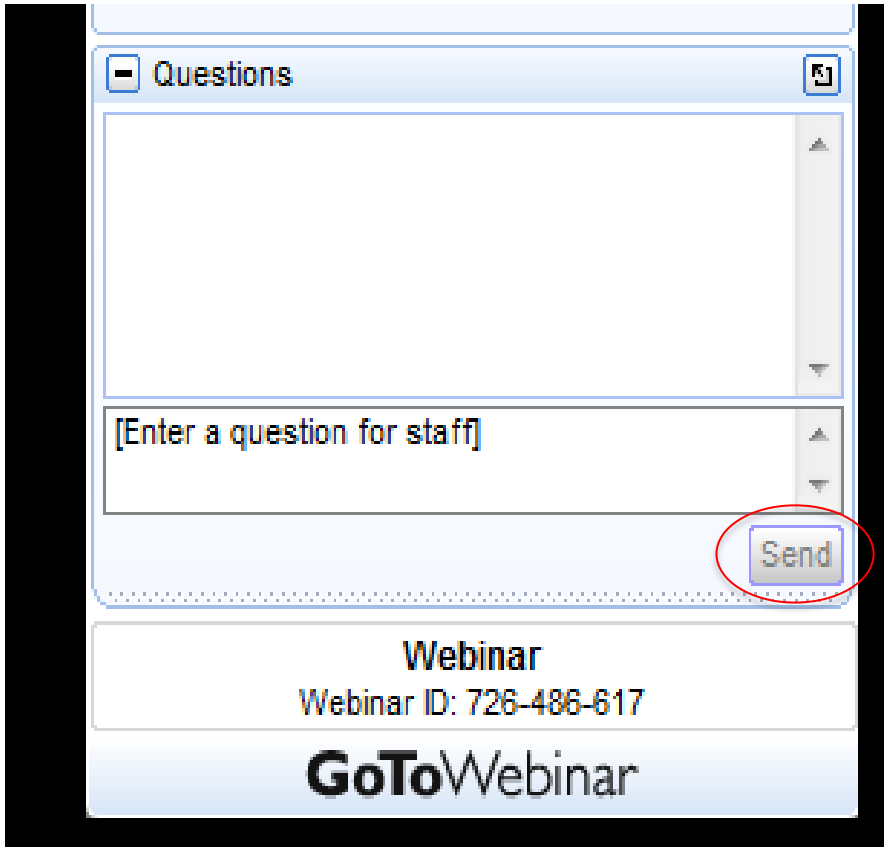
FY2015 Renewable Electric Storage Competitive Solicitation

Webinar

Presented by the Office of Clean Energy
and the Market Manager Team

November 5, 2014
10 am

Submitting Questions



We will collect any questions you may have as you view the presentation, but we will be **unable to respond** during this webinar.

Please use the space provided on your control panel to send questions to the Market Manager Team.

REIP Program Goals

- Provide support in the form of financial incentives for energy storage systems that are integrated with Class 1 renewable energy projects installed behind the meter at customer sites.

- Benefit New Jersey ratepayers by supporting the installation of renewable electric storage systems in government, commercial, institutional and industrial entities (including public and critical facilities) for the purpose of providing emergency back-up power for essential services, offsetting peak loads by shifting electricity to hours of higher demand and, or helping to stabilize the electric distribution system through the provision of frequency regulation services.

REIP Program Objectives

- Focus on energy storage systems integrated with behind-the-meter electric generation from Class I renewable energy resources, which are “ready to build” and can be completed as expeditiously as possible.

- Establish maximum incentive amounts which will allow the limited amount of funds to be committed to a broader number of projects.

- Prioritize facilities that are defined as “public and critical” with the goal of demonstrating the potential for energy storage to keep critical systems operating during power outages.

> “Critical facilities” means public facilities, including federal, state, county or municipal facilities, non-profit and/or private facilities, including hospitals and communication centers determined to be Tier I or critical infrastructure facilities by the Office of Emergency Management and/or Office of Homeland Security and Preparedness.

Solicitation Timeline

October 22, 2014: NJBPU Staff presents Solicitation to NJBPU for approval at its agenda meeting.

October 23, 2014: Solicitation is issued through email distribution to NJCEP listservs and posting on NJCEP website

October 29, 2014: Written question submittal period ends at 5:00 pm EST.

