

**Applications accepted on a first-come, first-serve basis through
December 31, 2015 by 5:00 PM Eastern Time**

PROGRAM SUMMARY:

The FlexTech Program Opportunity Notice (PON) 1746 seeks customers interested in receiving cost-shared analysis of energy efficiency technical evaluations, process improvement analysis, energy master plans, retrocommissioning, and development of peak-load curtailment plans (PLCPs) of their existing facilities as well as combined heat & power (CHP) feasibility studies for implementation within existing facilities. This solicitation is divided into three (3) separate components: 1) Energy Efficiency; 2) CHP; and 3) PLCPs.

For eligible Energy Efficiency and CHP studies, NYSERDA will cost-share up to \$1,000,000 on selected studies as described herein. For PLCP development, NYSERDA will provide \$2/kW of the facility's peak summer (May-October) electrical demand up to \$8,000 directly to Independent Service Providers.

Service Providers, not under contract to NYSERDA as FlexTech Consultants, with interested customers should utilize this document along with the Consolidated Funding Application (CFA) to apply for project funding. A complete project package is comprised of a Scope of Work developed according to the appropriate Appendix (B-D), a signed Terms & Conditions sheet (Appendix A1 or Appendix A2) and the CFA.

SCOPE OF WORK AND TERMS & CONDITIONS SUBMISSION:

Scanned electronic copies of the Scope of Work and signed Terms & Conditions sheet should be sent to Mary Sauvie, mks@nyserda.org. Include FlexTech PON1746 in the subject line. Please include the CFA number if available at the time of submission. Alternatively, submit hard copy to:

Mary Sauvie, PON 1746, NYS Energy Research and Development Authority, 17 Columbia Circle, Albany, New York 12203-6399

The CFA may be accessed through the following webpage: <http://nyworks.ny.gov/>

Customers, Service Providers, or FlexTech Consultants with FlexTech Program questions should contact: Joanna Moore (866-NYSERDA ext. 3220, jml@nyserda.org)

All contractual questions should be directed to Venice Forbes (866-NYSERDA ext. 3507, vwf@nyserda.org).

Complete project packages will be accepted until 5:00 PM on December 31, 2015. Late or incomplete project packages will be returned. Submissions will not be accepted at any other NYSERDA location other than the address specified above.

I. INTRODUCTION

NYSERDA's FlexTech Program provides New York State commercial, industrial, institutional, government, and not-for-profit sectors with objective and customized information to help customers make informed energy decisions.

This solicitation is divided into three (3) separate components: 1) Energy Efficiency; 2) CHP; and, 3) PLCPs.

All three components will be reviewed for funding on a first-come, first-served basis. Participants may choose to submit to any or all components. Separate submissions for each component are not required but a submission for both energy efficiency and CHP measures will be accepted to the CHP component and reviewed as such (see Appendix C for review guidelines). General classifications are defined below.

ELIGIBLE PARTICIPANTS

Eligible participants include: NYS industrial and commercial facilities, colleges and universities, health care facilities, state and local governments, not-for-profit and private institutions, and public and private K-12 schools.

Eligible applicants are a New York State electricity or gas distribution customer of a participating utility company who pay into the Systems Benefit Charge (SBC).

The FlexTech Audit Program provides free energy audits to small businesses and not-for-profits with an average electric demand of 100kW or less. For more information on the FlexTech Audit Program please contact Kathryn Fantauzzi (866-NYSERDA ext. 3456, kf3@nyserda.org).

SERVICE PROVIDER SELECTION

Customers may select their own service provider. Potential service providers include, but are not limited to: Energy Service Companies (ESCOs), energy consultants, and engineering companies.

Customers who are in need of a service provider may choose from NYSERDA's FlexTech Consultant list comprised of firms under NYSERDA contract who have been competitively selected to provide a statewide geographic distribution of needed technical services. Please contact Joanna Moore (866-NYSERDA ext. 3220, jm1@nyserda.org) for further assistance.

Firms interested in becoming a NYSERDA FlexTech Consultant are encouraged to review the FlexTech website, www.nyserda.ny.gov/flextech, specifically the "Interested in Becoming a NYSERDA FlexTech Consultant" section.

ENERGY EFFICIENCY PROJECT CLASSIFICATIONS

Eligible participants may propose energy studies in the following energy efficiency project categories, but are not limited to:

General Energy Feasibility Studies

Feasibility studies aim to assist customers in making more informed energy decisions at their facilities. This service may include equipment replacement or upgrade recommendations, comprehensive energy analysis in campus-type settings, energy-related design assistance through computer-assisted building modeling, or engineering support and other analysis requested by the customer and approved by NYSERDA. Although detailed design services are not eligible, a feasibility study may require some conceptual design to determine the feasibility of potential improvements.

Peak-Load Reduction and Load Management

These studies may evaluate the peak demand impacts of study recommendations. Electric grid reliability and availability of demand response or demand reduction initiatives during summer peak periods is especially critical and particular focus should be paid to calculating this impact in addition to the customer billing impact. The historic peak load occurs between May 1 and October 31, during the hours of 11:00 A.M. to 6:00 P.M., with the exception of some night peaking load pockets.

Studies will need to provide analysis showing how the study measures coincide with or impact the system electric summer peak. Both short-term load management and long term permanent load reduction opportunities may be investigated. These studies may investigate the economics of participating in a Mandatory Hourly Pricing Program (MHP) to evaluate the purchase of electricity based on time-differentiated pricing and provide review of real-time metering information and the benefits to facilities interested in participating in load curtailment programs or in tracking daily load profiles to monitor the effects of energy consuming systems. This service may help customers identify their ability to, and the financial benefit from, participating in such programs and the associated energy savings from installing real-time metering or web-enabled metering when it is used to curtail or shift loads at their facility. Consultants will be asked to identify and analyze opportunities for customers to participate in load curtailment activities of the New York Independent Systems Operator (NYISO) such as Installed Capacity Special Case Resources (ICAP/SCR), a Time of Use (TOU), or Real Time Pricing (RTP) Program.

Industrial and Process Efficiency Analysis

Industrial facilities and processes require customized approaches to energy efficiency. Production lines and processes often have unique characteristics and functions. Studies may also focus on increasing productivity, improving environmental performance, or minimizing waste. Analyses should predominantly focus on defining and reducing energy use per unit of production.

Data Centers

Data center energy analysis assistance will assess energy efficiency and carbon reduction potential of data center support systems and information technology (“IT”) equipment. Strategies can include, but are not limited to: cooling/IT equipment replacement or upgrade recommendations, server virtualization, redundancy optimization, temperature set point investigations, etc. Analyses should predominantly focus on defining and reducing energy cost per unit of productive data throughput.

