



Direct Install (DI) Program

Program Guide

Fiscal Year 2017

(7/1/2016 through 6/30/2017)

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1. Overall Program Description

The DI program is designed to identify and implement cost-effective energy efficiency retrofits and provide financial incentives for up to 70% of the installed costs to encourage the early replacement of existing inefficient equipment with high efficiency alternatives. Systems and equipment eligible for incentives include the following categories: lighting, lighting controls, HVAC, and HVAC controls, premium efficiency motors, variable speed drives for existing HVAC, pipe insulation, water saving measures and refrigeration. Additional measures and measure categories will be explored for possible future addition to the Program.

For each project, the program strives to include installation of a comprehensive package of cost-effective energy efficiency improvements that may be quickly implemented. DI is a “turn-key” program utilizing pre-selected Participating Contractors (PCs) and Participating Vendors (PVs) and is aimed at providing participants a seamless process for energy efficiency analysis and equipment replacement to reduce consumption and lower energy costs. PCs will conduct Energy Assessments and Equipment Inventories in accordance with a software tool and procedures to identify eligible energy efficiency improvement opportunities at each site.

In addition to small businesses, this program is used by local government entities and non-profit organizations.

2. Target Market & Eligibility

The DI Program is open to all eligible commercial and industrial customers whose peak demand did not exceed 200 kW in any of the preceding twelve months, have their gas or electricity provided by one of New Jersey's Investor Owned Utilities (IOUs) and pay into the Societal Benefits Charge (SBC).

Funding may also be available for buildings located outside of one of the IOU territories who are serviced by oil, propane, or a municipal electric cooperative customer. This funding is limited and is provided from the Department of Energy for a State Energy Program (SEP) on a first-come, first-served basis. Other than expiration dates related to the availability of SEP funds, existing program guidelines and rules related to Direct Install will apply. Expiration dates are subject to the timeframe defined in the Grant Award. Information on available SEP funding can be [found here](#).

3. Program Website Link

- The below link routes to the DI homepage:
<http://njcleanenergy.com/commercial-industrial/programs/direct-install>

4. Program Delivery

The DI program offers a “turn-key” approach to customers. To ensure consistency, the program will be delivered across the state by the C&I Program Manager (TRC) in association with multiple regional contractors (contractors) who were selected via a Request for Proposal (RFP) process to deliver installation and related services. Contractors will work in conjunction with material suppliers (vendors), who were selected under a separate competitive RFP process.

However, if an applicant wishes to utilize their own contractor, rather than the pre-selected regional contractor for their area, the Program Manager will work with the applicant's contractor to confirm that the contractor:

1. Meets all of the Program's bid requirements.
2. Agrees to the Program's set pricing.
3. Participates in program training provided by the Program Manager.
4. Signs the Direct Install Program Sub-Contractor Agreement.

If all requirements are met, the contractor will be allowed to participate in the program. If the applicant's contractor is unable to meet these requirements, the applicant will be given the option to proceed in the Direct Install Program utilizing an approved contractor for that specified geographic area, or continue with their contractor outside of the Program with the option to access other available NJCEP programs.

5. Steps to Participate

The below outlines in six simple steps how a small business chooses to enter and participate in the DI program:

1. Contact the regional DI contractor that is servicing the area where your business is located.
2. The DI Contractor will conduct an energy assessment of the property and business.
3. Sign a scope of work to proceed with the implementation of qualifying measures and arrange for payment of the project costs with the contractor (up to 30% funded by the applicant).
4. Arrange for the installation of energy conservation measures.
5. Accept the installation/quality of work by signing a Project Completion Form.

6. Regional PC Responsibilities

PCs are responsible for the following program components:

- Completing Direct Install Program training provided by the Program Manager.
- Program marketing within their assigned program territories.
- Educating the applicant on the Direct Install program, completing the program application, gathering utility information, and pre-qualifying an applicant.
- Performing site visits and collecting existing equipment inventory and energy usage data, analyzing information and identifying opportunities for efficiency improvements, and making preliminary recommendations.
- Submitting completed energy assessment, using the Program's Energy Assessment Tool (EAT), to the Program Manager for review and approval.
- Presenting finalized comprehensive recommendations to the customer, including costs and savings estimates, obtaining customer agreement to proceed with installation, and the collection of the balance of projects costs owed by the program applicant (30%). The customer agreement will be a standard agreement approved by the Program.
- Submission of completed and executed scope of work (SOW), including pre-implementation report to the Program Manager for review and approval. All measures identified in the Direct Install Scope of Work are subject to the Program's total resource cost test which is utilized to screen out all measures which are not cost-effective.
- Procurement of all approved program equipment from the program's selected equipment vendor for lighting and refrigeration. Contractor is responsible for providing all HVAC and mechanical equipment associated with the program. Contractor is also responsible for procurement of all ancillary equipment required for complete installation.
- Installation of eligible measures per the SOW, including obtaining all appropriate permits.
- Submission of post-implementation report, including payment request. The Program Manager will review all post-implementation reports and either forward the incentive (70%) as approved for payment or send back to the contractor with questions or issues for resolution.
- Providing program applicant with all installed equipment technical manuals, manufacturer's specification/certification sheets, and warranties for all equipment and labor.
- Providing a one-year warranty on all labor and equipment.
- Tracking and reporting on program activity as requested by the Program Manager, including, but not limited to:
 - Inventory of equipment replaced, including quantity, type, location, hours of use
 - Estimates of energy (kWh &/or therms) and demand (kW) savings and total project costs
 - Installation schedules
 - Coordinating the proper disposal of all removed equipment.

