# Summary of 60-Day Notice: Lighting Efficiency and Small Business Lighting

The following 60-Day Notice summarizes the Company's action to update several components in the Lighting Efficiency ("LE") and Small Business Lighting ("SBL") products. The changes are intended to improve the cost effectiveness of the products and make it easier for customers and distributors to participate. Although some of the changes are expected to lead to decreased participation, the growth in the overall product achievement is forecasted to offset the decrease in individual measures, and provide for higher savings and cost effectiveness across the two products.

Listed below are the proposed changes:

- Allow shelf stocking for lamps;
- Rebate reductions for exterior lighting fixtures;
- Rebate and cost reductions for troffer fixtures;
- Addition of new Networked Lighting Controls measure;
- Change in structure and costs of stand-alone control rebates; and
- Eliminate fluorescent fixture and lamp measures.

In addition, the Lighting Efficiency and Small Business Lighting products are having a strong year and to highlight the growth in the product's overall achievement in 2018, the Company updated the expected measure achievement of the products' most impactful measures to reflect actual savings, incremental costs and rebates values as part of this Notice. Thus, the values in the tables and technical assumptions represent the impact of the proposed changes, as well as the growth in the products overall.

Table 1 below shows the product's updated rebate budgets, energy and demand savings forecasts and MTRC scores with the proposed changes and updated forecasts factored in.

Table 1: Summary of Lighting Efficiency and Small Business Lighting Forecasts

	,	Eighting Efficiency und		Filed MTRC Test
Products	Filed Net Gen kW	Filed Net Gen kWh	Filed Rebate Budget	Ratio
Lighting				
Efficiency	12,956	89,520,562	\$8,093,572	1.43
Small				
Business				
Lighting	3,391	22,558,448	\$2,232,470	1.14
Total	16,347	112,079,010	\$10,326,042	
	Proposed Net Gen	Proposed Net Gen	Proposed Rebate	Proposed MTRC
	kW	kWh	Budget	Test Ratio
Lighting				
Efficiency	20,481	134,954,122	\$12,183,335	1.50
Small				
Business				
Lighting	7,210	45,230,123	\$5,287,743	1.32
Total	27,691	180,184,245	\$17,471,078	

### **Allow Shelf Stocking for Lamps**

The Company proposes to allow shelf-stocked LED lamps to receive rebates. Currently, a customer receives a rebate for LED lamps purchased and installed. The customer is required to install all of the lamps and is not allowed to receive rebates on any lamps that are not installed including any additional lamps that may have been put in storage. This creates issues with customers returning extra lamps, matching the color of lamps installed and not having any lamps for a back-up should an installed lamp burn out. Additionally, some customers choose to replace fluorescent lamps as they burn out. Projects employing this strategy typically stretch out over many months. Allowing shelf stocking for the new LED lamps will greatly simplify the paperwork and improve the customer experience with these projects.

The Company proposes to change the process for the Lighting Efficiency and Small Business Lighting so that customers are not penalized for storing energy efficient lamps that were purchased through the products. Having high efficiency lamps in storage ensures that the next lamp installed will be an energy efficient one. In addition, it makes it easier for customers and distributors who are accustomed to buying and selling lamps in cases. Remaining lamps can be placed in storage rather than returned to the distributor. This creates a more positive experience for both the customer and the distributor.

The Company will apply this treatment to all lamps within the products but will not apply this treatment to light fixtures. Currently, the lamps within the Lighting Efficiency and Small Business Lighting products that this would impact are:

- LED linear tubes Type A and B;
- LED mogul screw-based lamps;
- LED 2 pin & 4 pin lamps; and
- Lamps under the Midstream offering.

The Company forecasts the number of bulbs sold through the products will increase by 1 percent in 2018 due to this change. Table 2 and Table 3 provide information on the estimated impact of this change on product rebate budgets and energy consumption for downstream and midstream measures, respectively.