Energy Efficiency Retro-Commissioning

Retro-commissioning is the systematic process of verifying that all building systems perform interactively according to design intent, that they meet the operational needs of the owners and occupants, and that staff responsible for operation and maintenance are sufficiently trained. The goal of this service is to improve system performance, operation and maintenance, energy efficiency, occupant comfort, and indoor environmental quality. Retro-commissioning studies will need to focus specifically on energy efficiency. In general, NYSERDA’s FlexTech Program allows retro-commissioning on facilities and equipment that have been in use for at least one year. Retro-commissioning does not include replacement of significant HVAC or other building components, but rather focuses on the verification and identification of proper control strategies, sequence of operations, operations and maintenance plans, and other building or system optimization strategies. Projects defined as Energy Efficiency Retro-Commissioning (RCx) must also complete one NYSERDA RCx Deficiency Worksheet for each deficiency found (Appendix B-4). Each NYSERDA RCx Deficiency Worksheet must have a corresponding line on the Project Summary Sheet.

Long-Term Energy and Carbon Management

Commercial and industrial customers can apply to the FlexTech Program for long-term energy and carbon related services. The service provider should act as a member of the customer team to provide long-term support on energy and carbon management issues, actively identifying opportunities and performing analyses with the customer’s and NYSERDA’s approval. Services may include, but are not limited to: screening level energy evaluation of campuses, providing detailed technical support for decisions regarding the purchase of energy-efficient equipment, preparing bid documents for the purchase and installation of equipment, preparing RFPs, reviewing ESCO proposals, developing scopes-of-work for comprehensive energy audits conducted by a selected ESCO, reviewing comprehensive energy audits, reviewing proposed energy performance contracts, performing design assistance, performing independent verification that equipment and installations are as specified, reviewing annual savings reports from ESCOs during the guarantee period, and assisting with planning and implementation of strategies to reduce energy and environmental footprints. These studies may also be used to develop long-term capital budget strategies for the systematic replacement or upgrade of energy consuming and capital intensive systems. These studies may include evaluation of the current condition of the existing equipment, its expected useful life, and recommendations of energy-efficient replacement alternatives as a basis for a long-term capital budget strategy.

CHP PROJECT CLASSIFICATIONS

Participants may propose to evaluate CHP studies to investigate the site-specific technical and economic feasibility of installing CHP. All scopes of work must identify the specific uses for the recovered heat. See Appendix C-1 for a description of eligible CHP projects.

PEAK-LOAD CURTAILMENT PLAN (PLCP) CLASSIFICATIONS

Service providers may submit to receive funds for the development of a PLCP. The purpose of this component is to encourage service providers to develop comprehensive protocols which allow their customers to respond to load curtailment calls from the NYISO during periods of New York electrical system capacity constraints. Proof of customer registration in the NYISO ICAP/SCR is required. This “proof” can be in the form of a forwarded email from the NYISO providing the qualified load. Prior registration of curtailable load with the NYISO must have occurred within 6 months of project package receipt.

NYSERDA PAYMENT

NYSERDA will reimburse the Applicant the percentage of the actual FlexTech study as provided in the issued Purchase Order and documented by invoices, cancelled checks, etc proving full study cost payment to their service provider. When appropriate, NYSERDA may issue progress payments based on documented work delivered, up to the allowable percentage of the study cost, not-to-exceed 50% of NYSERDA’s total financial commitment. Please refer to section IV for PLCP payment process.

II. PROGRAM REQUIREMENTS AND LIMITATIONS

MATCHING CONTRIBUTIONS/FUNDING LIMITS

With the exception of PLCP, all projects must include cost-sharing in the form of matching cash support from the customer. An independent third-party consultant is required for all projects. In-kind contributions of any type are not allowed as matching funds. For most studies, NYSERDA will contribute fifty percent (50%) of the eligible study costs, up to the lesser of either \$1,000,000 or ten percent (10%) of the participating facility’s annual energy costs, based on an approved Scope of Work.

The intent for individual studies approaching the \$1,000,000 cost-share amount is for long-term energy studies continuing for at least a three (3) year time-frame.

For PLCP assistance, NYSERDA will provide \$2/kW of the facilities peak summer (defined as May-October) demand, up to \$8,000 directly to the service provider. To be eligible, registered load must be equal to or greater than 10% of the facility’s peak summer demand and must exceed 100kW.

OVERALL FLEXTech PROGRAM LIMITATIONS/REQUIREMENTS

- Electric customers of the New York Power Authority (NYPA) or the Long Island Power Authority (LIPA) are not eligible for funding under this solicitation. These customers are encouraged to contact their local Utility Customer Service Representative about energy efficiency.
- A scope of work requesting funding for both Energy Efficiency and CHP will only be reviewed through the CHP component of the Program. CHP studies will under-go review by an independent panel to determine eligibility for acceptance into this solicitation. See Appendix C-1 for Evaluation Criteria for the proposals submitted to the program. In general, these minimum criteria must be met in order to have the project accepted into NYSERDA’s Program.
- With the exception of those projects in the CHP component needing independent panel review, upon NYSERDA’s receipt of the signed Terms & Conditions and Scope of Work, applicants are allowed to

commence their studies at their own risk.

- Benchmarking may be allowed if it is part of a larger Scope of Work, such as one that includes identification of energy efficiency measures or retro-commissioning. Facilities may not receive cost-sharing for benchmarking more than once every three (3) years.
- New facilities, or those that have undergone substantial renovations, must be occupied for more than one year to be eligible for funding under this solicitation.
- Whole building or new construction commissioning is not eligible for funding under this program. Commissioning of new equipment or systems within an existing building is eligible, but must focus on the energy aspects of proper operating parameters. Calculations demonstrating the potential energy impacts from repairing each deficiency are required.
- Detailed engineering design is considered an implementation effort under this solicitation and is not eligible for funding under this program.
- NYSERDA's funding under this program is limited to 10% of the participating facility's annual energy cost.
- Customers and service providers are limited to ten (10) open projects in this Program offering or the program formally known as the Technical Assistance Program at any given time.
- Unless otherwise negotiated, all work funded under this program must be completed within two (2) years of issuance of the Purchase Order.
- Service provider travel costs are limited to 3% of the total project cost.
- Scopes of Work seeking funding for single, multifamily, or Publicly Assisted Housing are not eligible under this program, but may apply under NYSERDA's Residential Energy Affordability programs. Information is available by calling toll-free 1-866-NYSERDA or at www.nyserdera.ny.gov.
- Scopes of Work seeking funds to support the sale or distribution of energy are not eligible for funding under this program except as defined in Appendix C-1.
- Equipment purchases are not eligible for funding under this program, except for metering equipment, software costs, and other data collection hard costs. These hard costs may be eligible for funding where the added expense is justified through increases in the overall effectiveness of the technical evaluation; the equipment must be a necessary component of the funded study and collected data must be an integral component of the study's engineering analysis. The purpose and type of metering equipment, use of trend data, and installation locations must be detailed in the scope of work. Interval meters must be capable of capturing time sensitive data no less frequently than once-per hour; interval meter data must be accessible no less than once-per-day. Requested funds for these costs cannot exceed 50% of the eligible FlexTech project costs (i.e. the cost of the engineering analysis). NYSERDA reserves the right to reduce the allowable metering costs in a study below 50%.
- No service provider may apply for more than 25% of the funds available under this program.
- Power quality, power factor, and power conditioning studies are not eligible for funding under this program.
- Utility billing error analysis is not eligible for funding under this program.