November 5, 2014: Market Manager conducts a webinar to review application submittal procedures and provide answers to previously submitted questions.

December 8, 2014: Deadline for application submittal. All paperwork must be received by the Market Manager by 5:00 pm EST.

December 18, 2014: Market Manager finishes its review of all applications for completeness. It identifies incomplete applications as such prior to forwarding all applications to the Solicitation Evaluation Committee. Incomplete applications may be evaluated at the discretion of the Committee.

January 7, 2015: The Committee completes its evaluation of all applications and recommends incentive awards for Staff's presentation to the NJBPU at a regularly scheduled NJBPU Agenda meeting.

TBD: The BPU makes a final determination on the Committee's recommendations. Following that determination, all applicants are notified in writing as to whether their applications have been approved and, if so, at what funding level.

TBD: The Market Manager issues REIP Approval letter(s) upon receiving a signed Order from the NJBPU.

REIP Program Eligibility

- Projects must provide for the storage of electricity and be integrated with a Class 1 renewable resource as defined in N.J.A.C. 14:8-1.2 and N.J.A.C. 14:8-2.5.
- The RE system to which the project is integrated must be an existing or to-be-installed behind-the-meter, net metered, interconnected system sized to produce no more than 100% of the host site's annual electric consumption.
- Open only to projects where the site host is served under a non-residential electric tariff.
- Energy Storage projects must have minimum capacity of 50 kW; smaller projects may be aggregated to meet minimum requirement.
- Site host must contribute to the Societal Benefits Charge (SBC).
- Incentive payment is contingent on applicant meeting all program requirements, EDC interconnection requirements and all applicable federal, state and local laws, regulations and permit requirements.
- Applicant must supply accurate cost information and identify all funding sources and other direct incentives.

Technology Eligibility

- **Storage system must charge and discharge electricity only**
  - Thermal energy storage systems are not eligible.
- **Electricity must be generated by Class 1 renewable system**
  - Storage device may not be charged by on-site fossil fuel generator or electric grid except for short-term charging and discharging to enable ancillary services.
- **Storage equipment must be new and permanently installed**
  - Used, refurbished, temporary equipment is not eligible
  - Portable systems are not eligible
- **Storage systems must use proven, commercially available technology**
  - Program is technology agnostic
- **Emergency back-up & islanding capability are not program requirements**
  - Evaluation Committee will consider their value to the host site in its evaluation criteria
  - For emergency back-up purposes, system must be able to support host's critical load
  - Applicant must state number of hours system can meet critical load (no min. or max.)
- **System should be scalable, replicable and support diverse RE resources**

REIP Program Funding

- $3 Million available funding
- Lesser of $500,000 per project or 30% of the project's total installed "eligible project" cost (minus other incentives)
- Maximum per-entity incentive $750,000

*** Entity is defined as the business, corporation, non-profit, institution or public agency that is the site host for the electric storage project(s). The per-entity maximum does not apply to project installers/developers unless they own the system.**

REIP Incentive Level

- Incentive amount approved for any project shall be the maximum incentive amount the project will receive.

- Upon completion, if the project is sized below the capacity for which it was approved, the incentive will be reduced by a dollar amount equal to the capacity reduction multiplied by the project's approved per-Watt incentive.

For example, a 100 kW project approved for a $200,000 incentive has a per-Watt incentive of $2.00. If the project is ultimately sized at 90 kW, it would receive a prorated incentive of only $180,000 based on the reduced capacity ($2.00 x 90,000 watts = $180,000

REIP Incentive Payment Structure

Final As Built Packet Submitted	Incentive Paid (as % of approved amount)
Within 12 Months	100%
12 – 18 Months (requires extension)	90%

All incentives will be paid following the successful completion of the REIP Inspection

- A project that is granted an incentive commitment in one Solicitation round may not reapply for an incentive in a subsequent, consecutive Solicitation round.
- A project would be eligible to reapply in any round thereafter
- Applicants may request one six month extension

REIP Application Submittals

- **Market Managers will accept REIP Program Applications for review on a competitive basis between the issuance of the Solicitation and 5:00pm EST on December 8, 2014.**

- **The chronological order in which applications are received will not factor into the evaluation process.**

- **Applications received after the submittal deadline will not be considered for this round of the Solicitation and will be returned by mail to the Applicant.**