Table 2: Downstream Measure Level Forecast of Shelf Stocking Modification

	2018 Filed Measures	Filed Net Gen	Filed Net Gen kWh	Filed Rebate Budget
	LED Linear Tubes		11,111	Duuget
LE	Type A&B	177	1,039,354	\$36,000
	LED Screw-in Mogul		, ,	
	Based	116	679,242	\$44,000
	LED PL/G based CFL			
	Replacement lamp	94	553,580	\$31,500
Total		388	2,272,175	\$111,500
	LED Linear Tubes			
SBL	Type A&B	1	7,819	\$300
	LED Screw-in Mogul			
	Based	17	102,493	\$7,450
	LED PL/G based CFL			
	Replacement lamp	11	62,629	\$3,500
Total		29	172,941	\$11,250
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	2018 Proposed	Proposed Net Gen kW	Proposed Net Gen kWh	Proposed Rebate Budget
	2018 Proposed  LED Linear Tubes	_		_
LE	•	_		_
LE	LED Linear Tubes	Gen kW	Gen kWh	Budget
LE	LED Linear Tubes Type A&B	Gen kW	Gen kWh	Budget
LE	LED Linear Tubes Type A&B  LED Screw-in Mogul Based	3,296	Gen kWh 19,313,096	\$1,315,525
LE	LED Linear Tubes Type A&B LED Screw-in Mogul	3,296	Gen kWh 19,313,096	\$1,315,525 \$44,000
LE	LED Linear Tubes Type A&B  LED Screw-in Mogul Based  LED PL/G based CFL	3,296 116	Gen kWh  19,313,096  679,242	\$1,315,525
Total	LED Linear Tubes Type A&B  LED Screw-in Mogul Based  LED PL/G based CFL Replacement lamp  LED Linear Tubes	Gen kW  3,296  116  94  3,507	Gen kWh  19,313,096  679,242  553,580  20,545,917	\$1,315,525 \$44,000 \$31,500 \$1,391,025
	LED Linear Tubes Type A&B  LED Screw-in Mogul Based  LED PL/G based CFL Replacement lamp	Gen kW 3,296 116	Gen kWh  19,313,096  679,242  553,580	\$1,315,525 \$44,000 \$31,500
Total	LED Linear Tubes Type A&B  LED Screw-in Mogul Based  LED PL/G based CFL Replacement lamp  LED Linear Tubes Type A&B  LED Screw-in Mogul	Gen kW  3,296  116  94  3,507  731	553,580 20,545,917 4,328,514	\$1,315,525 \$44,000 \$31,500 \$1,391,025 \$160,000
Total	LED Linear Tubes Type A&B  LED Screw-in Mogul Based  LED PL/G based CFL Replacement lamp  LED Linear Tubes Type A&B	Gen kW  3,296  116  94  3,507	Gen kWh  19,313,096  679,242  553,580  20,545,917	\$1,315,525 \$44,000 \$31,500 \$1,391,025
Total	LED Linear Tubes Type A&B  LED Screw-in Mogul Based  LED PL/G based CFL Replacement lamp  LED Linear Tubes Type A&B  LED Screw-in Mogul Based	Gen kW  3,296  116  94  3,507  731	553,580 20,545,917 4,328,514	\$1,315,525 \$44,000 \$31,500 \$1,391,025 \$160,000
Total	LED Linear Tubes Type A&B  LED Screw-in Mogul Based  LED PL/G based CFL Replacement lamp  LED Linear Tubes Type A&B  LED Screw-in Mogul Based  LED PL/G based CFL	Gen kW  3,296  116  94  3,507  731	553,580 20,545,917 4,328,514 91,218	\$1,315,525 \$44,000 \$31,500 \$1,391,025 \$160,000 \$7,450
Total	LED Linear Tubes Type A&B  LED Screw-in Mogul Based  LED PL/G based CFL Replacement lamp  LED Linear Tubes Type A&B  LED Screw-in Mogul Based	Gen kW  3,296  116  94  3,507  731	553,580 20,545,917 4,328,514	\$1,315,525 \$44,000 \$31,500 \$1,391,025 \$160,000