7. PV Responsibilities

PVs will be responsible for the following program components:

- Providing offered program equipment required for installation statewide for all approved Direct Install projects.
- Ensuring all provided equipment meets or exceeds the program's minimum efficiency requirements and program guidelines.
- Packaging and shipping of all procured program equipment to the specific project site or Contractor.
- Providing all manufacturer's specifications/certifications and equipment warranties for all installed program equipment to the installation contractor.

8. Eligible Energy Conservation Measures

All contracts with vendors and contractors will be negotiated to establish consistent, statewide pricing. All equipment proposed must be cost effective per Program rules and, depending on the project, certain equipment may not be considered cost effective. Eligible equipment categories include but may not be limited to:

- Energy efficiency T8 & T5 lamps, ballast and fixtures
- ENERGY STAR® approved LED lamps
- Compact Fluorescent Lamps
- Design Lights Consortium (DLC) Qualified LED Fixtures
- HVAC & HW controls
- LED Exit Signs
- Occupancy Sensors
- VFDs
- ENERGY STAR Programmable Thermostats
- ENERGY STAR/High Efficiency Boilers (up to 1,500,000 Btuh)¹
- ENERGY STAR Furnaces (up to 140,000 Btuh)²
- Oil to Natural Gas Conversions allowed for existing furnaces and boilers
- High Efficiency Cooling Systems
- ENERGY STAR Products
- Refrigeration Measures
- Other measures may be added after evaluation by the Program such as investigating the potential of implementing retro-commissioning measures which may include rooftop HVAC tune-ups, refrigerant charges, filter replacements, controls adjustment, and optimization.

In K-12 public and private schools where the facility has an existing boiler that does not exceed 3,000 kBtuh in output heating capacity, the contractor will have the ability to propose a new system that

¹ In cases where the existing boiler is oversized, the existing larger boiler may be evaluated and considered for replacement as long as the replacement unit does not exceed 1,500,000 Btuh.

² In cases where the existing furnace is oversized, the existing larger furnace may be evaluated and considered for replacement as long as the replacement unit does not exceed 140,000 Btuh.

comprises multiple/modular boilers in series as an appropriate replacement, based on the total output heating capacity and efficiency of the existing boiler. A minimum efficiency level of 93% will be enforced.

Contractors will be solely responsible for boiler project design, providing proper training to the applicant, and developing and providing load calculations to the applicant and the Program Manager supporting the proposed system. Further, the contractor will be required to work with township officials to ensure the installation meets all current local and state codes and standards. Refer to the Appendix for the DI Program eligible measures and minimum efficiency guidelines.

9. Incentives & Utility Financing

Qualifying C&I customers are eligible for incentives up to 70% of the installed cost of cost-effective, approved measures with a project incentive cap of \$125,000. DI participants will also be held to a fiscal year entity cap of \$250,000 per entity. Incentives are paid to the installation contractor and the contractor will invoice the customer for the remaining balance of the installation (30%).

The Program Manager will investigate additional/enhanced incentives for distressed communities such as Urban Enterprise Zones (UEZ) and work with Board Staff to determine if additional incentives are appropriate.

Religious facilities³ which are metered residentially will be permitted to participate in the Direct Install Program. The Program Manager will handle these applications on a case by case basis through the appeals process. Applicants will be required to meet all other program requirements.

Some of the New Jersey Electric and Gas utilities provide 0% interest, on-bill repayment loans for DI projects in their service territories. Contact the utilities to inquire about these special programs.

