Project Schedule	--	On Schedule
2.4.11	List of Improvements	--	Biomass Boiler Systems Energy Efficient Lighting (Lamps, Ballasts, Controls) Building Envelope (Windows, Skylights, Insulation) HVAC and Controls Upgrades Domestic Water Conservation
2.4.12	Project Performance	--	The amounts of projected annual savings, guaranteed annual savings, and actual energy savings for each project are presented in the table

No.	Item	Description	
			shown below, per the bid documents
2.4.13	Measurement & Verification	M&V Approach Description: Stipulated Savings:	Direct measurement or calculation as defined by the IPMVP/FEMP method. None – all measured
2.4.14	Performance Guarantee	Savings Guarantee Description:	Guaranteed savings were achieved.
2.4.15	Additional Comments	Special features, services, conditions, create approaches, special needs of customer, etc. that are relevant to the ESPCP and clientele:	Foster-Glocester planned to physically consolidate the middle school and high school for use as an expanded high school and to build a new middle school. The existing high school was set to become the South building of the expanded high school, while the existing middle school was set to become the North building. We coordinated our energy performance contract with a large new construction and renovation project that was already under way. ConEdison <i>Solutions</i> provided a variety of hands-on energy educational opportunities for the high school students.

Utility Type	Units	Projected Annual Energy Savings ⁴	Guaranteed Annual Energy Savings	Actual Energy Savings Year 1 (2011)	Actual Energy Savings Year 2 (2012)	Actual Energy Savings Year 3 (2013)	Actual Energy Savings Year 4 (2014)	Actual Energy Savings Year 5 (2015)
Electricity	kWh	2,695,536	2,318,161	3,400,816	TBD	TBD	TBD	TBD
Fuel Oil	Gallons	68,210	58,661	148,494	TBD	TBD	TBD	TBD
Biomass Fuel (wood chip)	Tons	-1,364	-1,173	-1,706	TBD	TBD	TBD	TBD

⁴ The projected and guaranteed annual energy savings were based upon an assumed 80% project completion. The actual savings are based on 100% completion. Foster-Glocester terminated the LTSA phase and released ConEdison *Solutions* from the performance guarantee but requested ConEdison *Solutions* to do the M&V and O&M services as needed.

Project Reference 3: City of Northampton, MA

No.	Item	Description	
2.4.1	Project Identification	Owner Name: City/State: Facility Type:	City of Northampton Northampton, MA Municipal
2.4.2	Contact Information	Name: Contact Information:	Christopher Mason 413.587.1260
2.4.3	Project Type	--	Energy Savings Performance Contract
2.4.4	Project Size	Number of Buildings: Total Square Footage:	35 1,067,677
2.4.5	Project Dollar Amount	Total Contract Amount: \$ Total Project Capital Expenditure Amount: \$	\$7.66 Million \$6.79 Million
2.4.6	Source of Funding	Source of Funding: ConEdison <i>Solutions'</i> Role:	City arranged their own financing Support
2.4.7	Project Dates	Audit Start: Acceptance: Actual Construction Start: Actual Construction End:	February 2010 June 2010 July 2010 April 2012
2.4.8	Contract Terms	Type of Contract: Financing Agreement: Contract Term:	Energy Savings Performance Contract Third party financing 15 Years
2.4.9	Project Personnel	Name, Role, Will be Assigned to CT ESPCP Projects:	Ken Nathanson, Sales Executive Robert Torre, Director of Operations John Johnson, Senior Energy Efficiency Engineer Steve Manwell, Energy Efficiency Engineer Mike Smith, LTSA/Construction Manager Louqmane Tidjani, Project Manager
2.4.10	Project Schedule	--	On Schedule
2.4.11	List of Improvements	--	Lighting Upgrades Oil Fueled Burners High Efficiency Cooling System Infrared Heating System Heating Coils Dehumidification System Process System Upgrades New Energy Management Control System Steam zone valves

No.	Item	Description	
2.4.12	Project Performance	--	The amounts of projected annual savings, guaranteed annual savings, and actual energy savings for each project are presented in the table shown below, per the bid documents
2.4.13	Measurement & Verification	M&V Approach Description: Stipulated Savings:	Direct measurement or calculation as defined by the IPMVP/FEMP method. None – all measured
2.4.14	Performance Guarantee	Savings Guarantee Description:	Guaranteed savings were achieved.
2.4.15	Additional Comments	Special features, services, conditions, create approaches, special needs of customer, etc. that are relevant to the ESPCP and clientele:	Multi-facility project; Customer required low humidity space conditions in several locations that were provided by unique dehumidification equipment; Process equipment changes were included in waste water treatment and drinking water treatment plants.