ADDITIONAL ENERGY EFFICIENCY COMPONENT REQUIREMENTS/LIMITATIONS

- Retro-commissioning services funded under this component of the program must be specifically focused on energy efficiency. Retro-commissioning studies without the potential for significant energy savings are not

eligible for funding. Study costs may be prorated at NYSERDA's discretion with NYSERDA cost-sharing only the energy efficiency components. Funds may be used for evaluation of facilities only and may not be used to correct deficiencies found. Calculations demonstrating the potential energy impacts from repairing each deficiency are required. NYSERDA reserves the right to determine which projects are classified as retro-commissioning.

- NYSERDA may also require that the Scope of Work include a list of the components contained within the system being retro-commissioned. This could include identifying the size, type, age and location of all air handlers, pumps, chillers, control points, etc.
- Organizations which generate, transmit, or distribute energy for sale are not eligible for funding under this component of the program.

CHP COMPONENT - INELIGIBLE PROJECTS

- Proposals for studies of generation without a heat recovery component are not eligible for funding.
- Proposals seeking assistance with evaluating CHP systems for which the potential generation capacity would be larger than 50 MW or mechanical equivalent in total prime mover capacity, including back up, are not eligible for funding.
- Proposals seeking assistance with evaluating CHP systems for which less than 75% of the electricity generated would be used on-site are not eligible for funding.

ADDITIONAL PLCP REQUIREMENTS/LIMITATIONS

- Facilities must have a peak summer demand (defined as May-October) exceeding or equal to 1000 kW.
- To be eligible for funding, projects must not have sold the capacity identified in the PLCP into the NYISO Demand Response Program ICAP/SCR more than 6 months prior to project proposal package receipt. The sold date refers to the day in which the load becomes eligible for payment from the NYISO or Con Edison.
- PLCPs must demonstrate that the full registered load is technically capable of being curtailed. For all projects, facility-specific loads must be identified for curtailment.
- The facility's registered load must be equal to or greater than 10% of the facility's peak summer demand and must exceed 100kW.
- If multiple facilities are included in a single submission, each facility must meet the minimum requirements listed.
- Generator projects must be located within Con Edison territory and are limited to existing emergency/back-up generators. Emissions must be less than 7.5 grams per brake horsepower (g/bhp-h) of NOx or Department of Environmental Conservation (DEC) regulations if stricter than 7.5 g/bhp-h.
- A facility needs to provide data access instructions for NYSERDA to access interval meter information. The facility should provide the URL, username and password for the interval meter or a print-out of interval meter data by hour for at least 5 weekdays.

III. SUBMISSIONS

Complete project packages will be accepted until 5:00 pm December 31, 2015. Late or incomplete submissions will be returned. Customers or their selected service providers may submit projects for the Energy Efficiency or CHP components of this PON; only service providers may submit for the PLCP component.

Customers, Service Providers, or FlexTech Consultants with questions about the FlexTech Program should contact: Joanna Moore (866-NYSERDA ext. 3220, jm1@nyserda.org).

All contractual questions should be directed to Venice Forbes (866-NYSERDA ext. 3507, vwf@nyserda.org).

To submit to the **ENERGY EFFICIENCY** component of this solicitation:

- Send a complete Scope of Work (as defined in Appendix B-1) and signed Terms & Conditions (Appendix A-1) to the attention of Mary Sauvie at the email address or building address at the beginning of this PON.
- Complete the CFA located at <http://nyworks.ny.gov>
- A complete project package is comprised of Appendix A-1, a complete Scope of Work and the CFA.

To submit to the **CHP** component of this solicitation:

- Send a complete Scope of Work (as defined in Appendix B-1) and signed Terms & Conditions (Appendix A-1) to the attention of Mary Sauvie at the email address or building address at the beginning of this PON.
- Complete the CFA located at <http://nyworks.ny.gov>
- A complete project package is comprised of Appendix A-1, a complete Scope of Work with an attached detailed budget for the study to be conducted, and a list of the service provider's relevant project experience. Project proposals containing scopes of work that do not expand upon the requirements in Appendix C-2 or C-3 (as appropriate), to include site and project specific issues, may be rejected.

To submit for the **PLCP** component of this solicitation:

- Send the signed Terms & Conditions sheet (Appendix A-2), along with a PLCP for each facility (as outlined in Appendix D) and copies of one year of electricity bills to the attention of Mary Sauvie at the email address or building address at the beginning of this PON.
- Complete the CFA located at <http://nyworks.ny.gov>
- A complete project package is comprised of Appendix A-2, PLCP and the CFA.

IV. AWARDS

ENERGY EFFICIENCY PROJECTS

When NYSERDA receives a completed Scope of Work as defined in Appendix B-1, the project scope will be reviewed to verify that it meets the requirements of this solicitation and the format set forth in the Guidelines for Scopes of Work (Appendix B-1). NYSERDA will assign a NYSERDA Project Manager to issue comments to the customer and service provider requesting revisions and clarification of the Scope of Work as necessary. Comments will also address missing project package components, such as a signed Terms & Conditions page and CFA if such components are not submitted simultaneously with the Scope of Work.

Upon approval of a Scope of Work and receipt of the signed Terms & Conditions and CFA, NYSERDA will issue a Purchase Order for the project. Customers and their service providers may begin study execution upon NYSERDA's receipt of the Scope of Work at their own risk. Cost-share amounts are not encumbered until a Purchase Order is issued.

Final reports must comply with the requirements in Appendix B-2. Upon receipt of two copies of the draft report, NYSERDA will assign a Technical Reviewer, under contract to NYSERDA, who will issue comments to be addressed in the Final Report as necessary. Upon receipt and approval of a hard copy and electronic copy of the Final Report, NYSERDA will require a copy of the service provider's invoice(s) to the customer indicating the total study cost, a copy of the metering equipment/software invoice(s), if applicable, and an invoice from the customer to NYSERDA. The service provider's

invoice(s) should be broken out by non-labor costs, individuals, titles, hourly rates, dates and hours worked on each task. In addition, if applicable, NYSERDA may also require a copy of the customer's canceled check paying the total study cost to the service provider. At NYSERDA's discretion, a copy of the canceled check(s) from the customer to the service provider showing the total study cost and a copy of the lump-sum invoice may be accepted in lieu of a detailed invoice. All invoices and other reimbursement documentation must be sent to invoices@nyserda.org. NYSERDA will reimburse the customer the percentage of the actual study cost incurred, subject to the maximum dollar amount as provided in the issued Purchase Order. When appropriate, NYSERDA may issue progress payments up to the allowable percentage of the study cost, not-to-exceed 50% of NYSERDA's total financial commitment.

CHP PROJECTS

CHP studies will be evaluated by NYSERDA staff members and outside technical experts on a first-come first-served basis. The review will involve a comparative evaluation of the applicable criteria in Appendix C. Customers will be notified of the funding decisions approximately three (3) weeks after submission.

Upon approval, NYSERDA will assign a Project Manager who will issue comments to the customer requesting revisions and clarification of the Scope of Work as necessary. Upon approval of a Scope of Work and receipt of the signed Terms & Conditions and CFA, NYSERDA will issue a Purchase Order. Cost-share amounts are not encumbered until the Scope of Work is approved, the signed Terms & Conditions and CFA have been received and a Purchase Order is issued.