10. Deficient Applications

If an application package is incomplete or information is missing or deemed insufficient, a deficiency letter will be mailed to the applicant and an email will be sent to the contractor requesting additional information. The information or documentation requested on the letter must be received within 30 days of the date of the request. If a contractor or customer fails to respond to a deficiency request within 30

³ Refers to buildings that are used as places of worship. This includes churches, temples, mosques, synagogues, meetinghouses, or any other buildings that primarily function as a place of religious worship. Also applies to buildings that may be associated with a religious organization, such as schools, or buildings used primarily for other community activities but excludes religious residential facilities such as convents, etc.

days, the application will be cancelled. If cancelled, customers may re-apply under the program incentives and requirements in place at that time through their selected contractor.

11. Pre & Post Inspections

The program reserves the right to conduct a pre-inspection of the facility prior to the installation. This will be done prior to the issuance of the approval letter. Work must not begin prior to formal program approval. All projects are subject to post inspection to confirm equipment installation prior to payment.

12. Program Dispute Resolution

Disputes, concerns, or complaints that arise will be addressed initially by the Program Manager or Program Staff at the point of contact. If resolution for whatever reason is not possible, there is a [dispute resolution process](#) defined by the NJ Board of Public Utilities.

The program is designed to allow for participation by any third party contractor that meets the program requirements. One of the primary responsibilities of the program is to oversee the level of performance of the contractors that participate in the program. There are BPU approved contractor remediation procedures that will be followed if a contractor is found to violate program procedures and rules or consistently violates program requirements which may include being barred from participating in the program.

13. Call Center Support

New Jersey's Clean Energy Program operates a call center staffed weekdays between 9 AM and 5 PM. The phone number is 866-NJSMART. The call center is trained in answering general questions about the program and application processes as well as able to provide specific information pertaining to an application.

14. Appendix

Direct Install Program Eligible Measures Minimum Efficiencies and Guidelines:

1. Lighting

- a. All materials must be UL listed. Reflectors must be UL classified.
- b. SPECULAR REFLECTORS: The reflector must have the appropriate UL Classification Marking. "These devices have been evaluated by UL to determine that when used in accordance with the manufacturer's instructions, they do not adversely affect the operation of the complete fixture."
- c. 4' T8 LAMPS: All installed 4' T8 lamps must meet the minimum requirements prescribed by CEE High-Performance T8 Specification or CEE Reduced Wattage T8 Specification.
- d. ELECTRONIC BALLASTS: All installed electronic ballasts in 4' T8 systems must be included on CEE qualified products list. All installed electronic ballasts must have a Total Harmonic Distortion < 20%.
- e. LED FIXTURES: All installed LED fixtures must be ENERGY STAR® or Design Lights Consortium (DLC) qualified.
- f. LED SCREW-INS: All supplied LED screw-in lamps must be ENERGY STAR® qualified.

2. Refrigeration

- a. REFRIGERATION CONTROLS: All eligible refrigeration control devices must be listed by UL or other OSHA approved Nationally Recognized Testing Laboratory (NRTL) in accordance with applicable US standards.
- b. REFRIGERATED CASE LEDs: All eligible refrigerated case LEDs must be Design Lights Consortium (DLC) qualified.
- c. ELECTRONICALLY COMMUTATED MOTORS: Applicable to the installation of ECMs to replace shaded pole or permanent split capacitor motors driving evaporator fans in refrigerated cases.
- d. EVAPORATOR/COMPRESSOR CONTROLLER: Applicable to existing refrigerated cases with continuously running evaporators and compressors.
- e. DOOR HEATER CONTROL: Applicable to existing refrigerated cases with continuously running anti-sweat door heaters.
- f. REFRIGERATED CASE DOORS: Applicable to open-type refrigerated cases only. Replacement of existing doors is not an eligible measure. Installed doors must have either heat reflective treated glass, be gas-filled, or both.
- g. ELECTRIC DEFROST CONTROL: Applicable to existing evaporator fans with a traditional, time operated defrost mechanism.
- h. ALUMINUM NIGHT COVERS: Retractable, woven aluminum covers are applicable to open-type refrigerated cases only.
- i. ELECTRIC DEFROST CONTROL: Applicable to existing evaporator fans with a traditional, time operated defrost mechanism.
- j. NOVELTY COOLER SHUTOFF: Applicable to existing novelty coolers that run continuously.

3. Motors

- a. All installed motors must be new, three phase, NEMA Design A & B, Open Drip Proof or Totally Enclosed Fan-Cooled, 1200, 1800 or 3600 RPM induction motors.
- b. Efficiency ratings are to be full-load nominal efficiencies tested in accordance with IEEE Standard 112, Test Method B. Minimum program efficiency rating requirements for eligible measures are below.

