

# **Lighting - systems and controls**

## 2014 project information form for upstate New York

This Project Information Form is an application and serves as template to collect project systems and equipment information and specifications. In addition, this form serves as a guide to lighting system and controls terms and identifies energy efficiency improvement products and incentives. Prior to the start of any installation of equipment or systems, contact your **National Grid representative** to arrange a convenient time to perform an inspection of the existing equipment or systems. This pre-inspection is required for all applications.

CUSTO	OMER FACILITY NAME:				DATE OF APPLICATION	N:		
					SQ. FT. COVERED BY A	PPLIC	ATION:	
CONT	ACT PERSON:				FEDERAL ID NUMBER:			
STREE	T ADDRESS:				COMPANY TYPE:			
CITY:			□ Incorporated □ E	xemp	t   Not Incorpor	ated		
CLASS	IFICATION TYPE: > 2MW	☐ (Large	Industrial only)*		PHONE NUMBER:			
	< 2MW	☐ (Mid-si	ze) 🗖 Industrial 🗖 Commercia	ıl	FAX NUMBER:			
* <u>&gt;</u> 2M	W Large Commercial custor	mer use th	e <2MW classification		E-MAIL ADDRESS			
CUSTO	OMER OF RECORD INFORMA	TION: Bill	ing Account Number:		RI	EQUI	IRED	
UILDII	NG TYPE (SELECT ONE)							
	Assembly		Full Service Restaurant		Light Industrial		Small Office	
	Auto Repair		Grocery		Motel		Small Retail	
	Big Box		High School		Multifamily high-rise		University	
	College Dormitory		Hospital		Multifamily low-rise		Warehouse	
	Community College		Hotel		Refrigerated Warehouse		Other	
	Elementary School		Large Office		Religious			
	Fast Food		Large Retail		Single Family Residence			
VAC S	YSTEM TYPE (SELECT ONE)							
	AC with Electric Heat		CV No Econ		Gas Heat Only		Steam Heat Only	
	AC with Gas Heat		Electric Heat Only		Heat Pump		VAV Econ	
	CV Econ		Fan Coil with Chiller and Hot H2O		H2O Cooled Ammonia Screw Compressor		Other	
ls this a	an exterior/non-air condition	ed space i	nstallation? ☐ Yes ☐ No					
INST <i>E</i>	ALLATION CONTRACTOR	INFORM	ATION					
			Installation Contractor (Vendor)		*If contractor has not been select	ted, se	elect Customer	
Comp	lete this section if installat	ion is not	by the customer or the incenti	ve rec	<u>ipient</u>			
	be the contractor:							
CONT	ACT PERSON:				CITY:		STATE:	_ ZIP:
E-MAII	L ADDRESS:				PHONE NUMBER:			
	ICATION INFORMATION							
EXPEC	TED COMPLETION DATE:							
	OSED INCENTIVE RECIPIENT		Customer (Account Credit or Che	,	☐ Installation Contractor**			
· · · Con	piete this section if Install	ation Con	tractor has been selected as t	ne pro	posed incentive recipient:			
FEDER	AL ID NUMBER		COMPAN	Y TYPE	: □ Incorporated □ Exemp	ot .	☐ Not Incorporate	ed.

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#### **INSTRUCTIONS:**

- 1) Prior to the start of any installation of equipment or systems, **call your National Grid representative** to arrange a convenient time to perform an inspection of the existing equipment or systems. This pre-inspection is required for all applications.
- 2) Fill in the Customer information datasheet on page 1.
- 3) For lighting systems, enter the proposed equipment for your facility on the Lighting System Inventory Worksheet on page 8.
- 4) For lighting controls, enter the proposed equipment for your facility on the Lighting Control Inventory Worksheet on page 9.
- 5) Contact your National Grid representative to complete an application and to determine the incentive for this Lighting project.

#### **GUIDE TO TERMS**

Watts Controlled: total wattage (combined lamps and ballast wattage) connected to lighting controls.

Minimum Watts Controlled: in order to qualify for an incentive, watts controlled divided by quantity of controls must equal or be more than the minimum watts controlled.

#### MEASURE CATEGORY: LIGHTING SYSTEMS

**Measure Code:** refers to National Grid's unique system of identifying fixture and control types that qualify for incentives. For Measure Codes, see Table 1A Lighting Systems Eligibility and Incentives on page 3.

Device Code: refer to the New York Device Codes and Rated Lighting System Wattage Table

Watts per Fixture (Watts per Device): refer to the New York Device Codes and Rated Lighting System Wattage Table

Annual Hours of Operation: refers to the estimated annual hours that the affected lighting system operates. Minimum 2000 hours\*.