Table 3: Midstream Measure Level Forecast of Shelf Stocking Modification

Products	Filed Net Gen kW	Filed Net Gen kWh	Filed Rebate \$
CO LE 2018	3,008	21,422,805	\$ 2,451,645
CO SBL 2018	903	6,845,624	\$ 622,750
Total	3,910	28,268,429	\$ 3,074,395
	Proposed Net Gen kW	Proposed Net Gen kWh	Proposed Rebate \$
CO LE 2018	3,591	21,834,005	\$ 1,067,845
CO SBL 2018	2,206	13,410,844	\$ 500,096
Total	5,797	35,244,849	\$ 1,567,941

## **Rebate Reductions for Exterior Lighting Fixtures**

The Company proposes to reduce prescriptive and custom rebates for night time lighting measures because the value of the avoided revenue requirements for these measures is lower than the corresponding value for measures with system peak coincident savings. The avoided revenue requirement value is lower for two reasons:

- These measures do not operate during system peak events which typically happen on hot summer weekday afternoons. As such, there is no associated generation or transmission avoided revenue requirement benefit; and
- The marginal energy cost during night time hours is typically lower than the marginal energy cost during day time hours, so the avoided revenue requirement energy benefit for night time lighting is lower than it is for a similar measure operated during daytime hours.

As the generation system continues to shift to include a higher percentage of non-carbon resources (recent additions have been primarily wind generation), the difference in value between night time and day time avoided marginal energy cost is expected to increase. This decline in benefits has made these measures less cost-effective while increasing customer's rates to a larger extent. Therefore, the Company recommends reducing the night time lighting rebates by approximately 50 percent. The custom rebate will also decrease from \$400 per kW to \$200 per kW for "dusk 'til dawn" measures excluding the parking garage fixtures which will remain at \$400 per kW as they provide 24- hour savings.

The Company does not anticipate there will be a significant impact on 2018. The following table shows the estimated impact of this change on product rebate budgets and energy consumption.

<sup>&</sup>lt;sup>1</sup> "Dusk 'til dawn lighting includes applications such as area lighting for parking lots, street lighting, wall packs for pathway lighting.

Table 4 provides information on the estimated impact of this change on product rebate budgets and energy consumption.

Table 4: Forecasted Impact of Rebate Reduction for Exterior Lighting Measures

Products	Filed Net Gen kW	Filed Net Gen kWh	Filed Rebate Budget (\$)
SBL 2018	35	1,721,277	\$141,885
LE 2018	1,021	16,038,526	\$887,829
Total	1,056	17,759,803	\$1,029,714
			<b>Proposed Rebate</b>
	<b>Proposed Net Gen</b>	<b>Proposed Net Gen</b>	Budget
	kW	kWh	(\$)
SBL 2018	35	1,526,111	\$132,669
LE 2018	1,021	16,038,526	\$736,501
Total	1,056	17,564,637	\$869,170

The measures and impacted rebates are highlighted in Table 5 below, some of the new construction rebates listed remain unchanged; however they are listed in the table so the entire category can be reviewed at once. The Company is proposing to align the rebates between the retrofit and new construction products for exterior lighting fixtures, with the exception of parking garage rebates which offer higher savings and higher rebates, to simplify the customer experience and reduce internal administrative costs.