Utility Type	Units	Projected Annual Energy Savings	Guaranteed Annual Energy Savings	Actual Energy Savings Year 1 (2013)	Actual Energy Savings Year 2 (2014)	Actual Energy Savings Year 3 (2015)	Actual Energy Savings Year 4 (2016)	Actual Energy Savings Year 5 (2017)
Electricity	kWh	1,551,338	1,318,637	TBD	TBD	TBD	TBD	TBD
Natural Gas	Therms	42,481	36,109	TBD	TBD	TBD	TBD	TBD
Fuel Oil	Gallons	70,014	59,512	TBD	TBD	TBD	TBD	TBD
Propane	Gallons	47,966	40,771	TBD	TBD	TBD	TBD	TBD
Water/Sewer	CCF	2,978	2,531	TBD	TBD	TBD	TBD	TBD

Project History

Project Reference 4: City of Concord, NH

No.	Item	Description	
2.4.1	Project Identification	Owner Name: City/State: Facility Type:	City of Concord, NH Concord, NH Municipality
2.4.2	Contact Information	Name: Contact Information:	Doug Ross 603-225-8530
2.4.3	Project Type	--	Energy Savings Performance Contract: Phase 1 and Phase 1- Add on
2.4.4	Project Size	Number of Buildings: Total Square Footage:	45 891,000
2.4.5	Project Dollar Amount	Total Contract Amount: \$ Total Project Capital Expenditure Amount: \$	\$1.25 million \$1.01 million
2.4.6	Source of Funding	Source of Funding: ConEdison <i>Solutions</i> Role:	ARRA and DOE Funding plus City-arranged Bond Support
2.4.7	Project Dates	Audit Start: Acceptance: Actual Construction Start: Actual Construction End:	December 2010 July 2011 July 2011 Continuous, Phase I – Add on
2.4.8	Contract Terms	Type of Contract: Financing Agreement: Contract Term:	Energy Savings Performance Contract Third party financing 16 Years
2.4.9	Project Personnel	Name, Role, Will be Assigned to CT ESPCP Projects:	Ken Nathanson, Sales Executive Robert Torre, Director of Operations Steve Manwell, Energy Efficiency Engineer Mike Smith, LTSA/Construction Manager Louqmane Tidjani, Project Manager Kevin Venturini, Commissioning
2.4.10	Project Schedule	--	On Schedule
2.4.11	List of Improvements		Lighting HVAC Upgrades Energy Management Control Systems Retro-Commissioning Building Envelope Improvements Plug Loads Kitchen Hood Controls Motors

No.	Item	Description	
2.4.12	Project Performance	--	The amounts of projected annual savings, guaranteed annual savings, and actual energy savings for each project are presented in the table shown below, per the bid documents
2.4.13	Measurement & Verification	M&V Approach Description: Stipulated Savings:	Direct measurement or calculation as defined by the IPMVP/FEMP method. None – all measured
2.4.14	Performance Guarantee	Savings Guarantee Description:	Guaranteed savings were achieved.
2.4.15	Additional Comments	Special features, services, conditions, create approaches, special needs of customer, etc. that are relevant to the ESPCP and clientele:	Solar thermal projects and ductless split heating/cooling units were installed at fire stations; Oversized, ineffective cooling units were designed at communications building; Condensing boilers were installed; Specialty projects were installed at the municipal airport and municipal golf course; LED street and pedestrian lighting were installed throughout city; Water treatment plant's magnetic motor drives were replaced with variable frequency drives; Complete DDC EMCS was installed city-wide; In large vehicle maintenance facility, fast-opening garage doors and improved insulation were installed.