Minimum Watts Saved: refers to minimum amount saved in order to receive an incentive.

#### MEASURE CATEGORY: LIGHTING CONTROLS

Measure Code: refers to National Grid's unique system of identifying fixture and control types that qualify for incentives. For Measure Codes, see Table 1B: Lighting Controls Eligibility and Incentives on page 8.

Quantity of Controls: amount of controls (or ballasts for Codes 62 and 63) to be installed

Device Code: refer to the New York Device Codes and Rated Lighting System Wattage Table

Quantity of Devices Controlled: how many devices will be controlled

Annual Hours of Reduction: The estimated annual hours that affected lighting system operates

#### APPENDIX A: LIGHTING SYSTEMS AND CONTROLS – OPPORTUNITIES AND ELIGIBILITY REQUIREMENTS

Table 1A: Lighting Systems Eligibility and Incentives lists the incentives available for energy efficient lighting improvements.

Facility lighting must average a minimum of **2,000** hours per year, except Municipal Facilities which must average a minimum of 1,000 hours.\* All Fluorescent Fixtures must have new T-8 or T5 lamps and new electronic ballasts. All Fluorescent Fixtures with High Performance (HP) T-8 lamps and ballasts must meet or exceed the Consortium for Energy Efficiency's (CEE) High Performance T-8 or Reduced Wattage T-8 specification. For detailed eligibility requirements and a list of qualifying lamps and ballasts, please log onto CEE's web site at **www.cee1.org** 

THIS FORM WAS COMPLETED BY:	
NAME:	
PHONE NUMBER:	E-MAIL ADDRESS:

Table 1A: Lighting Systems Eligibility and Incentives:

Measure Code	Measure Description	Measure Description Per Fixture Incentive Eligibility Criteria			
10 *	The re-lamp/re-ballast of existing fixtures with new High Performance /Reduced Wattage (HP/RW) T-8 or T-5 lamps and HP/RW T-8 Electronic Ballasts	\$15	Re-lamp/re-ballast of existing fixtures with T-8 or T-5 lamps, each fixture is composed of a ballast and 1, 2, 3 or 4 lamps. Only one incentive may be counted per fixture. Multiple fixtures served by a single ballast are only eligible for one incentive. Consider using reduced wattage 25 and 28 T8 CEE qualified lamps/ballasts.	11	O Tall
30A *	High Efficiency 2 lamp Prismatic Lensed Fluorescent Fixtures - 2x2 or 2x4	\$35	Overall fixture efficiency must be ≥:  ■ 83% for 2x4 prismatic lensed fixture with two T-8 or T-5 lamps;  ■ 75% for 2x2 prismatic lensed fixture with two T-8 or T-5 lamps (Reduced Wattage Biax lamps are eligible – 28 Watts).	27	
30B *	High Efficiency 2 lamp Parabolic Fluorescent Fixtures - 2x2 or 2x4	\$40	Overall fixture efficiency must be ≥:  ■ 80% for 2x4 fixture with parabolic louver (2" to 3" deep cells) with two T-8 or T5 lamps;  ■ 80% for 2x2 fixture with parabolic louver (2" to 3" deep cells) with two T-8 or T5 lamps. (Reduced Wattage Biax lamps are eligible – 28 Watts).	27	
30C *	High Efficiency up to 2 lamp Recessed Indirect/Direct Fluorescent Fixtures - 2x2 or 2x4	\$50	Overall fixture efficiency must be ≥:  75% for 2x4 recessed indirect/direct fixture with two T-8 or T-5 lamps;  70% for 2x2 recessed indirect/direct fixture with two T-8, T-5, or T5HO lamps. (Reduced Wattage Biax lamps are eligible – 28 Watts).	27	
31 *	High Efficiency 3 lamp Fluorescent Fixtures - 2x4	\$25	Overall fixture efficiency must be ≥:  ■ 83% for 2x4 prismatic lensed fixture with three T-8 or T-5 lamps;  ■ 75% for 2x4 fixture with parabolic louver (2" to 3" deep cells) with three T-8 or T5 lamps;  ■ 70% for 2x4 recessed indirect fixture with three T-8 or T-5 lamps;  Eligible fixtures are limited to 3 lamps with a low power ballast factor < 0.80.	31	
32 *	High Efficiency Recessed Fluorescent 2 lamp Retrofit Kits- 2x2 and 2x4	\$45	Overall fixture efficiency must be ≥:  80% for 2x4 parabolic retrofit kit and advanced glare reducing diffuser retrofit kit with two T-8 or T-5 lamps;  80% for 2x2 parabolic retrofit kit and advanced glare reducing diffuser retrofit kit with two T-8 ,T-5, or T5HO lamps (Reduced Wattage Biax lamps are eligible – 28 Watts)	27	

