

2015 EM&V – Regional/LDC Results & Persistence

CFIC Update

December 16, 2016

Purpose

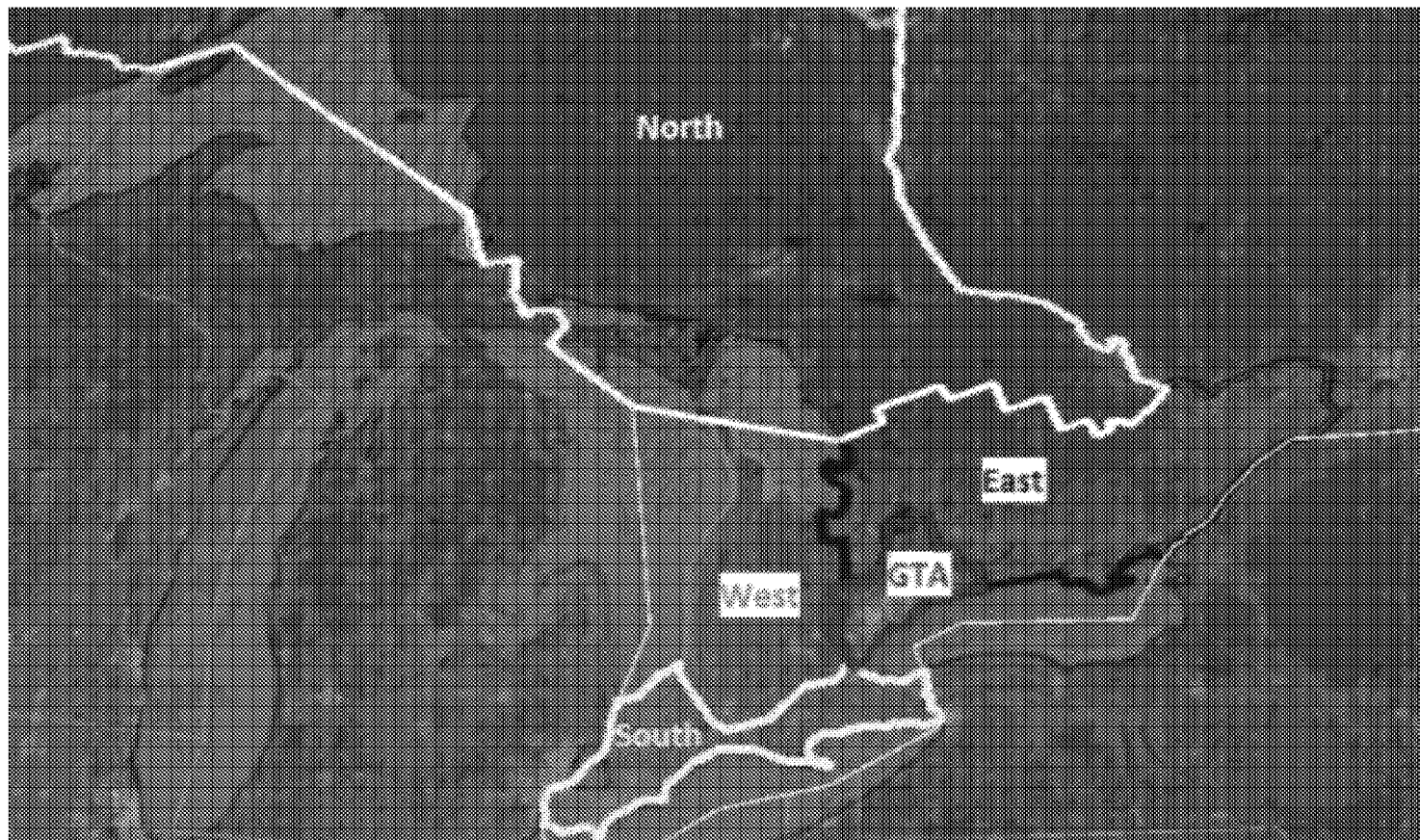
- The purpose of this deck is to provide an overview of 2015 Regional EM&V Results & Persistence of Savings Issues
- Regional EM&V Results were instituted in 2015 at the request of the LDCs and the scope is outlined in the CFF Evaluation Guidelines and were conducted in accordance with the EM&V Protocols and Requirements

Overview

We will review the results of following programs in the deck:

- Retrofit
- Small Business Lighting
- Process & Systems Upgrade Program

Retrofit – 6 Regions



Retrofit - Regional NTG Differences

Region	Prescriptive	Engineered	Custom
HONI	89	93	93
West	89	82	79
North	88	83	69
East	80	70	67
GTA	79	75	71
South	78	59	65