Final reports must comply with the requirements in Appendix B-2 and the applicable requirements in Appendix C. Upon receipt of two copies of the Draft Report, NYSERDA will issue comments to be addressed in the Final Report. Upon receipt and approval of a hard copy and electronic copy of the Final Report, NYSERDA will require a copy of the service provider's invoice to the customer showing the total study cost and an invoice from the customer to NYSERDA. The service provider's invoice(s) must be broken out by non-labor costs, individuals, titles, hourly rates, dates and hours worked on each task. In addition, if applicable, NYSERDA may also require a copy of the customer's canceled check paying the total study cost to the service provider. At NYSERDA's discretion, a copy of the canceled check(s) from the customer to the service provider showing the total study cost and a copy of the lump-sum invoice may be accepted in lieu of a detailed invoice. All invoices and other reimbursement documentation must be sent to invoices@nyserda.org. NYSERDA will reimburse the customer the percentage of the actual CHP study cost incurred, subject to the maximum dollar amount as provided in the issued Purchase Order. When appropriate, NYSERDA may issue progress payments up to the allowable percentage of the study cost, not-to-exceed 50% of NYSERDA's total financial commitment.

PLCP

When NYSERDA receives a completed PLCP, as defined in Appendix D, the PLCP will be reviewed to verify that it meets the program requirements. NYSERDA will assign a NYSERDA Project Manager and a Technical Reviewer under contract to NYSERDA to issue comments to the service provider requesting revisions and clarification as necessary. Comments will also address missing project package components, such as a signed Terms & Conditions page and CFA if such components are not submitted simultaneously with the PLCP. Once the PLCP is approved and the signed Terms & Conditions and CFA have been received, a Purchase Order will be issued. NYSERDA will provide \$2/kW of the facilities peak summer (defined as May-October) demand, up to \$8,000 directly to the service provider.

Service providers must submit an invoice to NYSERDA for the approved dollar amount as provided in the issued Purchase Order. All invoices must be submitted to invoices@nyserda.org.

V. REPORTING

A goal of this program is to share project successes with others who may gain from the transfer of technical information. In order to receive reimbursement, applicants awarded funding will be required to provide a Final Report or Peak-Load Curtailment Plan to NYSERDA. These reports must meet the requirements in Appendix B-2 or Appendix D as appropriate.

A required one-page project summary sheet (Appendix B-3) will be provided by NYSERDA with the Purchase Order and must be completed for all projects. A case study must also be submitted for all projects, along with copyright permissions for

the pictures used in the project case study.

Projects defined as Energy Efficiency Retro-commissioning (RCx) must also complete one NYSERDA RCx Deficiency Worksheet for each deficiency found (Appendix B-4). Each NYSERDA RCx Deficiency Worksheet must have a corresponding line on the Project Summary Sheet.

VI. GENERAL CONDITIONS

PROPRIETARY INFORMATION

Careful consideration should be given before confidential information is submitted to NYSERDA as part of your proposal. Review should include whether it is critical for evaluating a proposal, and whether general, non-confidential information, may be adequate for review purposes. The NYS Freedom of Information Law, Public Officers law, Article 6, provides for public access to information NYSERDA possesses. Public Officers Law, Section 87(2) (d) provides for exceptions to disclosure for records or portions thereof that "are trade secrets or are submitted to an agency by a commercial enterprise or derived from information obtained from a commercial enterprise and which if disclosed would cause substantial injury to the competitive position of the subject enterprise." Information submitted to NYSERDA that the proposer wishes to have treated as proprietary and confidential trade secret information, should be identified and labeled "Confidential" or "Proprietary" on each page at the time of disclosure. This information should include a written request to except it from disclosure, including a written statement of the reasons why the information should be accepted. See Public Officers Law, Section 89(5) and the procedures set forth in 21 NYCRR Part 501 available at www.nyserda.ny.gov/About/New-York-State-Regulations.aspx. However, NYSERDA cannot guarantee the confidentiality of any information submitted.

OMNIBUS PROCUREMENT ACT OF 1992

It is the policy of New York State to maximize opportunities for the participation of New York State business enterprises, including minority- and women-owned business enterprises, as bidders, subcontractors, and suppliers on its procurement Agreements.

Information on the availability of New York subcontractors and suppliers is available from:

Empire State Development
Division For Small Business
30 South Pearl Street
Albany, NY 12245

A directory of certified minority- and women-owned business enterprises is available from:

Empire State Development
Minority and Women's Business Development Division
30 South Pearl Street
Albany, NY 12245

LIMITATION

This solicitation does not commit NYSERDA to award a Purchase Order, pay any costs incurred in preparing a project package, or to procure or contract for services or supplies. NYSERDA reserves the right to accept or reject any or all proposals received, to negotiate with all qualified sources, or to cancel in part or in its entirety the solicitation when it is in NYSERDA's best interest.

DISCLOSURE REQUIREMENT

The proposer shall disclose any indictment for any alleged felony, or any conviction for a felony within the past five years, under the laws of the United States or any state or territory of the United States, and shall describe circumstances for each. When a proposer is an association, partnership, corporation, or other organization, this disclosure requirement includes the organization and its officers, partners, and directors or members of any similarly governing body. If an indictment or

conviction should come to the attention of NYSERDA after the award of a contract, NYSERDA may exercise its stop-work right pending further investigation, or terminate the agreement; the contractor may be subject to penalties for violation of any law which may apply in the particular circumstances. Proposers must also disclose if they have ever been debarred or suspended by any agency of the U.S. Government or the New York State Department of Labor.

CONTRACT AWARD FOR ENERGY EFFICIENCY PROJECTS

NYSERDA may request additional data or material to support submissions including scope of work modifications or negotiations before issuing a Purchase Order. A sample Purchase Order is available on request. NYSERDA expects to notify customers in approximately three (3) weeks from the receipt of a complete project package whether the submission has been selected to receive an award.

CONTRACT AWARD FOR CHP PROJECTS

NYSERDA anticipates making multiple awards under this solicitation. It may award a Purchase Order on initial project packages without discussion, or following limited discussion or negotiations. Each offer should be submitted using the most favorable cost and technical terms. NYSERDA may request additional data or material to support submissions. NYSERDA expects to notify customers in approximately three (3) weeks from the receipt of a complete project package whether the submission has been selected to receive an award.

CONTRACT AWARD FOR PEAK-LOAD CURTAILMENT PLAN TECHNICAL ASSISTANCE

NYSERDA may award a Purchase Order based on applications without discussion, or following limited discussion, application modifications or negotiations. NYSERDA may request additional data or material to support applications. A sample Purchase Order is available on request. NYSERDA expects to notify service providers in approximately three (3) weeks from the receipt of a complete project package whether the submission has been selected to receive an award.