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Measure Code	Measure Description		Eligibility Criteria	Min Watts Saved	
34 *	* Advanced Recessed Fluorescent Fixtures 2x2, 1x4 or 2x4 \$50		Overall fixture efficiency must be ≥:     85% for 2x4 advanced glare reducing diffuser fixture with one or two T-8 or T-5 lamps, or one T-5HO lamp;     80% for 1x4 advanced glare reducing diffuser fixture with one or two T-8 or T-5 lamps, or one T-5HO lamp.     80% for 2x2 advanced glare reducing diffuser fixture with one or two T-8 or T-5 lamps, or one T-5HO lamp (Reduced Wattage Biax lamps are eligible – 28 Watts)	33	
41 *	Industrial/Commercial Fluorescent Fixtures 4 ft. and 8 ft. Fixtures	\$30	Overall fixture efficiency must be ≥:     85% for Industrial Reflector fixture with T-8 or T-5 lamps (up to 20% up-light);     83% for Commercial Grade Wraparound fixture with one or two T-8 or T-5 lamps.     85% for reflector kits with specular or semi-specular reflectors     Reflector Kits for Existing Fixtures includes 2'x2', and 2'x4' reflector troffer kits, 4'and 8'strip channel, and industrial reflector kits.     Applies to fixtures installed at or less than 16 feet above the floor. Only one incentive may be counted per fixture. Eight foot and multiple fixtures served by a single ballast are only eligible for one incentive.	23	
43 *	Vapor Tight Fluorescent Fixtures- 4 ft. and 8 ft. Fixtures	\$50	Overall fixture efficiency must be ≥:  70% for Vapor Tight fluorescent fixture with one or two T-8, T-5, T-8HO, T-5HO or 3-T8 lamps.  Typically installed in garage, warehouse, food prep and other industrial applications.	45	[0]
44 *	Clean Room Rated Fluorescent Fixtures – 1x4 or 2x4	\$50	Overall fixture efficiency must be ≥:  To be eligible for incentives, fixtures must be installed in a clean room rated environment.	27	
23	Dimmable Compact Fluorescent Fixture	\$30	To be eligible for incentives, all fixtures must be hard-wired and have electronic ballasts with <33% THD. (Retrofit kits and screw-in adapters are not eligible)	35	
25	LED or LEC (Electroluminescence) Exit Fixtures	\$10	All materials and assembled units shall comply with all applicable codes and standards including (but not limited to) Federal/State/Local building, fire, and electrical codes, and may require designated egress lighting to comply with such codes. Exit sign retrofit kits are not eligible.	15	EXIT

Measure Code	Measure Description	Per Fixture Incentive	Eligibility Criteria	Min Watts Saved	
51	Pulse Start Metal Halide Lamp and Electronic Ballast Kits	\$50	All kits must include a new matched Pulse Start Metal Halide Lamp and Electronic Ballast installed per manufacturer's specifications and applicable codes. Indoor and Outdoor fixtures are eligible.	50	18
52	Pulse Start Metal Halide Fixture with Electronic Ballast	\$70	Only New Metal Halide Pulse Start fixtures with Electronic Ballasts are eligible. Retrofit of existing metal halide fixture of less than 200 watts with new fixture is not eligible. Indoor and Outdoor fixtures are eligible.	64	
56 *	High Intensity Fluorescent Fixtures (HIF) for High and Low Bay Applications (less than or equal to 210W)	\$75	Minimum wattage is 111 Watts and Maximum wattage is 210 Watts. Minimum fixture efficiency must exceed 80%. Recommended mounting height > 16 feet above the floor. High Intensity Fluorescent fixtures incorporate a number of lamp technologies that include T-8, T-5, T-5HO and compact fluorescent. Low power ballasts are not eligible.	55	
57 *	High Intensity Fluorescent Fixtures (HIF) for High and Low Bay Applications (greater than 210W)	\$100	Minimum wattage is greater than 210 Watts. Minimum fixture efficiency must exceed 80%. Recommended mounting height > 20 feet above the floor. High Intensity Fluorescent fixtures incorporate a number of lamp technologies that include T-8, T-5, T-5HO and compact fluorescent. Low power ballasts are not eligible.	85	
70	Metal Halide Specialty Lighting Hard Wired Fixtures with Electronic Ballast	\$50	Metal Halide Specialty Fixtures may be track, recessed or surface mounted and used for high quality display type lighting. Must be approved by UL or similar agency.	55	
71	Integral Metal Halide PAR Replacement Lamp	\$12	Install an Integral Metal Halide PAR replacement lamps, not to exceed 25W PAR38 lamp or similar.	27	
80	LED Downlight Fixtures- Hard Wired or GU – 24 Base	\$50	This incentive only applies to hardwired or GU-24 base LED fixtures rated as Commercial LED product by Energy Star. Also eligible Screw Base LED Down Light Retrofit Kits. For more information see www.energystar.gov	25	