Retrofit – Measures with Low Persistence

Archetypes with 2015 Step Downs		
CE Archetype	Measure	2015 Remaining Useful Life (Step Down)
Custom Lighting	all	8.2
Engineered Lighting	all	6.0
Prescriptive Lighting EUL3	Screw-in CFL - All sizes less than or equal to 40 Watt	
Prescriptive Lighting EUL3	Three-way CFL: 11 - 14 / 17 - 20 / 19 - 24 Watt	
Prescriptive Lighting EUL3	PAR CFL: 12 -20 Watt	
Prescriptive Lighting EUL3	PAR CFL: 20-39 Watt	
Prescriptive Lighting EUL5	Reduced Wattage T8 Re-lamping: Two 28W Lamps for Two Lamp Fixture	
Prescriptive Lighting EUL5	Reduced Wattage T8 Re-lamping: Two 25W Lamps for Two Lamp Fixture	
Prescriptive Lighting EUL5	Reduced Wattage T8 Re-lamping: One 25W Lamp for One Lamp Fixture	
Prescriptive Lighting EUL5	Reduced Wattage T8 Re-lamping: One 28W Lamp for One Lamp Fixture	
Prescriptive Lighting EUL5	Reduced Wattage T8 Re-lamping: Four 25W Lamps for Four Lamp Fixture	
Prescriptive Lighting EUL5	Reduced Wattage T8 Re-lamping: Four 28W Lamps for Four Lamp Fixture	
Prescriptive Lighting EUL5	Reduced Wattage T8 Re-lamping: Three 28W Lamps for Three Lamp Fixture	
Prescriptive Lighting EUL12 Fluorescent Baseline	Standard Performance T-8 fixture: Four-lamp	2.0
Prescriptive Lighting EUL12 Fluorescent Baseline	Reduced Wattage T-8 fixtures: Four-lamp	2.0
Prescriptive Lighting EUL12 Fluorescent Baseline	Standard Performance T-8 fixture: Single-lamp	2.0
Prescriptive Lighting EUL12 Fluorescent Baseline	Reduced Wattage T-8 fixture: Single-lamp	2.0
Prescriptive Lighting EUL12 Fluorescent Baseline	Standard Performance T-8 fixture: Two-lamp	2.0
Prescriptive Lighting EUL12 Fluorescent Baseline	Reduced Wattage T-8 fixture: Two-lamp	2.0
Prescriptive Lighting EUL12 Fluorescent Baseline	High Performance T-8 fixture: Two-lamp	2.0
Prescriptive Lighting EUL12 Fluorescent Baseline	High Performance T-8 fixture: Four-lamp	2.0
Prescriptive Lighting EUL12 Fluorescent Baseline	High Performance T-8 fixture: Single-lamp	2.0
Prescriptive Lighting EUL12 Fluorescent Baseline	T-5 fixture with 2 Lamps and 1 Electronic Ballast effective July 1, 2011	2.0
Prescriptive Lighting EUL12 Fluorescent Baseline	T-5 fixture with 3 Lamps and 1 Electronic Ballast effective July 1, 2011	2.0
Prescriptive Lighting EUL12 Fluorescent Baseline	Reduced Wattage T-8 fixture: Three-lamp	2.0
Prescriptive Lighting EUL12 Fluorescent Baseline	T-5 fixture with 1 Lamp and 1 Electronic Ballast effective July 1, 2011	2.0
Prescriptive Lighting EUL12 Fluorescent Baseline	High Performance T-8 fixture: Three-lamp	2.0
Prescriptive Lighting EUL12 Fluorescent Baseline	Standard Performance T-8 fixture: Three-lamp	2.0
Prescriptive Lighting EUL13	2-Pin pin-socket GU-24 lamps: 26-40 Watt, Hard wired, Fixture and Bulb	0.0
Prescriptive Lighting EUL13	2-Pin pin-socket GU-24 lamps: Up to 14 Watt, Hard wired, Fixture and Bulb	0.0
Prescriptive Lighting EUL13	2-Pin pin-socket GU-24 lamps: 14-26 Watt, Hard wired, Fixture and Bulb	0.0
Prescriptive Lighting EUL13	4-Pin pin-socket lamps: Up to 14 Watt, Hard wired, Fixture and Bulb	0.0
Prescriptive Lighting EUL13	4-Pin pin-socket lamps: 14-26 Watt, Hard wired, Fixture and Bulb	0.0
Prescriptive Lighting EUL13	4-Pin pin-socket lamps: 26-40 Watt, Hard wired, Fixture and Bulb	0.0
Prescriptive Lighting EUL20	ENERGY STAR® LED Recessed Downlight with Light Output >800 lumens	0.0
Prescriptive Lighting EUL20	ENERGY STAR® LED Recessed Downlight with Light Output >600 and <800 lumens	0.0
Prescriptive Lighting EUL20	ENERGY STAR® LED Recessed Downlight with Light Output > 350 and <600 lumens	0.0

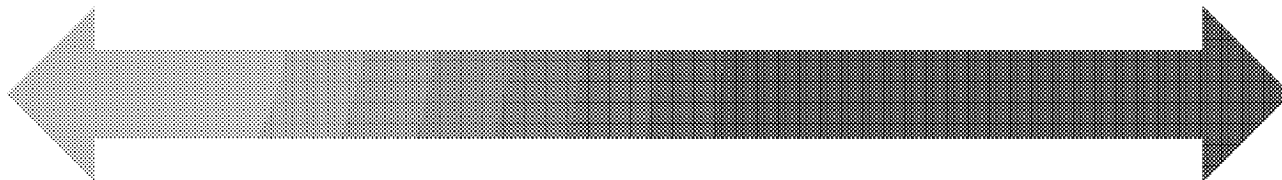
Retrofit – Reasons for Differences in NTG

	Reason		Reason
+	Use of Technical Reviewer decreases FR projects	+/-	Proportion of Measure Mix
+/-	Variance in Contractors		Proportion of FR is higher where the LDC is first contact (highest in the South) - proportion of participants who have already started the project is greater

Small Business Lighting

- 14 strata (regions)
 - Largest 8 LDCs their own strata
 - 6 other strata
 - Each of the 14 strata has a similar number of total projects
- NTG Ranges 82.5-96.5

82.5
Waterloo/
Cambridge



96.5
Powerstream

Process and System Upgrade

- Project Specific Results
- Long lead times – Long M&V periods
- Great variation in free-ridership
- Proposing additional NTG analysis at contract signing to supplement NTG analysis at project completion
 - Correlation of trends on LDC influence and participant intention