- **Applicants must include all completed forms and all other items listed on the REIP Energy Storage Application Checklist. The Checklist and all forms are available online at:**
  http://njcleanenergy.com/ESTORAGEAPPS

- **Applicants should mail or hand deliver (1) original hard copy and four (4) electronic copies of the completed Application packet in a digital format (CD, DVD or thumb drive). All electronic documents must be individually scanned and identified as they appear on the Energy Storage Application Checklist:**

Send materials to :
Renewable Energy Incentive Program –Energy Storage Solicitation
New Jersey Clean Energy Program
c/o Conservation Services Group
75 Lincoln Highway, Suite 100
Iselin, NJ 08830

Applications received will be reviewed only by the Market Manager and the Solicitation Evaluation Committee.

REIP Application Checklist

Sample Documents Included in this Presentation	Sample Documents Not Included in this Presentation
REIP Application Form	REIP Energy Storage Checklist
Energy Storage Technical Worksheet	Copy of Contract
Company Team Key Members and Profiles	Site Map
Description of Similar Projects	10 Year Certification
Decommissioning Plan	Equipment Specification Sheets
Breakdown of Project Costs and all other Funding Sources	Manufacturer's Warranty
Electric Bill	Data Collection Form
Milestone Reporting Form	
Data Collection Form	*Performance Reporting Form*

Application Form
Appendix A

Section B
System Owner Information

Section E
Signatures

Renewable Electric Storage Incentive
Appendix A – Application Form

A. APPLICANT / SITE HOST CONTACT (Where will the system be installed?)

Electric Utility Name: _____ Account Number: _____
Gas Utility Name: _____ Account Number: _____
Company Name (if applica _____
First Name: _____ Last Name: _____
Daytime Phone: _____ Fax Number: _____ Email: _____
Installation Address: _____
City: _____ State: NJ Zip Code: _____
Mailing Address (if differen ☐ Same as Install _____
City: _____ State: _____ Zip Code: _____
Building Type: ☐ Commercial ☐ Non-Profit ☐ Public Schoo ☐ School Oth ☐ Government ☐ Farm
Public and Critical Facility? _____ (Yes / No) Facility Type (i.e. hospital, school, office): _____

B. SYSTEM OWNER (Who will own the system after it is installed?) FILL OUT IF DIFFERENT PERSON

Company Name: _____ Contact Pers _____
Mailing Address: _____
City: _____ State: _____ Zip Code: _____
Daytime Phone: _____ Fax Number: _____ Email: _____

C. INCENTIVE RECIPIENT (Fill in section if rebate check is to be issued to an organization / person

Company Name: _____ Contact Pers _____
Mailing Address: _____
City: _____ State: _____ Zip Code: _____
Daytime Phone: _____ Fax Number: _____ Email: _____
Applicant Signature: _____

D. INSTALLER/DEVELOPER

Company Name: _____ Contact Pers _____
Mailing Address: _____
City: _____ State: _____ Zip Code: _____
Daytime Phone: _____ Fax Number: _____ Email: _____
Installer to be determined: _____ ☐ Self Install

E. CERTIFICATIONS

The undersigned warrants, certifies and represents that 1) the information provided in this form is true and correct to the best of his or her knowledge; 2) a net metered behind-the-meter system that will not exceed 100% of the host's historic annual electric usage on a site owned by a customer that pays the Societal Benefits Charge on an electric or gas bill.3) the installer/developer will provide manuals related to the system operation and maintenance to the system owner; 4) the system proposed will be constructed, installed and operated in accordance with all NJBPU rules and applicable laws, and all NJBPU policies and procedures for the REIP Renewable Electric Storage Incentive; 5) the applicant/site host contact is the Customer of Record for the Utility Account; 6) the site host contact gives permission for a program representative to review their electric account information, both prior to installation and subsequent to installation; 7) all signed parties realize that certain information in their application may be subject to the Open Public Records Act (OPRA); 8) the installer/developer has reviewed and explained the applicable REIP Renewable Electric Storage Technical Worksheet; and 9) the Worksheet that accompanies this application is accurate and system installation will

System Owner:
Signature: _____
Print Name: _____
Date: _____

Site Host (if different from system owner):
Signature: _____
Print Name: _____
Date: _____