Measure Code	Measure Description	Per Fixture Incentive	Eligibility Criteria	Min Watts Saved	
81A	Integral LED Directional Replacement Lamps - MR16 & PAR16 & PAR 20	\$15	Eligible LED Directional Integral replacement lamps for these reflector styles: MR16, PAR 16 and PAR20. Eligible lamps are required to be listed by Energy Star For more information, see <a href="https://www.energystar.gov">www.energystar.gov</a>	12	
81B	Integral LED Directional Replacement Lamps – PAR30, PAR38 & Screw Base LED Down Light Retrofit Kits	\$30	Eligible LED Directional Integral replacement lamps for these reflector styles: PAR30S, PAR30L and PAR38. Also Eligible Screw Base LED Down Light Reflector Kits. Eligible lamps are required to be listed by Energy Star For more information, see www.designlights.org	25	
82A	LED Cooler, Freezer Case or Refrigerated Shelving Fixtures – 3' & 4' Fixtures	\$30	Eligible LED Cooler and Freezer Case fixtures are required to be listed by DesignLights Consortium®. For more information, see www.designlights.org  Please specify quantity of end and/or center mount fixtures.	14	
82B	LED Cooler, Freezer Case or Refrigerated Shelving Fixtures – 5' & 6' Fixture	\$50	Eligible LED Cooler and Freezer Case fixtures are required to be listed by DesignLights Consortium®. For more information see www.designlights.org  Please specify quantity of end and/or center mount fixtures.	23	
83A	LED Low Bay Fixtures - Garage & Canopy Fixtures to be installed in 8760 hour applications	\$200	Eligible LED Low Bay fixtures are required to be installed in 8,760 hour applications and be listed by DesignLights Consortium®. For more information, see www.designlights.org  LED Retrofit kits are not eligible under this measure code. – please see 83B for Retrofit kit eligibility.	60	
83B	LED Low Bay Fixtures - Garage & Canopy Fixtures to be installed in minimum of 4380 hour applications	\$100	Eligible LED Low Bay fixtures are required to be installed in minimum of 4,380 hour applications. LED Retrofit kits are also eligible under this measure code. Fixtures and Retrofit kits need to be listed by DesignLights Consortium®. For more information, see www.designlights.org	95	

85A	LED Exterior Wall Mount Fixtures up to 45 Watts	\$125	Eligible LED Exterior Wall Mount fixtures required to be installed in minimum of 4,380 hour applications (dusk to dawn) and required to be listed by DesignLights Consortium®. For more information, see <a href="https://www.designlights.org">www.designlights.org</a>	80	
85B	LED Exterior Wall Mount Fixtures greater than 45 Watts	\$200	Eligible LED Exterior Wall Mount fixtures required to be installed in minimum of 4,380 hour applications (dusk to dawn) and required to be listed by DesignLights Consortium®. For more information, see www.designlights.org	130	
87A	LED Pole Mounted Parking, Roadway or Decorative Fixtures up to 100 Watts	\$75	Eligible LED Pole Mounted Parking, Roadway or Decorative Fixtures are required to be installed in minimum of 4380 hour applications (dusk to dawn) and required to be listed by DesignLights Consortium®. For more information see <a href="https://www.designlights.org">www.designlights.org</a> Note: Retrofit kits are eligible under this measure code	140	
87B	LED Pole Mounted Parking, Roadway or Decorative Fixtures 101 to 200 Watts	\$150	Eligible LED Pole Mounted Parking, Roadway or Decorative Fixtures are required to be installed in a minimum of 4380 hour applications (dusk to dawn) and required to be listed by DesignLights Consortium. For more information see <a href="https://www.designlights.org">www.designlights.org</a> Note: Retrofit kits are eligible under this measure code	260	
87C	LED Pole Mounted Parking, Roadway or Decorative Fixtures over 201 Watts	\$300	Eligible LED Pole Mounted Parking, Roadway or Decorative Fixtures are required to be installed in a minimum of 4380 hour applications (dusk to dawn) and required to be listed by DesignLights Consortium. For more information see <a href="https://www.designlights.org">www.designlights.org</a> Note: Retrofit kits are eligible under this measure code	440	
*			Note:  4ft straight tube T8 lamps and ballasts must meet the Consortium for Energy Effici (HP/RW) T8 specifications. For eligibility requirements and a list of eligible lamps at www.cee1.org.		
	ens per watt, a Cf nance T8 Ballast s lumens per watt,	RI greater than 80 and an RI greater than 80 and an Specifications a CRI greater than 80 and an formance T8 Ballast			