Table 5: Measure Level Rebate Adjustments for Nighttime Lighting

Off.		Filed Rebate	Proposed
Offering	Measure	(\$)	Rebate (\$
Retrofit	LED Area Lighting - 45-65W	\$100	\$35
Retrofit	LED Area Lighting - 66-89W	\$125	\$35
Retrofit	LED Area Lighting - 90-119W	\$150	\$40
Retrofit	LED Area Lighting - 120-140W	\$175	\$50
Retrofit	LED Area Lighting - 141-199W LED Area Lighting - 200-550W	\$200	\$60
Retrofit		\$250	\$90
Retrofit	LED Parking Garage Lighting 25W-60W LED Parking Garage lighting 61W - 83W	\$135	\$115
Retrofit	LED Parking Garage Wall Pack <= 25W	\$150	\$125
Retrofit	LED Parking Garage Wall Pack 26W - 60W	\$35	\$30
Retrofit		\$75	\$60
Retrofit	LED Parking Garage Wall Pack 61W - 150W	\$100	\$75
Retrofit	LED Street Lighting - 55-79W	\$60	\$25
Retrofit	LED Street Lighting - 80-109W	\$60	\$25
Retrofit	LED Street Lighting - 110-139W	\$75	\$40
Retrofit	LED Street Lighting - 140-209W LED Exterior Wall Pack <= 25W	\$100	\$50
Retrofit		\$35	\$15
Retrofit	LED Exterior Wall Pack 26W - 60W	\$75	\$30
Retrofit	LED Exterior Wall Pack 61W - 150W	\$100	\$50
Retrofit	LED Outdoor Canopy or Soffit lighting 25W - 60W	\$100	\$20
Retrofit	LED Outdoor Canopy or Soffit lighting 61W - 150W	\$125	\$25
New Construction	LED Area Lighting - 45-65W	\$35	no change
New Construction	LED Area Lighting - 66-89W	\$35	no change
New Construction	LED Area Lighting - 90-119W	\$40	no change
New Construction	LED Area Lighting - 120-140W	\$50	no change
New Construction	LED Area Lighting - 141-199W	\$60	no change
New Construction	LED Area Lighting - 200-550W	\$90	no change
New Construction	LED Parking Garage lighting 25W - 60W	\$25	no change
New Construction	LED Parking Garage lighting 61W - 83W	\$35	no change
New Construction	LED Parking Garage Wall Pack <= 25W	\$15	no change
New Construction	LED Parking Garage Wall Pack 26W - 60W	\$30	no change
New Construction	LED Parking Garage Wall Pack 61W - 150W	\$50	no change
New Construction	LED Street Lighting - 55-79W	\$25	no change
New Construction	LED Street Lighting - 80-109W	\$25	no change
New Construction	LED Street Lighting - 110-139W	\$50	\$40
New Construction	LED Street Lighting - 140-209W	\$75	\$50
New Construction	LED Exterior Wall Pack <= 25W	\$15	no change
New Construction	LED Exterior Wall Pack 26W - 60W	\$30	no change
New Construction	LED Exterior Wall Pack 61W - 150W	\$50	no change
New Construction	LED Outdoor Canopy or Soffit lighting 25W - 60W	\$20	no change
New Construction	LED Outdoor Canopy or Soffit lighting 61W - 150W	\$25	no change
Small Business	LED Area Lighting - 45-65W	\$100	\$35
Small Business	LED Area Lighting - 66-89W	\$125	\$35
Small Business	LED Area Lighting - 90-119W	\$150	\$40
Small Business	LED Area Lighting - 120-140W	\$175	\$50
Small Business	LED Area Lighting - 141-199W	\$200	\$60
Small Business	LED Area Lighting - 200-550W	\$250	\$90
Small Business	LED Parking Garage Lighting 25W-60W	\$135	\$115
Small Business	LED Parking Garage lighting 61W - 83W	\$150	\$125
Small Business	LED Parking Garage Wall Pack <= 25W	\$35	\$30
Small Business	LED Parking Garage Wall Pack 26W - 60W	\$75	\$60
Small Business	LED Parking Garage Wall Pack 61W - 150W	\$100	\$75
Small Business	LED Street Lighting - 55-79W	\$60	\$25
Small Business	LED Street Lighting - 80-109W	\$60	\$25
Small Business	LED Street Lighting - 110-139W	\$75	\$40
Small Business	LED Street Lighting - 140-209W	\$100	\$50
Small Business	LED Exterior Wall Pack <= 25W	\$35	\$15
Small Business	LED Exterior Wall Pack 26W - 60W	\$75	\$30
Small Business	LED Exterior Wall Pack 61W - 150W	\$100	\$50
Small Business	LED Outdoor Canopy or Soffit lighting 25W - 60W	\$100	\$20

#### **Rebate and Cost Reductions for Troffers Fixtures**

As LEDs have grown in popularity, the costs for troffer lighting technologies have decreased. The Company analyzed the equipment costs of rebates submitted in 2017 and determined that the costs have significantly declined since the 2017/2018 DSM Plan was approved. Therefore, the Company proposes to align the incremental costs with the market prices starting on projects claimed from January 1, 2018 forward.