Installer/Developer:
Signature: _____
Print Name: _____
Date: _____

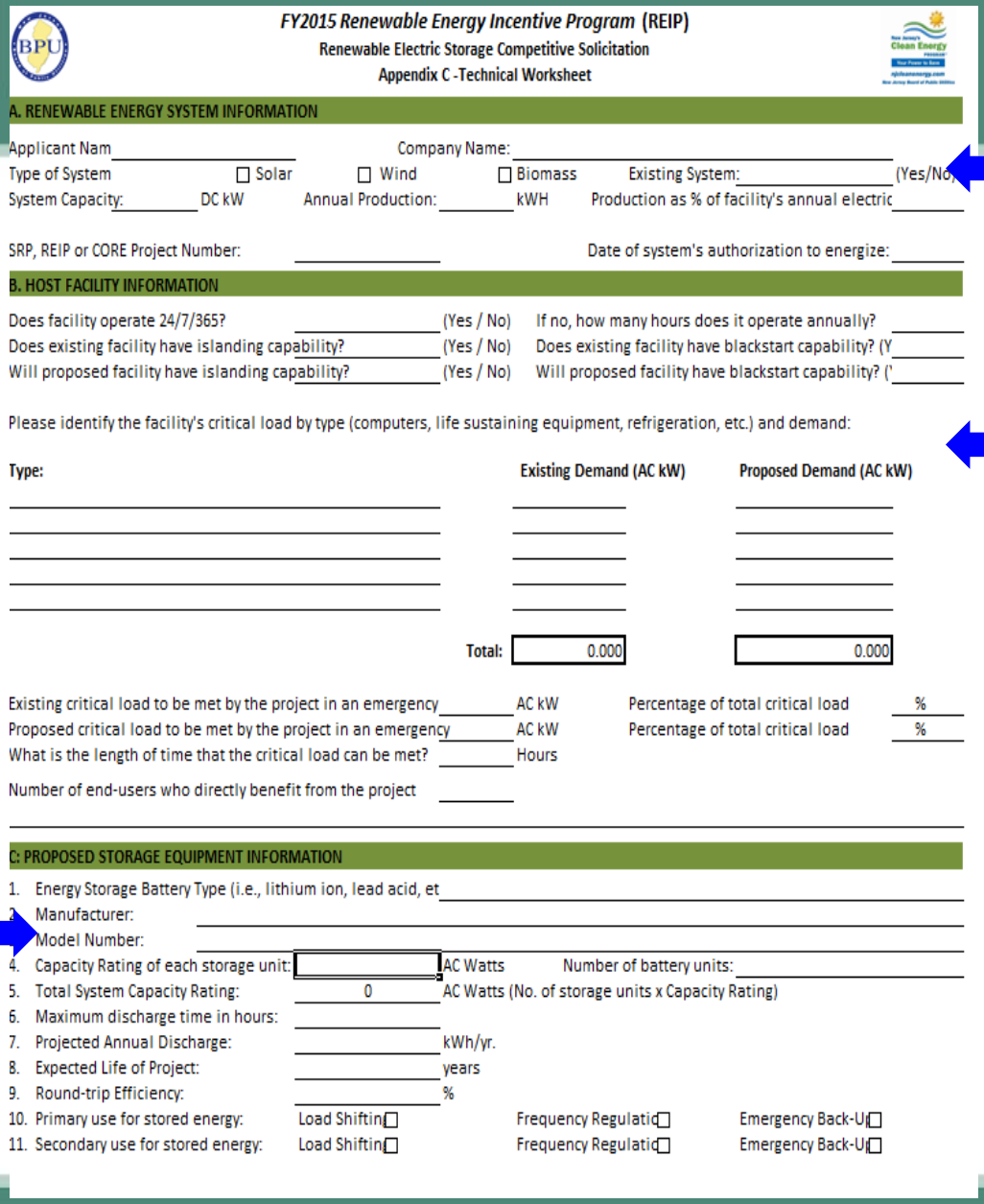
Section A
Applicant/Site Host Information

Facility Information

Section C
Rebate Recipient Information

Section D
Installer/Developer Information

Technical Worksheet Appendix C Page #1



FY2015 Renewable Energy Incentive Program (REIP)
Renewable Electric Storage Competitive Solicitation
Appendix C -Technical Worksheet