Open Drip Proof (ODP) Motors			
HP	1200 RPM	1800 RPM	3600 RPM
1	82.5%	85.5%	77.0%
1.5	86.5%	86.5%	84.0%
2	87.5%	86.5%	85.5%
3	88.5%	89.5%	85.5%
5	89.5%	89.5%	86.5%
7.5	90.2%	91.0%	88.5%
10	91.7%	91.7%	89.5%

Totally Enclosed Fan Cooled (TEFC) Motors			
HP	1200 RPM	1800 RPM	3600 RPM
1	82.5%	85.5%	77.0%
1.5	87.5%	86.5%	84.0%
2	88.5%	86.5%	85.5%
3	89.5%	89.5%	86.5%
5	89.5%	89.5%	88.5%
7.5	91.0%	91.7%	89.5%
10	91.0%	91.7%	90.2%

4. Variable Frequency Drives

- a. Measure is applicable to installation of variable frequency drives on Variable Air Volume (VAV) HVAC system motors and chilled water pumps between 1 and 10 HP.

5. Electric HVAC

- a. GAS HEATING UNITS: All installed equipment with electric cooling and gas heating must meet or exceed cooling mode specifications below and have a heating mode efficiency rating of 80% or better and have two-stage or modulating burners.

- b. Installed equipment must meet or exceed the following efficiency ratings in cooling and heating mode, determined in accordance with appropriate standards and associated rating conditions prescribed by AHRI:

Electric Unitary & Split Systems	
Cooling Capacity	Cooling Efficiency
< 5.4 Tons (Single-Phase)	15 SEER
< 5.4 Tons (Three-Phase)	14 SEER
≥ 5.4 to < 11.25*	12 EER; 12.7 IEER
≥ 11.25 to < 20	12 EER; 12.2 IEER
≥ 20	10.6 EER; 11.4 IEER

Air Source Heat Pumps		
Tons	Cooling Efficiency	Heating Efficiency
< 5.4 Tons	15 SEER	8.5 HSPF
≥ 5.4 to < 11.25**	12 EER; 12 IEER	3.4 COP
≥ 11.25 to < 20	11.5 EER; 11.4 IEER	3.2 COP

Water Source Heat Pumps		
Tons	Cooling Efficiency	Heating Efficiency
All Sizes	14 EER	4.3 COP

*7.5 Ton split systems must meet 11.5 EER @ AHRI Conditions

**7.5 Ton Air Source heat pumps must meet 11.5 EER & 3.4 COP

- c. The requirement for a Tier 1, 7.5 Ton Air Source Heat Pump at 47 deg F db/43 deg F wb testing conditions is 3.4 COP, which is approximately equal to an HSPF of 11.6 (COP = 0.293*HSPF). However, the requirement drops significantly when the testing conditions are not as specified above (2.4 COP or 8.2 HSPF @ 17 deg F db/15 deg F wb). So, the contractor needs to be sure the reported efficiency is tested at the correct conditions.

6. Heating & Hot Water

- a. **LOW-INTENSITY INFRARED HEATERS:** All eligible infrared heating units must be listed by UL or other OSHA approved Nationally Recognized Testing Laboratory (NRTL) in accordance with applicable US standards.

- b. Installed equipment must meet or exceed the following efficiency ratings, determined in accordance with appropriate standards and associated rating conditions prescribed by AHRI:

Fossil-Fuel Fired Equipment		
Equipment Type	Min. Efficiency	Eff. Units
Low Intensity IR Heating Unit (Gas)	83%	Et
Gas-Fired Furnace	95%	AFUE
Oil-Fired Furnace	83%	AFUE
Propane-Fired Furnace	92%	AFUE
Gas-Fired Boiler (<300 MBH)	93%	AFUE
Gas-Fired Boiler (≥300 MBH)	93%	Et
Oil-Fired Boiler (<300 MBH)	85%	AFUE
Oil-Fired Boiler (≥300 MBH)	85%	Et
Propane-Fired Boiler (<300 MBH)	85%	AFUE
Propane-Fired Boiler (≥300 MBH)	85%	Et
Gas-Fired Storage Water Heater (≤50 Gal; ≤75 MBH)	67%	EF
Gas-Fired Storage Water Heater (≤50 Gal; >75 MBH)	85%	Et
Gas-Fired Storage Water Heater (>50 Gal; ≤75 MBH)	67%	EF
Gas-Fired Storage Water Heater (>50 Gal; >75 MBH)	85%	Et
Gas-Fired Tankless Water Heater	82%	EF
Gas-Fired Combination Boiler/Water Heater	90%	Et
Gas-Fired Indirect Water Heater	Boiler: 90%	AFUE/Et

7. HVAC & Hot Water System Improvements

- a. All eligible HVAC controls must be listed by UL or other OSHA approved Nationally Recognized Testing Laboratory (NRTL) in accordance with applicable US standards.