The Company will also correspondingly reduce rebate amounts to align with reduced incremental costs. As adjusting rebates downward can be difficult on the participants, the Company will implement the reduced rebates on September 1, 2018 to provide additional time for customers and contractors to make purchase decisions.

In addition, as LED troffers have advanced, traditional LED tubes have been replaced by LED modules. As such, sizes and types of the LED troffers have become less consequential. Thus, the Company will combine all of the troffer measures into one troffer measure. This will help to simplify the rebate process for customers and streamline the Company's internal processes and will be made effective September 1, 2018.

The new rebate levels for the Lighting Efficiency retrofit and new construction troffers and configuration of the measures are listed in the table below. Achievement in this product has increased overall in 2018 therefore the Company does not anticipate the drop in rebates will have a significant impact on participation in 2018.

Table 6 reflects the updated rebates and table 7 reflects the estimated impact of this change on product rebate budgets and energy consumption.

Table 6: Proposed Modification for LED Troffers

Current Program	Current Measure	Current Rebate	New Measure	New Rebate
Prescriptive Retrofit	LED Troffer Fixtures	\$50		
Prescriptive Retrofit	LED Troffer Retrofit Kits	\$30	LED Troffer	\$30
Prescriptive New Construction	LED Troffer Fixtures	\$30		
Prescriptive Retrofit	LED Troffer Fixture (T12 Baseline)	\$70	LED Troffer	
Prescriptive Retrofit	LED Troffer Retrofit (T12 Baseline)	\$50	(T12 Baseline)	\$50

Table 7: Updated Forecast for LED Troffers

CO LE 2018	Filed Net Gen kWh	Filed Net Gen kW	Filed Rebate Budget
LED Troffer Fixture	2,548,847	435	\$500,000
LED Troffer Retrofit	365,239	62	\$45,000
LED Troffer Fixture (T12 baseline)	481,878	82	\$70,000
LED Troffer Retrofit (T12 baseline)	241,167	41	\$25,000
T12 LED Troffer Fixture	98,360	17	\$25,000
T12 LED Troffer Retrofit	18,933	3	\$3,000
All Measures	3,754,424	640	\$ 668,000
CO LE 2018	Proposed Net Gen kWh	Proposed Net Gen kW	Proposed Rebate Budget
LED Troffer Fixture	7,001,834	1,195	\$1,650,000
LED Troffer Retrofit	1,281,928	219	\$300,000
LED Troffer Fixture (T12 baseline)	2,892,722	494	\$560,000
LED Troffer Retrofit (T12 baseline)	611,756	104	\$80,000
T12 LED Troffer Fixture	7,422	1	\$1,650
T12 LED Troffer Retrofit	0	0	-
All Measures	11,788,240	2,012	\$ 2,591,650

Table 7: Updated Forecast for LED Troffers (Cont'd)

CO SBL 2018	Filed Net Gen kWh	Filed Net Gen kW	Filed Rebate Budget
LED Troffer Fixture	810,561	137	\$175,000
LED Troffer Retrofit	176,990	30	\$24,000
LED Troffer Fixture (T12 baseline)	1,094,590	185	\$175,000
LED Troffer Retrofit (T12 baseline)	657,375	111	\$75,000
T12 LED Troffer Fixture	536	0	\$150
T12 LED Troffer Retrofit	516	0	\$ 90
All Measures	2,740,568	463	\$449,240
CO SBL 2018	Proposed Net Gen kWh	Proposed Net Gen kW	Proposed Rebate Budget
LED Troffer Fixture	2,563,127	433	\$390,000
LED Troffer Retrofit	507,214	86	\$75,000
LED Troffer Fixture (T12 baseline)	4,579,715	774	\$861,000
LED Troffer Retrofit (T12 baseline)	525,900	89	\$60,000
T12 LED Troffer Fixture	0	0	-
T12 LED Troffer Retrofit	0	0	-
All Measures	8,175,956	1,382	\$1,386,000

## Addition of new Networked Lighting Controls measure

The Company proposes to include a new measure within the Lighting Efficiency product for networked lighting controls. Networked lighting controls are a system of individually addressable luminaires and control devices, allowing for software programmability of multiple control strategies in multiple zones and a host of other features. According to the 2017 study: *Energy Savings from Networked Lighting Control Systems* by the Design Lighting Consortium ("DLC"), Networked lighting controls can save, on average, 47 percent of lighting energy use in commercial buildings while providing additional opportunities, capabilities and benefits.