A. RENEWABLE ENERGY SYSTEM INFORMATION

Applicant Nam _____ Company Name: _____
Type of System ☐ Solar ☐ Wind ☐ Biomass Existing System: _____ (Yes/No)
System Capacity: _____ DC kW Annual Production: _____ kWH Production as % of facility's annual electric _____

SRP, REIP or CORE Project Number: _____ Date of system's authorization to energize: _____

B. HOST FACILITY INFORMATION

Does facility operate 24/7/365? _____ (Yes / No) If no, how many hours does it operate annually? _____
Does existing facility have islanding capability? _____ (Yes / No) Does existing facility have blackstart capability? (Y _____
Will proposed facility have islanding capability? _____ (Yes / No) Will proposed facility have blackstart capability? (' _____

Please identify the facility's critical load by type (computers, life sustaining equipment, refrigeration, etc.) and demand:

Type:	Existing Demand (AC kW)	Proposed Demand (AC kW)
Total:	0.000	0.000

Existing critical load to be met by the project in an emergency _____ AC kW Percentage of total critical load _____ %
Proposed critical load to be met by the project in an emergency _____ AC kW Percentage of total critical load _____ %
What is the length of time that the critical load can be met? _____ Hours

Number of end-users who directly benefit from the project _____

C: PROPOSED STORAGE EQUIPMENT INFORMATION

1. Energy Storage Battery Type (i.e., lithium ion, lead acid, et _____
2. Manufacturer: _____
3. Model Number: _____
4. Capacity Rating of each storage unit: _____ AC Watts Number of battery units: _____
5. Total System Capacity Rating: 0 AC Watts (No. of storage units x Capacity Rating)
6. Maximum discharge time in hours: _____
7. Projected Annual Discharge: _____ kWh/yr.
8. Expected Life of Project: _____ years
9. Round-trip Efficiency: _____ %
10. Primary use for stored energy: Load Shiftin☐ Frequency Regulatic☐ Emergency Back-U☐
11. Secondary use for stored energy: Load Shiftin☐ Frequency Regulatic☐ Emergency Back-U☐

Section A
Identify the type and size of the RE system with which the storage system is to be integrated

Section B
Identify the host facility, its critical load and the ability of the storage System to meet that load

Section C
Must be supported by Equipment Specification Sheet

Technical Worksheet
Appendix C
Page #2

FY2015 Renewable Energy Incentive Program (REIP)

Renewable Electric Storage Competitive Solicitation

Appendix C - Technical Worksheet

D. SYSTEM COSTS AND INCENTIVE REQUEST

1. Total Estimated Installed System Cost ($): $ _____
   Eligible installed system cost includes all key system components, installation, and applicable interconnection costs before New Jersey's Clean Energy Program incentive, less any other direct incentives. The actual costs must be documented by invoices from the vendor(s), as well as proof of customer purchase (copy of customer's check, credit card receipt or lease contract and documentation) submitted with the Final As-Built packet.

2. Total Estimated Installed System Cost (per kW): $ _____ per kW

3. Variable O&M Cost: $ _____ per kWh

4. Fixed O&M Cost (Estimated Annual Value): $ _____
   Fixed O&M Cost (Estimated Annual Value per kW): $ _____

5. Projected annual financial benefit (cost savings plus projected annual revenue from demand response and other ancillary services): $ _____

6. Requested Incentive: $ 500,000.00 *(Maximum incentive is $500,000 per project and $750,000 per entity)*

7. Requested incentive per kW of total storage capacity $ 0.00 (Section D6 divided by Section C5 * 1,000)

8. Identification of other incentive(s) applied for or obtained that was subtracted from Total Installed System Cost on Line D1. Please identify the agency, program and dollar amount of each incentive:

Agency	Program	Dollar Amount

Total $ Amount: 0.00

9. Maximum allowable incentive: $ 0.00 (30% of Installed Cost from Section D1)

10 Final incentive amount requested: $ 0.00 (Equals the lesser of Section D6 or D9)

E. WARRANTY INFORMATION

1. Equipment: _____ Years

2. Installation: _____ Years

3. Parts and Labor: _____ Years

Only cost for storage system

Section D
System Cost Information and Incentive Request

Section E -Warranty Information(Optional)

Technical Worksheet
Appendix C
Page #3

Section F
Similar Projects Successfully Installed by Project Team

FY2015 Renewable Energy Incentive Program (REIP)
Renewable Electric Storage Competitive Solicitation
Appendix C - Technical Worksheet