PROJECT PAYMENTS

NYSERDA will reimburse successful customers using independent service providers for NYSERDA's share of the actual FlexTech study cost provided in the issued Purchase Order at the conclusion of the FlexTech project and upon receipt of the required documentation as outlined in Section IV and Section V of this PON. Reimbursement will be based on services actually provided as defined in the Scope of Work and as documented by the approved final report, invoices and other documentation deemed necessary by NYSERDA. Unless otherwise noted, payments will be sent to the applicant address provided in Appendix A-3 or the scope of work. Progress payments are available at the discretion of the assigned NYSERDA Project Manager.

For customers using a NYSERDA FlexTech Consultant, NYSERDA will contribute up to 50% towards the allowable NYSERDA Consultant fees for energy feasibility studies. Successful applicants will pay the remaining balance of the NYSERDA Consultant fees directly to the NYSERDA Consultant under the terms and conditions to be negotiated by the applicant and NYSERDA Consultant. Progress payments are available at the discretion of the assigned NYSERDA Project Manager.

PLCP PAYMENTS

NYSERDA will provide an incentive of \$2/kW upon approval of the PLCP as outlined in Section IV.

VII. OTHER OPPORTUNITIES

NYSERDA has a number of programs available to New York State businesses and industries. These include implementation assistance programs, as well as many others. More information can be found on our website at www.nyserda.ny.gov, by e-mailing info@nyserda.org or by calling toll free 1-866-NYSERDA.

VIII. ATTACHMENTS

Included:

- Appendix A-1: Energy Efficiency and CHP Terms & Conditions
- Appendix A-2: Peak-Load Curtailment Plan Terms & Conditions
- Appendix A-3: Participant Information
- Appendix B-1: Scope of Work Requirements
- Appendix B-2: Final Report Requirements
- Appendix B-3: Project Summary Sheet
- Appendix B-4: NYSERDA RCx Deficiency Worksheet (Filled in Example)
- Appendix C-1: Eligible CHP Projects and Evaluation Criteria
- Appendix C-2: Required information in a detailed CHP study (costing greater than \$20,000)
- Appendix C-3: Required information in a preliminary CHP study (costing less than \$20,000)
- Appendix D: Peak-Load Curtailment Plan Requirements

Appendix A-1

Energy Efficiency and CHP Terms & Conditions

APPLICANT CERTIFICATION. *Please check the appropriate box*

Terms for applicants using a service provider not under contract to NYSERDA:

I, the Applicant, certify that the facility or lead facility named in the scope of work is interested in technical assistance and is requesting that NYSERDA set aside funds to reimburse the facility for certain eligible costs, as outlined in the scope of work, in pursuing a FlexTech project. I certify that the information provided is true to the best of my knowledge

As part of this project, NYSERDA will oversee the Service Provider's progress and results in completing the scope of work, provide technical review of any applicable report, and be available to address any questions or concerns which arise during the conduct of this project.

Terms for applicants using a NYSERDA FlexTech Consultant:

I, the Applicant, certify that the facility or lead facility named in the scope of work is interested in technical assistance and request that NYSERDA set aside funds to contribute towards the allowable NYSERDA Consultant fees, as outlined in the scope of work. The Applicant will pay the remaining Consultant fees directly to the Consultant under terms and conditions to be negotiated by the Applicant and the Consultant. NYSERDA's contribution will be paid directly to the Consultant, provided the work is acceptable to the Applicant and NYSERDA.

As part of this project, NYSERDA will oversee the NYSERDA Consultant's progress and results in completing the scope of work, provide technical review of any applicable report, and be available to address any questions or concerns which arise during the conduct of this project.

I, the Applicant, also certify that NYSERDA does not provide any endorsement of the Consultant's capabilities to provide services outside of the Scope of Work to be conducted pursuant to this agreement. The Customer acknowledges that neither NYSERDA nor its consultant is responsible for assuring that the design; engineering or installation of any recommendation of the technical service is proper or complies with any particular laws (including patent laws), codes, or industry standards.

Overall

NYSERDA does not make any representations of any kind regarding the results to be achieved or the adequacy or safety of any recommendation. NYSERDA does not endorse, guarantee, or warrant any particular manufacturer or product, and NYSERDA provides no warranties, expressed or implied for any product of service.

I, the Applicant, certify the number provided is my correct taxpayer identification number (or I am waiting for a number to be issued to me); I am not subject to backup withholding because: (a) I am exempt from backup withholding, or (b) I have not been notified by the Internal Revenue Service (IRS) that I am subject to backup withholding as a result of a failure to report all interest or dividends, or (c) the IRS has notified me that I am no longer subject to backup withholding; and I am a U.S. citizen or other U.S. person (as defined in IRS Form W-9).

AUTHORIZED APPLICANT (ENTITY PAYING FOR THE STUDY)

SIGNATURE: _____

NAME AND TITLE: _____

ORGANIZATION AND PHONE: _____

FEDERAL ID¹: _____

Federal ID # should match company/organization paying for energy study services

Appendix A-2

Peak-Load Curtailment Plan Terms & Conditions

ADDITIONAL PROJECT INFORMATION

Peak Demand & Corresponding Month	
Total Curtailable Load (kW)	
Total Registered Load (kW)	
NY ISO ICAP/SCR Registration ID Number	
Date of Enrollment in NY ISO ICAP/SCR	
Funds Requested from NYSERDA (\$2 times Peak Summer Demand of Facility)	\$ Note: Maximum eligibility is \$8,000.

CUSTOMER CERTIFICATION	SERVICE PROVIDER CERTIFICATION
I, the Customer, certify that the facility named in this submission is interested in the Peak-Load Curtailment Plan and enrollment in the NY ISO SCR/ICAP programs. I request that NYSERDA set aside funds to reimburse the service provider for development of the plan. I have the authority to put the Peak-Load Curtailment Plan into effect and I understand and will support the kW curtailment strategies identified as part of this application. I certify that the information provided is true to the best of my knowledge. I understand that submissions must meet the specified criteria described in Program Opportunity Notice 1746 and that all submissions may not be funded.	I, the service provider, recognize and accept that participation in the program, and receipt of any program incentive payments, is predicated on following all guidelines and procedures established by the program. I certify that the information provided is true to the best of my knowledge. I understand that submissions must meet the specified criteria described in Program Opportunity Notice 1746 and that all submissions may not be funded.

OVERALL

I, the Customer or service provider, certify the number shown on this form is my correct taxpayer identification number (or I am waiting for a number to be issued to me); I am not subject to backup withholding because: (a) I am exempt from backup withholding, or (b) I have not been notified by the Internal Revenue Service (IRS) that I am subject to backup withholding as a result of a failure to report all interest or dividends, or (c) the IRS has notified me that I am no longer subject to backup withholding; and I am a U.S. citizen or other U.S. person (as defined in IRS Form W-9).

CUSTOMER SIGNATURE: _____	SERVICE PROVIDER SIGNATURE: _____
NAME: _____	NAME: _____
TITLE: _____	TITLE: _____
ORGANIZATION: _____	ORGANIZATION: _____
PHONE: _____	PHONE: _____
	FEDERAL ID #: _____

PLEASE NOTE: A scope of work as defined in Appendix D and Consolidated Funding Application must also be submitted.