Networked lighting controls provides an option for customers to further increase the costeffectiveness of their lighting retrofit, while positioning them for future technological advances. This measure offers customers more energy savings per dollar spent than traditional lighting or stand-alone controls. As building systems become more sophisticated, lighting control systems are following suit.

The networked lighting control market has expanded over the past few years with multiple manufacturers, products and models now available. A technical qualified products list created by the DLC provides a tool for utilities to validate products and energy savings. Thus, new networked lighting system controls need to be DLC listed to qualify for a rebate, however the fixtures can be DLC listed or non-DLC listed.

The Company proposes to offer a prescriptive retrofit rebate for commercial customers for networked lighting control systems applicable to new qualifying energy efficient equipment.

The Company analyzed the participation of lighting control measures from 2017 and attended the "DLC" networked lighting controls conference where we were able to speak with other utilities that currently offer measures prior to developing this new measure. Key learnings indicated that simplicity in the structure of an offering is paramount for fostering adoption. Thus, the Company designed the measure to be easy to use, basing it on the total controlled wattage, at \$0.40 per controlled watt. This rebate level is in addition to the rebate for the energy efficient lighting fixture. This rebate level is higher than the stand alone controls amount in order to drive participation and higher savings.

Manufacturers are working to educate distributors and customers on how to install and commission systems. The Company will support this practice by working closely with distributors and providing materials and resources such as case studies, informational collateral and training.

#### **Change in Structure of Stand-Alone Control Rebates**

The Company proposes to change the existing prescriptive stand-alone lighting control rebates to better align with the new networked lighting control measure proposed in this notice. Currently, stand-alone control rebates are offered as a dollar amount per sensor purchased. To better align stand-alone controls with the new networked control measure on the Company proposes to rebate these measures based on the total controlled load. This method is also preferable to the current rebate offering because it creates an economy of scale and incentivizes the customer to control more wattage.

To simplify the Company's offerings, this Notice proposes to consolidate the technical assumptions and modify the methodology used to calculate energy savings. By modifying the rebate process to align incentives based upon the total controlled load the Company can consolidate several measures, making it easier for customers and contractors to understand the Company's offerings. The current 12 control measures would be consolidated to three control measures in addition to the networked lighting control measure previously discussed. The rebate budget for all controls is in addition to the rebate amount for installing new qualifying fixtures.

Additionally, the Company proposes to switch the metric used in the energy savings calculations for all the control measures to "percent savings" instead of "Power Adjustment Factor". These metrics are inverses of each other, i.e. 25 percent energy savings yields a power adjustment factor of 75 percent, 45 percent energy savings yields a power adjustment factor of 55 percent and so on. This change has no effect on the energy savings calculation other than making it more immediately comprehensible to the reader.

Similar to the update made to the incremental costs for troffers, the Company will also update the incremental cost forecast for stand-alone controls as costs have decreased relative to the Company's forecast in the approved 2017/2018 DSM Plan.

Table 10 shows the measures and corresponding rebate amounts that are being consolidated and the new measures being added. Table 11 and Table 12 show the changes in energy savings and rebate budgets.