F. SIMILAR PROJECTS SUCCESSFULLY INSTALLED BY PROJECT TEAM

Similar Projects Successfully Installed by the Project Team

Project Name	Location	Time in Operation	System Size (kW)	Maximum Discharge Time	Supporting Critical Load? (Yes/No)

G. DECOMMISSIONING PLAN

Please summarize the decommissioning plan for the storage system:

Section G
Summarize the arrangements made for environmentally responsible disposal of the battery system

Milestone Reporting Form
Appendix D
Page #1

FY2015 Renewable Energy Incentive Program (REIP)
Appendix D-Milestone Reporting Form
For Renewable Electric Storage Projects

PROGRAM TERMS AND CONDITIONS

To qualify for an incentive, the Applicant must comply with all *Renewable Energy Incentive Program* (REIP) terms and conditions, eligibility requirements and installation requirements, and submit all completed forms. This Milestone Reporting Form must be submitted by the Applicant as a baseline report with the REIP Application Packet and quarterly thereafter, including any extensions that may be granted to the initial approval period, until the Final As-Built Packet is submitted. Quarterly reports are due within two weeks of the end of the quarters ending on March 31, June 30, September 30 and December 31.

Milestone Reporting Dates

INSTRUCTIONS FOR COMPLETING THIS FORM

Section A Please complete the project and applicant identification information. The project identification number requested is the five-digit number following "REIPR" in your approval letter.

Section B Please complete the chart, indicating whether each of the listed project milestones has been achieved. Where a milestone has been achieved, please insert the date it occurred in the Date Achieved column **(it is not necessary to submit any supporting documentation)**; where a milestone has not been achieved, please insert the date that you expect it to occur in the Date Expected to Achieve column. Dates may be expressed as month and year; it is not necessary to identify a particular day. Please use the Comments section to elaborate on any of your responses.

Section C The Applicant and Site Host Contact (if different from the Applicant) must sign the appropriate space(s).

Once this form is completed, it should be submitted to the Market Manager in hard copy as part of the REIP Application Packet (if an initial report) or electronically to njreinfo@njcleanenergy.com (if a quarterly report).

SECTION A: APPLICANT AND PROJECT IDENTIFICATION

Project Identification Number: REIPR-_____ System Size (kW): _____

Name of Applicant/Site Host Contact: _____

Name of Company or Organization: _____

Installation Address: _____

City, State, ZIP Code: *(City)* _____ *(State)* NJ *(ZIP Code)* _____

Daytime Phone: _____ Email Address: _____

Name of System Owner (if different from Applicant): _____

Name of Company or Organization: _____

System Owner Address: _____

City, State, ZIP Code: *(City)* _____ *(State)* _____ *(ZIP Code)* _____

Section A Applicant and Project Information

Milestone Reporting Form
Appendix D
Page #2

FY2015 Renewable Energy Incentive Program (REIP)

Appendix D-Milestone Reporting Form
For Renewable Electric Storage Projects

SECTION B: PROJECT MILESTONES

Milestone	Achieved Yes / No	Date Achieved	Date Expected to Achieve
1 Applications submitted for all required federal, state and local permits			
2 All required federal, state and local permits obtained			
3 Interconnection application approval			
4 Contract signed with installer*			
5 Construction / installation begun			
6 Construction / installation complete			
7 Passed local inspection (UCC)			
8 Receive authorization to operate from EDC			

***NOTE:** Once a Contract has been executed, a hard copy should be submitted to the Market Manager with the next quarterly Milestone Reporting Form submission. Copies of any/all contracts must be submitted prior to scheduling an REIP Inspection.

If you did not submit a copy of the warranty for the energy storage system with your initial REIP Application, you may submit with your next quarterly Milestone Reporting Form submission.

Comments (optional):

SECTION C: CERTIFICATIONS

The undersigned warrants, certifies and represents that the information provided in this form is true and correct to the best of his or her knowledge.