Utility Type	Units	Projected Annual Energy Savings	Guaranteed Annual Energy Savings	Actual Energy Savings Year 1 (2013)	Actual Energy Savings Year 2 (2014)	Actual Energy Savings Year 3 (2015)	Actual Energy Savings Year 4 (2016)	Actual Energy Savings Year 5 (2017)
Electricity	kWh	524,778	472,301	TBD	TBD	TBD	TBD	TBD
Natural Gas	Therms	12,160	10,915	TBD	TBD	TBD	TBD	TBD
Fuel Oil	Gallons	5,623	5,060	TBD	TBD	TBD	TBD	TBD
Optg & Maint	\$	\$1,791	\$1,612	TBD	TBD	TBD	TBD	TBD

Project History

Project Reference 5: U.S. Coast Guard – Integrated Strategic Command

No.	Item	Description	
2.4.1	Project Identification	Owner Name: City/State: Facility Type:	U.S. Coast Guard Boston, MA Security Military Installations
2.4.2	Contact Information	Name: Contact Information:	Jean Bretz 401-736-1765
2.4.3	Project Type	--	Energy Savings Performance Contract
2.4.4	Project Size	Number of Buildings: Total Square Footage:	5 400,000
2.4.5	Project Dollar Amount	Total Contract Amount: \$ Total Project Capital Expenditure Amount: \$	\$5.75 Million \$4.96 Million
2.4.6	Source of Funding	Source of Funding: ConEdison <i>Solutions</i> ' Role:	Financial Institution Support
2.4.7	Project Dates	Audit Start: Acceptance: Actual Construction Start: Actual Construction End:	April 2003 January 2005 January 2005 November 2005
2.4.8	Contract Terms	Type of Contract: Financing Agreement: Contract Term:	Energy Savings Performance Contract Third Party Financing October 2005-November 2019
2.4.9	Project Personnel	Name, Role, Will be Assigned to CT ESPCP Projects:	Ken Nathanson, Sales Executive Robert Torre, Director of Operations John Johnson, Senior Energy Efficiency Engineer Steve Manwell, Energy Efficiency Engineer Karen DiMeglio, Energy Efficiency Engineer Mike Smith, LTSA/Construction Manager Louqmane Tidjani, Project Manager
2.4.10	Project Schedule	--	On Schedule
2.4.11	List of Improvements	--	Chilled Water Cooling System Domestic Hot Water Boilers Lighting Energy Management Control System Winter Cooling Air Handling Unit Air Distribution Upgrades
2.4.12	Project Performance	--	The amounts of projected annual savings, guaranteed annual savings, and actual energy

No.	Item	Description	
			savings for each project are presented in the table shown below, per the bid documents
2.4.13	Measurement & Verification	M&V Approach Description: Stipulated Savings:	Complies with FEMP M&V guidelines for Federal Energy Projects None – all measured
2.4.14	Performance Guarantee	Savings Guarantee Description:	Guaranteed savings were achieved.
2.4.15	Additional Comments	Special features, services, conditions, create approaches, special needs of customer, etc. that are relevant to the ESPCP and clientele:	Chilled water piping and chillers were installed in four historic buildings while in full occupancy; Hot water piping was also run throughout occupied buildings. Process improvements were made to boat blast bay equipment including sand blast compressors and exhaust hoods.

Utility Type	Units	Projected Annual Energy Savings	Guaranteed Annual Energy Savings	Actual Energy Savings Year 1 (2006)	Actual Energy Savings Year 2 (2007)	Actual Energy Savings Year 3 (2008)	Actual Energy Savings Year 4 (2009)	Actual Energy Savings Year 5 (2010)
Electric	kWh	2,157,221	2,048,907	2,157,221	2,209,233	2,269,294	2,259,355	2,270,002
Natural Gas	Therms	158,200	150,257	158,200	164,310	168,930	168,930	168,930
Optg & Maint	\$	\$17,381	\$16,508	\$17,381	\$17,381	\$17,902	\$18,440	\$18,993