Table 10: Updated Measure Level Rebates for Lighting Controls

Current Measures	Current Rebate	New measures	New Rebate \$ per Controlled Watt
Integral Occupancy Sensor for		Networked Lighting	
LED case lighting	\$20.00	Control	\$0.40
Integral Occupancy Sensor for		Combo Continuous Dimming (photocell) and	
LED troffers	\$20.00	Occupancy/Vacancy	\$0.15
Integral Occupancy & Photo		Continuous Dimming	
Sensor for LED troffers	\$28.00	(photocell)	\$0.10
Integral Photocell for LED			
Troffers	\$8.00	Occupancy/Vacancy	\$0.05
Integral Occupancy Sensor for			
LED Parking Garage Fixtures	\$20.00		
Non-DLC Bi-level stairwell			
fixture with integrated sensor	\$56.25		
Bi-level stairwell fixture with			
integrated sensor/ DLC or			
ENERGY STAR rated bi-level			
stairwell fixture with integrated			
sensor (MN)	\$75.00		
Wall mount occupancy sensor			
(50-300 W)	\$15.00		
Wall mount occupancy sensor			
(>=301 W)	\$25.00		
Ceiling or Fixture occupancy			
sensor (50-300 W)	\$30.00		
Ceiling or Fixture occupancy			
sensor (>=301 W)	\$40.00		
Photocell	\$25.00		

Table 11: 2018 Forecast Impact to the Lighting Efficiency Product

Current Measures – LE 2018	Filed Net Gen kWh	Filed Net Gen kW	Filed Rebate Budget
Ceiling mount occupancy sensor - 50 - 300W Controlled Load	90,908	16	\$15,000
Ceiling mount occupancy sensor - 300W+ Controlled Load	464,872	79	\$20,000
Wall mount occupancy sensor - 50 - 300W Controlled Load	90,908	16	\$7,500
Wall mount occupancy sensor - 300W+ Controlled Load	278,923	48	\$7,500
Photocell	44,984	8	\$2,500
Stairwell Fixture with Integral Occupancy Sensor	61,810	11	\$15,000
Integral Occupancy Sensor	124,284	12	\$16,000
Integral Occupancy & Photo Sensor	352,508	38	\$56,000
Integral Photo Sensor	98,326	10	\$4,800
Total	1,607,523	238	\$144,300.00
New Measures – LE 2018	Proposed Net Gen kWh	Proposed Net Gen kW	Proposed Rebate Budget
Networked Lighting Control	826,220	141	\$145,891
Combo Continuous Dimming (photocell) and Occupancy/Vacancy	269,146	88	\$22,043
Continuous Dimming (photocell)	169,987	65	\$12,596
Occupancy/Vacancy	1,457,032	56	\$62,980
Total	2,722,385	350	\$243,510

Table 12: 2018 Forecast Impact to the Small Business Lighting Product

Current Measures - SBL 2018	Filed Net Gen kWh	Filed Net Gen kW	Filed Rebate Budget
Ceiling mount occupancy sensor - 50 - 300W Controlled Load	2,974	1	\$540
Ceiling mount occupancy sensor - 300W+ Controlled Load	4,224	1	\$200
Wall mount occupancy sensor - 50 - 300W Controlled Load	9,416	2	\$855
Wall mount occupancy sensor - 300W+ Controlled Load	5,913	1	\$175
Photocell	1,635	0	\$100
Stairwell Fixture with Integral Occupancy Sensor	2,808	0	\$750
Integral Occupancy Sensor	417	0	\$60
Integral Occupancy & Photo Sensor	473	0	\$84
Integral Photo Sensor	439	0	\$23
Total	28,299	5	\$2,787
Current Measures – SBL 2018	Proposed Net Gen kWh	Proposed Net Gen kW	Proposed Rebate Budget
Networked Lighting Control	129,432	22	\$25,154
Combo Continuous Dimming (photocell) and Occupancy/Vacancy	209,612	35	\$18,894
Continuous Dimming (photocell)	90,096	15	\$7,348
Occupancy/Vacancy	198,579	34	\$9,447
Total	627,719	106	\$60,843

#### **Eliminate Fluorescent Fixture and Lamp Measures**

The costs of LED fixtures have decreased significantly over the last four years while the selection of available products has increased. Many LED products are more durable, longer lasting, and provide more energy savings than fluorescent options. One goal of the DSM lighting programs is to influence the market to broadly adopt more efficient equipment, and specifically to influence individual customers to install more efficient equipment. Thus, the Company believes that 2018 is the right time to eliminate fluorescent fixtures as a measure eligible for rebates.