Applicant / Site Host Contact		**System Owner (if different from Applicant)**	
Signature:	_____	Signature:	_____
Print Name:	_____	Print Name:	_____
Date:	_____	Date:	_____

Section B
Project Milestones

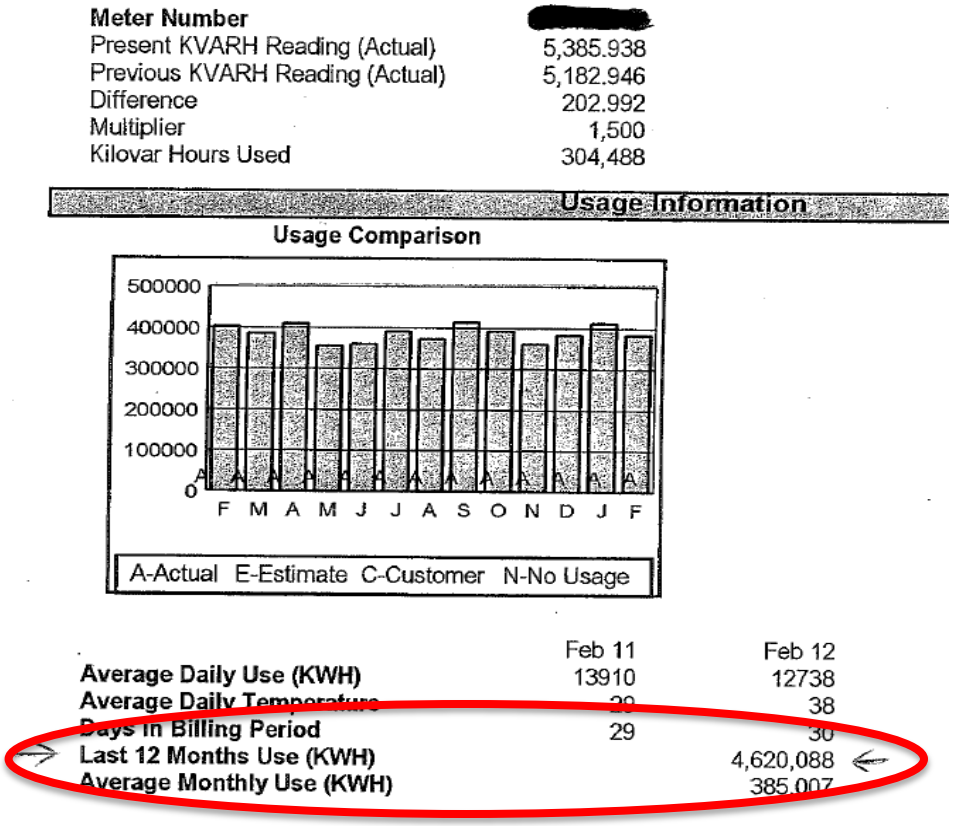
Section C
Signatures

Electric Bill

Include first page of the utility bill with customer name, account number and address

Proof of electric or gas account from a regulated utility is required to process the Application

New construction or expansion project, or the property is under new ownership, and 12 months of recent electric bills are not available, applicant must provide all available electric bills <u>and</u> a copy of a signed and sealed load estimator from a Professional Engineer (PE).



Meter Number	[redacted]
Present KVARH Reading (Actual)	5,385.938
Previous KVARH Reading (Actual)	5,182.946
Difference	202.992
Multiplier	1,500
Kilovar Hours Used	304,488

Usage Information

Usage Comparison

	Feb 11	Feb 12
Average Daily Use (KWH)	13910	12738
Average Daily Temperature	29	38
Days in Billing Period	29	30
Last 12 Months Use (KWH)		4,620,088
Average Monthly Use (KWH)		385,007