Scope of Work Requirements

1. The scope of work should be a stand-alone document titled "Exhibit A-1" and should not be in letter format. The service provider doing the work should also be noted. In general, Scopes of Work range from four to eight pages. After review of the Scope of Work, it should be clear where opportunities exist and why a study is needed.

NOTE: To develop a Scope of Work for the CHP component of the FlexTech program, applicants must meet the applicable requirements within Appendix C.

2. **FACILITY DESCRIPTION:** The first page of the Scope of Work should contain a detailed description of the customer's facility and the service provided or product produced. The Scope of Work should at a minimum include:
- a. Customer Contact information
 - i. Please include the contact information for the entity associated with the Federal ID number provided in Appendix A-1 or A-2 if different from the facility contact. As noted in Appendix A-3, the applicant address will be the address used for study reimbursements unless otherwise noted.
 - b. Contractor contact information
 - c. CFA number (if submitted)
 - d. Customer utility information (utility company, utility account number(s), consumption, and costs)
 - e. Indication of contribution to Systems Benefit Charge on electric utility, gas utility or both.
 - f. Description of building size, age, and occupancy type

Appendix A-3 may be submitted instead of or in addition to the information requested above.

3. **PROJECT BACKGROUND:** The first page should also include a one- or two-paragraph description of the project making clear the need for the study. This should include:
- a. A description of the current systems and methods of operation
 - b. Total amount of space to be evaluated (whole facility or percentage of space i.e. office, process line, common space) and what will be reviewed to replace or change these systems or methods to become more efficient. This paragraph should also include the method of data collection (metering, motor nameplate etc.) and energy savings calculation (i.e. computer modeling, spreadsheets or manually etc.).

For RCx projects, NYSERDA may require that the scope of work include a list of the components contained within the system being commissioned. This may include identifying the size, type, age and location of all air handlers, pumps, chillers, control points etc.

4. **TASKS:** The next pages should divide the project into numbered tasks. Each energy efficiency measure (EEM) reviewed should be a single task. Each task should include a description of:
- a. What will be reviewed in regard to that EEM
 - b. The current condition of the equipment or operation to be evaluated (if not included in section above)
 - c. What will be evaluated as potential replacement or upgrade options
 - d. The method of data collection (data loggers, meters, nameplate information, etc.)
 - e. The method to calculate energy savings (spreadsheet, modeling, etc.)

Energy efficiency measures are considered those that will provide measurable and verifiable energy savings for the facility.

Please note, energy savings must be presented as savings at the customer's utility meter(s), and not at the individual building or tenant space. For example, self-generated steam or chilled water savings should be reported back to the source of generation (i.e. natural gas).

5. **ASSUMPTIONS:** Following the Tasks section should be a paragraph describing the project assumptions, if necessary. Examples of this could be that the customer's facility would provide a knowledgeable guide to the consultants as they review the facilities, or note any information the customer has promised to provide the consultant for the completion of the study.

6. **DELIVERABLES:** Following the Assumptions section should be a one-paragraph section describing the Deliverables. This should state that a draft report will be forwarded to NYSERDA addressing all of the tasks described and will follow NYSERDA's format as defined in the Program Opportunity Notice (PON) Appendix B-2. It should also note that comments made by NYSERDA's project manager will be addressed in a final report which will also be forwarded to NYSERDA. Finally, the deliverable should also include a Project Summary Sheet and a Case Study. Examples of these will be provided with the Purchase Order and are available on NYSERDA's website.

7. **SCHEDULE:** Following the Deliverable description should be a schedule to complete each of the tasks. This schedule should be in a "weeks from purchase order" format. The schedule should correspond to the individual tasks and budget. For example: Kick-off meeting within two weeks of purchase order; Task 1.0 completed within four weeks of purchase order, etc.

8. **BUDGET:** Finally, a detailed project budget broken out by task should be attached. For each task, the number of hours and dollars per personnel title to be spent should be clearly indicated. This will provide a clear understanding of how much emphasis is being placed on each task and therefore, the level of detail that can be expected. Please include a separate line item for travel and expenses. The budget should include the total study cost, as well as the NYSERDA cost-share and customer contribution.

In general, the Scope of Work should eliminate any ambiguity about the project. It should be clear what the current status of the facility is, what will be reviewed in the study and in what detail the study will be done. The Scope of Work will be used as the basis for reimbursement by NYSERDA. The final report will be compared to this document to determine if it has met the requirements of the FlexTech program. It should therefore, be as detailed as possible. Overall, the Scope of Work will help all parties involved understand what is expected of them and what they can expect of the other participants.

Final Report Requirements

Executive Summary - Concisely summarize the FlexTech project's intent, findings, recommendations, and economics of the recommendations in narrative format.

Background - Provide information about the applicant and the project, such as type of business or organization, average number of employees per location, annual energy costs by fuel type, electric and gas suppliers, and rate tariff.

Project Description - Include a description of the project intent, approach, and tasks performed as defined in the project scope.

Project Results/Recommendations - Describe the project findings here. Include reasons for recommendations on cost effective, electrical energy efficiency measures and capital improvements. At a minimum, the recommendations and related economics must be presented. Life-cycle cost or other analyses may also be included, if desired. Final reports should include information on additional potential project benefits, such as increased productivity, job creation or retention, and environmental benefits. Include a qualitative description of other project benefits, such as increased knowledge or information base, comfort, competitiveness, product quality, or energy affordability. Describe the role of NYSERDA funding in making this project possible. For projects where computer modeling is used, reports must also include: 1) a brief presentation of the manipulations which the program performed; 2) input data for the building and for each EEM should be presented in a manner which allows easy identification of input parameters; 3) clear and precise presentation of the results in both tabular and narrative forms, and; 4) verification that interaction effects were taken into account.

Appendices - This section will include supporting documentation for all recommendations not included in the previous section, along with historical energy costs, sample calculations for all EEM's reviewed, assumptions, conversion factors, items included in project implementation costs, and sources of cost estimates, etc. Energy savings calculations must be presented as savings at the customer's utility meter(s), and not at the individual building or tenant space. For example, self-generated steam or chilled water savings should be reported back to the source of generation (i.e. natural gas).

Project Summary Sheet - This one page summary outline is required for all projects (see Appendix B-3). Copies are available online. This form provides a simple matrix of the project by summarizing the payback, costs and savings in dollars, therms, MMBtu's, and kWh and kW where appropriate.

Case Study - This one-page case study should follow the format of the case study which will be attached to the Purchase Order. Other examples are available online. It must include photos and a brief description of the customer, project background, results, and benefits. Photos must be provided in digital and hard copy forms. Digital copies must be high resolution photo suitable for publication (300 dpi at 4"x6" max.). The Applicant must also supply copyright permissions so that NYSERDA may re-use the pictures in promotional material for the program. The Applicant agrees that NYSERDA may use the case study and the Final Report to promote successes of this FlexTech Program for replication throughout New York State.

NYSERDA RCx Deficiency Worksheet - This additional worksheet is required for all retro-commissioning projects. See Appendix B-4. One worksheet must be completed for each deficiency found and must provide an energy cost/savings associated with the deficiency. These values must be supported in the report by the appropriate engineering calculations. Each deficiency must also be included on the required Project Summary Sheet.