The Company plans to rebate fluorescent fixtures through December 31, 2018 to accommodate customers that have incorporated these fixtures into their sourcing plans. However, in 2019 the Company proposes to offer rebates on LED fixtures only. The Company does not expect a decrease in overall product savings or participation as a result of this change in 2018. The savings and budget differential will be absorbed by the other measures in the Lighting Efficiency product. The measures impacted and their corresponding rebate budgets and energy consumption forecasts are shown in Table 13 and Table 14 below.

Table 13: Forecasted Impact to Lighting Efficiency from the Elimination of Fluorescents

Measures Eliminated	2018 NET Gen kW	2018 NET Gen kWh	2018 Rebate Budget (\$)
Retrofit - LE			
T8 to T8 Optimization	4	24,504	\$ 1,200
High Bay Fluorescents replacing 150, 175, 250 Watt HID	14	84,117	\$ 3,500
High Bay Fluorescents replacing 320, 350, 400 Watt HID	30	175,174	\$ 10,000
High Bay Fluorescents replacing 750 Watt HID	79	461,235	\$ 16,000
High Bay Fluorescents replacing 1000 Watt HID	2	14,310	\$ 500
T8 Ballast, 2 ft to 4 ft., 1 and 2 Lamp / T8 Ballast, 2 ft to 4 ft., 3 and 4 Lamp	0	1,814	\$ 150
CFL <= 18W Pin Based	4	23,029	\$ 200
CFL 19-32W Pin Based	13	78,748	\$ 600
CFL 33W+ Pin Based	6	35,884	\$ 300
T8 4' Lamps - 25 Watts	102	595,104	\$ 30,000
T8 4' Lamps - 28 Watts	58	340,060	\$ 15,000
Total	313	1,833,978	\$ 77,450

<u>Table 13: Forecasted Impact to Lighting Efficiency from the Elimination of Fluorescents (Cont'd)</u>

New Construction - LE	2018 NET Gen kW	2018 NET Gen kWh	2018 Rebate Budget (\$)	
High Bay			(4)	
Fluorescents instead				
of 150, 175, 250 Watt				
HID	7	40,986	\$ 500	
High Bay				
Fluorescents instead				
of 320, 350, 400 Watt				
HID	9	54,133	\$ 500	
High Bay				
Fluorescents instead				
of 750 Watt HID	8	46,223	\$ 300	
High Bay				
Fluorescents instead				
of 1000 Watt HID	3	15,041	\$ 100	
CFL <= 18W Pin				
Based	4	23,029	\$ 200	
CFL 19-32W Pin				
Based	7	39,374	\$ 200	
CFL 33W+ Pin Based	6	35,884	\$ 200	
T8 4' Lamps - 25				
Watts	20	119,021	\$ 6,000	
T8 4' Lamps - 28				
Watts	12	68,012	\$ 3,000	
Total	75	441,705	\$ 11,000	

<u>Table 14: Forecasted Impact to Small Business Lighting from the Elimination of Fluorescents</u>

Measures Eliminated	2018 NET Gen kW	2018 NET Gen kWh	2018 Rebate Budget (\$)
Retrofit - SBL	KVV	Genkwn	Duuget (φ)
T8 to T8 Optimization	3	14,917	\$ 804
High Bay Fluorescents replacing 150, 175, 250 Watt HID	1	4,586	\$ 210
High Bay Fluorescents replacing 320, 350, 400 Watt HID	1	3,979	\$ 250
High Bay Fluorescents replacing 750 Watt HID	0	2,095	\$ 80
High Bay Fluorescents replacing 1000 Watt HID	0	2,600	\$ 100
T8 Ballast, 2 ft to 4 ft., 1 and 2 Lamp / T8 Ballast, 2 ft to 4 ft., 3 and 4 Lamp	2	11,535	\$ 1,050
CFL <= 18W Pin Based	4	20,924	\$ 200
CFL 19-32W Pin Based	6	35,775	\$ 300
CFL 33W+ Pin Based	6	32,605	\$ 300
T8 4' Lamps - 25 Watts	9	54,071	\$ 3,000
T8 4' Lamps - 28 Watts	3	20,599	\$ 1,000
Total	35	203,686	\$ 7,294

The Company is including with this Notice:

- Updated Technical Assumption Electric Forecast;
- Updated Deemed Savings worksheets; and
- Updated product write ups.