Data Collection Form –Appendix E

Information entered into program forms will automatically populate this form

Boxes highlighted in yellow will need to be manually filled out by applicant

DATA COLLECTION FOR EVALUATION FORM - ENERGY STORAGE - Appendix E				
Data Inputs to be entered by APPLICANT				
No.	Category	Unit	Data Location	Data Inputs
A	***Financial and Economic Viability***			
1	Total Estimated Installed System Cost	$	TWS-D1	0.00
2	Total Estimated Installed System Cost Per kW	$/kW	TWS-D2	0.00
3	Variable O&M Cost	$/kWh	TWS-D3	0.00
4	Fixed O&M Cost (Estimated Annual Value)	$	TWS-D4	0.00
5	Fixed O&M Cost (Estimated Annual Value per kW)	$/kW-yr	TWS-D4	0.00
6	Energy Storage Battery Replacement Cost	$/kWh		
7	Final Incentive Amount Requested	$	TWS-D10	0.00
8	Final Incentive Amount Requested per kW of storage system capacity	$/kW	TWS-D7	
9	Other incentives requested for the same project	$	TWS-D8	0.00
10	Projection of cost savings, demand response and other ancillary service revenues expected annually for the life of project	$		
B	***Project Readiness***			
1	Estimated Project Construction Start Date	Date	MF-B5	01/00/00
2	Project Construction Start Date	Date	MF-B5	01/00/00
3	Estimated Construction Completion Date	Date	MF-B6	01/00/00
4	Project Construction Completion Date	Date	MF-B6	01/00/00
5	Estimated date for applying for required permits	Date	MF-B1	01/00/00
6	Permit Applications Submitted	Date	MF-B1	01/00/00
7	Prior similar project experience		TWS-F	
C	***Technical Feasibility***			
1	Technology Type		TWS-C1	0
2	Total System Capacity Rating	KW	TWS-C5	-
3	Maximum discharge time in hours	Hrs	TWS-C6	0
4	Projected Annual Discharge	kWh/ yr	TWS-C7	0
5	Expected Life of Project	Yrs	TWS-C8	0
6	Lifetime Battery Replacements			
7	Roundtrip Efficiency	%	TWS-C9	0%
D	***Resilience***			
1	Is the host site a "public and critical facility"?	Yes/No	APP-A	0
2	Islanding capability (Existing)	Yes/No	TWS-B	0
	Islanding capability (Proposed)	Yes/No	TWS-B	0
3	Blackstart capability (Existing)	Yes/No	TWS-B	0
	Blackstart capability (Proposed)	Yes/No	TWS-B	0
4	Host facility load met by the project at times of emergency (Existing)	kW	TWS-B	-
	Host facility load met by the project at times of emergency (Proposed)	kW	TWS-B	-
5	Percent of total host facility load met by the project at times of emergency (Existing)	%	TWS-B	0%
	Percent of total host facility load met by the project at times of emergency (Proposed)	%	TWS-B	0%
6	Length of time for which the host facility load share can be met	Hrs	TWS-B	0
7	Number of end-users who directly benefit from the project	Qty	TWS-B	0

Solicitation Evaluation Committee Review

The Committee will review Applications on the basis of four categories:

Category	Weight as % of Total	Maximum Point Total
Financial and Economic Viability	30%	30
Project Readiness	30%	30
Technical Feasibility	20%	20
Resilience	20%	20
Total	100%	100 Points

- Funds will be committed to Applicants who rank highest in evaluation process.
- Funds shall be committed subject to availability.
- The NJBPU reserves the right to reject incomplete applications and to terminate this Solicitation round if none of the proposals pass a minimum threshold or if insufficient funds exists.
- See Section 6.3 Evaluation Criteria Page 14 of the Solicitation for additional information

Monitoring and Reporting

- Incentive recipients are required to provide NJBPU Staff with data on the performance and efficiency of their storage systems on a quarterly basis for first year of the system's operation.
- This data includes, but is not limited to:
  - Total amount of kilowatts and kilowatt-hours charged and discharged each month; overall operating efficiency;
  - Economic benefit the system produces in terms of revenue generated by ancillary s services or demand charges avoided by load shifting;
  - If applicable, the amount of time the system may have served the host facility's critical load (as defined by the Applicant) during power outages
- Participation in future Solicitations is contingent on the Applicant submitting this data in a timely manner.
- Performance data will be reviewed only by NJBPU Staff.

Energy Storage Resources

The Energy Storage Solicitation, Energy Storage forms and a copy of this presentation is available at:

http://njcleanenergy.com/ESTORAGEAPPS

Other resources:

BPU and EDA approved the Energy Resiliency Bank (ERB) Program Guide to Program Funds and Round One funding document, which outlines the parameters through which grants and loans will be provided to eligible critical facilities, at their September 30 and October 14 Board meetings, respectively. These guides and an initial Intake Application can be found at www.NJERB.com, or by calling (866) 534-7789, or emailing erb@njeda.com.

For More Information

Visit NJCleanEnergy.com
Call (866) NJSMART

For the latest updates on program announcements
or new incentives, subscribe to the NJ Clean Energy Program
E-Newsletter at: NJCleanEnergy.com.