PROJECT SUMMARY SHEET

Customers Name and Address _____

Customers Contact and Title: _____

Telephone #: _____

STRATEGY OF ENERGY SAVINGS

Measure Description	Measure Status (See notes)	Fuel Type Saved (See notes)	Energy Saved in kWh	Energy Saved in kW	Energy Saved in mmBTUs	Annual Dollars Saved	Estimated Costs for Implementation	Simple Payback Period (Years)
						\$	\$	
						\$	\$	
						\$	\$	
						\$	\$	
						\$	\$	
						\$	\$	
TOTAL:						\$	\$	

Notes: Please fill in applicable boxes.

Measure Status: Implemented (I); Recommended (R); Further Study Recommended (RS); Not Recommended (NR).

Fuel Saved: Elec, NGas, Oil2, Oil4, Oil6, Coal, LPG. MMBtu = 1,000,000 Btu

Please note, energy savings must be presented as savings at the customer's utility meter(s), and not at the individual building or tenant space.

NYSERDA RCx Deficiency Worksheet - Example

<u>Deficiency Number:</u>	1		Annual kWh saved	kW saved	Annual mmBTU's saved	Annual Dollars saved	Implement Cost	Fuel Type Saved	Simple Payback	Supporting calculations found on page:
<u>System:</u>	HVAC		8,200	0	200	\$3,384	\$250	Elec. & Gas	0.1 Yr	appendix c, page 56
<u>Component:</u>	AHU #12		Other Notes: Damper appears to be stuck as a result of a control wire breaking off of the control motor.							
<u>Location:</u>	East Wing over Conference Room									

Deficiency Description	Effect on system operation	Corrective Action	Benefit⁽¹⁾	Recommend Corrective action?
<i>Air damper stuck in open position</i>	<i>Over ventilation and cooling of offices 8-12</i>	<i>repair and adjust damper</i>	<i>E, C, O</i>	<i>Yes</i>

One worksheet is to be completed for each deficiency found in the RCx study, and included in the report. For each deficiency found, the energy saving/cost associated must be included. If the deficiency does not have any associated energy savings, zeros should be used. The complexity of the energy savings calculations should be appropriate to the size of the energy savings. Each deficiency must also be included in the required NYSERDA Project Summary Sheet (Appendix B-3).

E= Improved energy efficiency; C= Improved comfort; M= Reduced maintenance; O= Improved operation efficiency

Eligible CHP Projects

Combined Heat and Power (CHP) Systems are considered those that simultaneously provide thermal and electrical energy at a host site. The system should intend to meet the requirement for efficient CHP, defined as an application of technology that achieves an average, annual, fuel-conversion efficiency meeting or exceeding an efficiency of 60%.

The CHP system should intend to meet the following criteria:

- Sum of all usable thermal energy products must constitute at least 20% of the technology's total usable energy output, and
- Sum of all usable power must constitute at least 15% of the technology's total usable energy output.

The following are ineligible:

-
- Scopes of work proposing to evaluate systems utilizing fuel sources other than natural gas;
- Scopes of Work seeking assistance with evaluating systems using highly processed or treated materials (including materials painted, or pressure treated with chromium, chlorine and arsenic bearing compounds);
- Scopes of Work seeking assistance with evaluating systems using Municipal Solid Waste;
- Scopes of Work seeking assistance with evaluating studies for which the potential CHP system would be larger in total prime mover capacity than 50 MW; and
- Scopes of Work seeking assistance with evaluating CHP systems for which less than 75% of the electricity generated would be used on-site.

Please note that other NYSERDA programs have limited installation funds available for combined heat and power projects. Solicitations are released on a periodic basis. Please visit www.nyserdera.ny.gov for more information.

Please also note, all CHP projects performed by FlexTech-Independent Consultants must undergo review by an independent panel of experts to determine eligibility of acceptance into the FlexTech Program.

CHP Evaluation Criteria

All CHP submissions must follow the scope of work requirements as outlined in Appendix B-1 and comply with the evaluation criteria listed below. Scopes of work that do not expand upon the requirements in Appendix C-2 or C-3 (as appropriate), to include site and project specific issues, may be rejected.

Combined Heat and Power Scopes of Work must identify assumptions and include site specific supporting detail to:

- Analyze the thermal and electric usage on an hourly profile per year.
- Provide the thermal and electrical profiles using engineering analysis or metered data for at least a year (Metered data is preferred.)
- Identify the tariff impacts that would result from installation of the system.
- Provide a schematic of the electrically interconnect of the proposed system.
- Identify the necessary permits for the proposed system.
- Describe the engineering analysis that will be used to identify the match between the electric and thermal load profiles at the site. There must be at least a potential for a 60% Fuel Conversion Efficiency.
- Also identify the generating technologies that would be used. Only reciprocating engines, turbines, microturbines and fuel cells are to be considered. Proposals evaluating fuel cells and microturbines also need to evaluate reciprocating engines.

- Sufficient detail that will support the methodology proposed for each of the required tasks as outlined in Appendix C-2 or C-3.

Additional Requirements

- The scope of work and related estimates must demonstrate an economically justified project.
- The cost of the study must be reasonable and must contain a detailed budget broken out by task that shows hours and dollars allocated to each task of the scope of work
- Consultant staff allocations and schedule must be sufficient to meet the objectives of the scope of work cost effectively.
- Involved consultant staff, contractors, sub-contractors, etc. must have had at least three completed and related projects.

Required Information in a Detailed CHP Feasibility Study (Total study cost greater than \$20,000 total cost)

The following information must be included in detailed CHP feasibility studies, in addition to general final report requirements in Appendix B-2.

System Information

- Energy use profiles must be reviewed in detail to accurately determine the level of temporal coincidence between thermal and electrical loads to be satisfied by the CHP system. An electronic copy of a spreadsheet-based model that describes system operation, including electricity produced and heat recovered on an hourly basis must be provided with the DEA. Assumptions used in the model should be clearly indicated in the DEA.
- Thermal usage and electricity profiles must be illustrated in a figure for variance by month for one year and by hour on a summer, winter and shoulder day.
- The type and rating of the prime mover and an energy balance around the prime mover must be shown. The energy balance must be applied to a schematic of the system showing all major components, including the uses for the recovered heat. Annual totals for each energy input/output must be shown along with maximum, minimum, and average instantaneous values. Temperatures for each waste heat transfer fluid and sink must also be indicated.
- CHP system efficiency and emissions must be described.
 - Annual thermal utilization percentage must be given (i.e., the annual amount of heat that is recovered for space and/or process heating and/or cooling divided by the annual recoverable thermal output from the prime movers).
 - Fuel conversion efficiency (FCE) for the prime movers must be provided. FCE is defined as the ratio expressed as a percentage of the total usable energy produced by a technology to the sum of all fuel or other energy inputs to the technology measured at each fuel's lower heating value.
 - The annual emissions of the proposed system must be provided.
 - Any additional emission control technology must be provided if necessary to meet emission regulations.
- The description of the proposed system must include a preliminary floor plan indicating equipment location. Construction cost estimates should include estimates for rigging, building construction (if necessary) and any anticipated structural modifications.
- The pressure and availability of natural gas must be described in the study.
- An operational sequence must be included that specifies the control system to be used along with a discussion of its integration with other on-site control systems and who will have responsibility for system operation.
- A project schedule that includes durations for design (engineering & architectural), utility coordination and review, permitting (environmental and construction), construction, start-up, and commissioning must be provided.