### **Table 1B: Lighting Controls Eligibility and Incentives**

Please note that only one incentive control strategy will be approved per fixture/area. Also consider using program start CEE qualified ballasts for all appropriate control measure codes to ensure longer lamp life over instant start ballasts.

Measure Code	Measure Description	Per Control Incentive	Eligibility Criteria	Min Controlled Wattage	
61	Remote Mounted Occupancy Sensor	\$60	Comply with manufacturer's coverage recommendations. Ceiling mounted control. No manual "ON" overrides	110	
62	Daylight Dimming System (DDS-FL)	\$25 (per fixture)	Must have continuous dimming or adjust to a minimum of 4 levels.  Typical lamping is either a 30 watt or 32 watt T-8 lamps.	53 (per fixture)	
63	Occupancy Controlled Step-Dimming System	\$20 (per fixture)	Ballast must be automatically controlled based on occupancy. Power consumption in low mode must not exceed 60%.	53 (per fixture)	The state of the s
64A	Wall mounted Occupancy Sensors	\$25	Occupancy Sensors must operate as Automatic On and Off. Sensors are wall mounted devices only.  Not eligible if installed in restrooms, locker rooms, stairwells or rooms of greater than 250 square feet	51	
64B	Wall mounted Vacancy Occupancy Sensors	\$30	Vacancy Sensors must operate as Manual On, Automatic Off. Sensors are wall mounted devices only.  Not eligible if installed in restrooms, locker rooms, stairwells or rooms of greater than 250 square feet	51	
65	Photocell Sensors (lighting systems on 24/7)	\$50	Photocell control for lighting systems that operate on 24 hours a day, 7 days a week (8,760 hours annually)	70	
68	High Bay Fluorescent (HIF) Occupancy Control Systems	\$25 (per fixture)	Ballasts must be automatically controlled based on occupancy. Systems with manual "ON" or override switches are not eligible. Sensors to be mounted on individual fixtures	110 (per fixture)	

## **Energy Initiative Lighting Systems Inventory Worksheet**

Building and Room Identification (Installation Site):

Line Item	Location	Existing/ Proposed	Measure Code (Appendix A)	Device Code*	Watts per Fixture (Watts per Device)*	Annual Hours of Operation*	Minimum Watts Saved	Device Quantity (a)	Unit Incentive \$ (b)	Total Incentive \$ (a) x (b)
Ex	Room 202, first floor	Existing		F42SE	86			70		
	ricent zoz, met neer	Proposed	10	F42SSILL	48	4850	38	70	\$ 45	\$ 3150
		Existing								
		Proposed							\$	\$
		Existing								
		Proposed							\$	\$
		Existing								
		Proposed							\$	\$
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		Proposed							\$	\$
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		Proposed							\$	\$
		Existing								
		Proposed							\$	\$
		Existing								
		Proposed							\$	\$
		Existing								
		Proposed							\$	\$

<sup>\*</sup> Refer to the NY Device Codes & Rated Lighting System Wattage Table

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<sup>\*\*</sup> Facility lighting must average a minimum of 2,000 hours per year, except Municipal Facilities which must average a minimum of 1,000 hours.

## **Energy Initiative Lighting Control Inventory Worksheet**

Building and Room Identification (Installation Site):

			Quantity of						Minin Connecte Verific	d Watts			
Line Item	Measure Code	Device Description*	Controls (or ballast for Codes 62& 63 (A)	Minimum Required Connected Watts per Control (B)	Device Code*	Quantity of Devices Controlled (C)	Watts Per Device (D)	Annual Hours of Reduction**	Required (A x B)	Actual (C x D)	Wattage Test (Actual > Required, Y or N)	Unit Incentive \$ (E)	Total Incentive \$ (A) x (E)
Ех.	61	Remote-Mounted Occ Sens. (OS)	7	119	F42SSILL	70	48	1200	833	3360	Υ	\$ 60	\$ 420
												\$	\$
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												\$	\$

<sup>\*</sup> Refer to the NY Device Codes & Rated Lighting System Wattage Table

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<sup>\*\*</sup> The estimated annual hours that affected lighting system operates.