Economic Evaluation

- Electricity, fuel, operation, and maintenance costs before and after the proposed installation along with a summary of project economics must be included.
- Economics must be presented in a simple payback format. Additionally, a cash flow analysis or life cycle cost analysis must be presented.
- Operational costs must include any impact to the customer's energy tariffs.
- Maintenance costs can be listed in \$/kWh, but must also be annualized. This should include M&V costs.
- Capital costs must include:
 - Equipment purchase and system installation
 - Structural (new building, existing building modifications, etc)
 - Interconnection and Utility Connection (construction & utility fees)

- Electrical distribution system changes
- Rigging
- Permitting
- Design fees
- Commissioning

Maintenance

- In addition to inclusion in the economic analysis described above, maintenance items must be described in detail. The source of the maintenance costs must be included along with a list of what would be covered (i.e. annual major overhaul of prime mover, oil changes, etc.).
- An estimate of downtime that would occur due to routine maintenance must also be included.

Tariff Impacts and Interconnections

- In addition to inclusion in the economic analysis described above, a detailed description of the relationship between the proposed CHP facility and the Customer's existing energy tariffs must be included. Contract dates and dates of potential tariff rule must be included. In the case where such future changes would significantly impact the economics of the Project, sensitivity analysis must be presented assuming the potential tariff or contract changes occurred.
- Site-specific grid interconnection issues and costs must be discussed. A brief, clear plan for if and how the system will be properly interconnected to the grid, natural gas pipelines and/or the Con Edison steam system must be presented.

Permitting

- A brief description of the necessary environmental and building permits that the customer needs to obtain must be provided. The permit determination should be based on the annual emissions potential for the size of the unit and the emissions of any existing equipment at the facility. Anticipated time frames and durations for environmental, utility and construction permitting should be incorporated in the Project schedule.

System Reliability and Availability

- The reliability and availability of the CHP System must be quantified (e.g. number of hours the system would be available at less than full capacity). This must be compared to service and discussed in the context of the Customer's core business and tolerance for risk.

Required Information in a Preliminary CHP Feasibility Study (Total study cost less than \$20,000 total cost)

The following information must be included in preliminary CHP feasibility studies, in addition to general final report requirements in Appendix B-2.

System Information

- Energy use profiles must be reviewed in detail to accurately determine the level of temporal coincidence between thermal and electrical loads to be satisfied by the CHP system. An electronic copy of a spreadsheet-based model that describes system operation, including electricity produced and heat recovered on a daily basis, must be provided with the final report. Assumptions used in the model should be clearly indicated in the final report. Thermal demands must be shown for the specific heat sinks to be satisfied by the CHP system.
- Preliminary type and rating of and energy balance around the prime mover. The energy balance must be applied to a schematic of the system showing all major components, including the uses for the recovered heat. Annual totals for each energy input/output must be shown.
- Description of the proposed system must include a floor plan showing equipment location.

Economic Evaluation

- Electricity, fuel, operation and maintenance costs before and after the proposed installation along with a summary of project economics must be included.
- Economics must be presented in a simple payback format.
- Operational costs must include any impact to the Customer's energy tariffs.
- Maintenance costs can be listed in \$/kWh, but must also be annualized.
- Capital costs must include any necessary one time costs such as permitting, interconnection or electrical distribution system changes.

Maintenance

- In addition to inclusion in the economic analysis described above, maintenance items must be described in detail. The source of the maintenance costs must be included along with a list of what would be covered (i.e. annual major overhaul of prime mover, oil changes, etc.).

Tariff Impacts and Interconnections

- Site-specific grid interconnection issues and costs must be discussed. A brief, clear plan for if and how the system will be properly interconnected to the grid. In the absence of such a plan, natural gas pipelines interconnect issues must be presented.

Permitting

- A brief description of the necessary environmental and building permits that the Customer needs to obtain must be provided.

Peak-Load Curtailment Plan Requirements

Peak-Load Curtailment Plans provide a protocol to curtail electrical demand (kW) upon a call from the NYISO. The intent of the Peak-Load Curtailment Plan component of this solicitation is to encourage service providers to increase the number of facilities registering for the NYISO Peak-Load Installed Capacity/Special Case Resource Program (ICAP/SCR), to provide a more thorough evaluation of load curtailment opportunities, and to increase the rate of facility participation when called upon to curtail load.

Participation in this component of the program requires; 1) a Peak-Load Curtailment Plan; 2) engineering calculations demonstrating that the curtailable load registered with the NYISO is technically and reasonably feasible; 3) proof of registration with the NYISO's ICAP/SCR program; 4) copies of the previous year of electrical bills for the applicant facility; and 5) data access instructions for interval meter information including the URL, username and password or a printout of interval meter data by hour for at least 5 weekdays.

Please review the Limitations Section (Section II) of this solicitation carefully prior to submitting. Incomplete, inappropriate and ineligible submissions will be returned to the service provider. NYSERDA reserves the right to accept or reject any or all proposals received, to negotiate with all qualified sources, or to cancel in part or in its entirety the solicitation when it is in NYSERDA's best interest.

PEAK-LOAD CURTAILMENT PLAN REQUIREMENTS AND FORMAT

- The first page shall be an Executive Summary. It should outline the intent of the document and include, at a minimum, the name and location of the facility, a brief description of the equipment and operations within the facility. Please include the electric utility account number for the participating facility and a statement indicating the facility's contribution to the SBC.
- The main body of the Peak-Load Curtailment Plan shall provide a separate section for each load curtailment measure. Each section shall detail the step-by-step actions to be taken when receiving a request from the NYISO to curtail load, along with a projection of the associated curtailed load resulting from those actions, a description of the anticipated impacts on comfort and/or operations.
- Appendix A to the Peak-Load Curtailment Plan must include:
 - A brief description of the baseline conditions of the Facility as a whole and also specific to the equipment involved in the proposed measures. This should include documentation of methods and assumptions used to determine baseline conditions. A Facility baseline that is representative of normal operating conditions should be developed to reflect the time period of proposed curtailment.
 - Calculations demonstrating the amount of electrical demand (kW) curtailed for each action (curtailment measure) in the main body of the document, including pre- and post-implementation electric demand for all affected equipment, measured in kW, along with electric use, measured in kWh.
 - Interval meter data access instructions including URL, username and password or a printout of interval meter data by hour for at least five weekdays.
- Appendix B to the Peak-Load Curtailment Plan shall be proof of registration of the load with the NYISO. This can be in the form of the email spreadsheet from the NYISO noting the registration number, the corresponding curtailable load and associated information. An electronically forwarded screenshot of the email may be required at NYSERDA's discretion.
- Appendix C to the Peak-Load Curtailment Plan shall be comprised of copies of the facilities electrical bills for the previous year.