

Metro Transit Sustainability



Transportation Committee

August 10, 2015

Presented by

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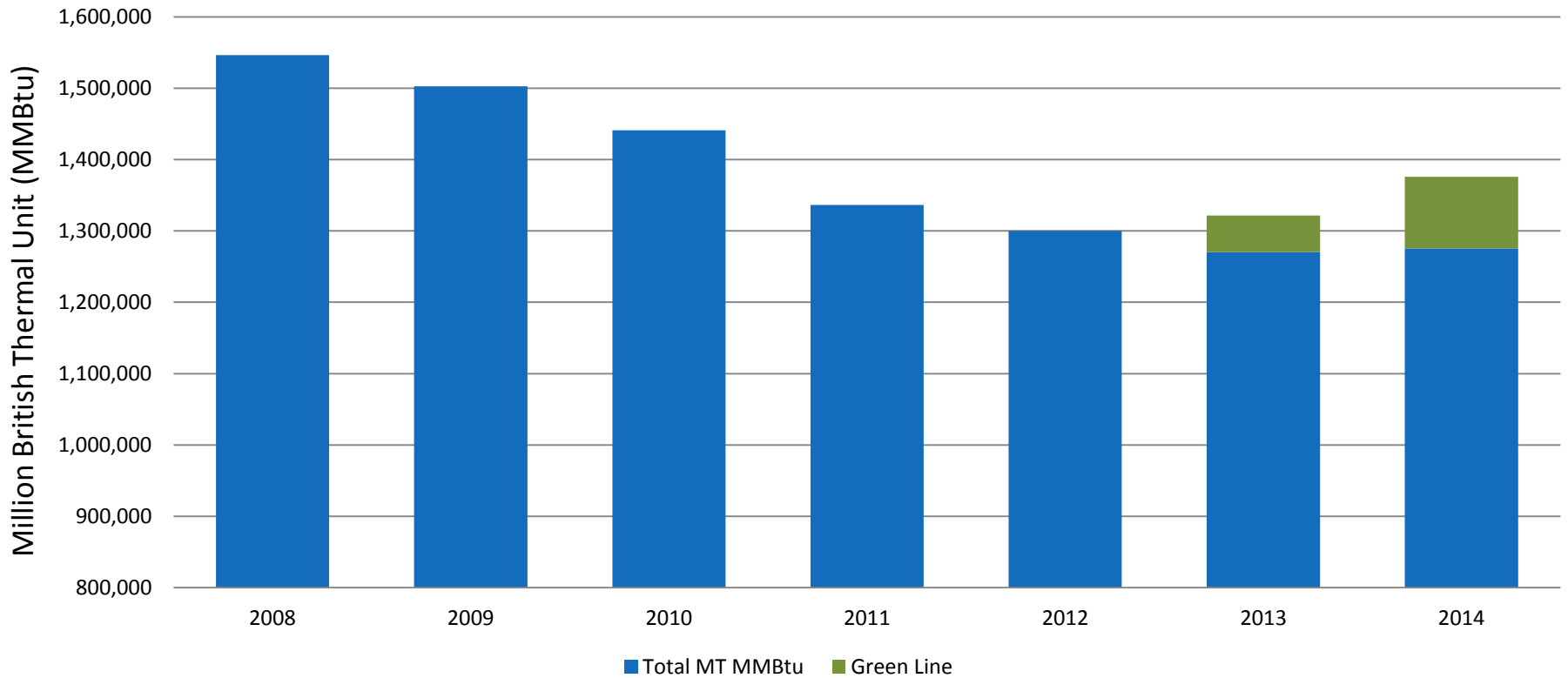
Metro Transit, Engineering and Facilities

Thrive Outcomes: Sustainability

- **Operating the region's wastewater treatment and transit systems sustainably**
 - Increase energy efficiency.
 - Use of renewable energy sources.
 - Reduce greenhouse gas emissions from Council operations.
 - Conserve and protect water resources.
 - Reduce solid waste generation.
 - Reuse and recycle materials.

2008-2014 MT Total MMBTU

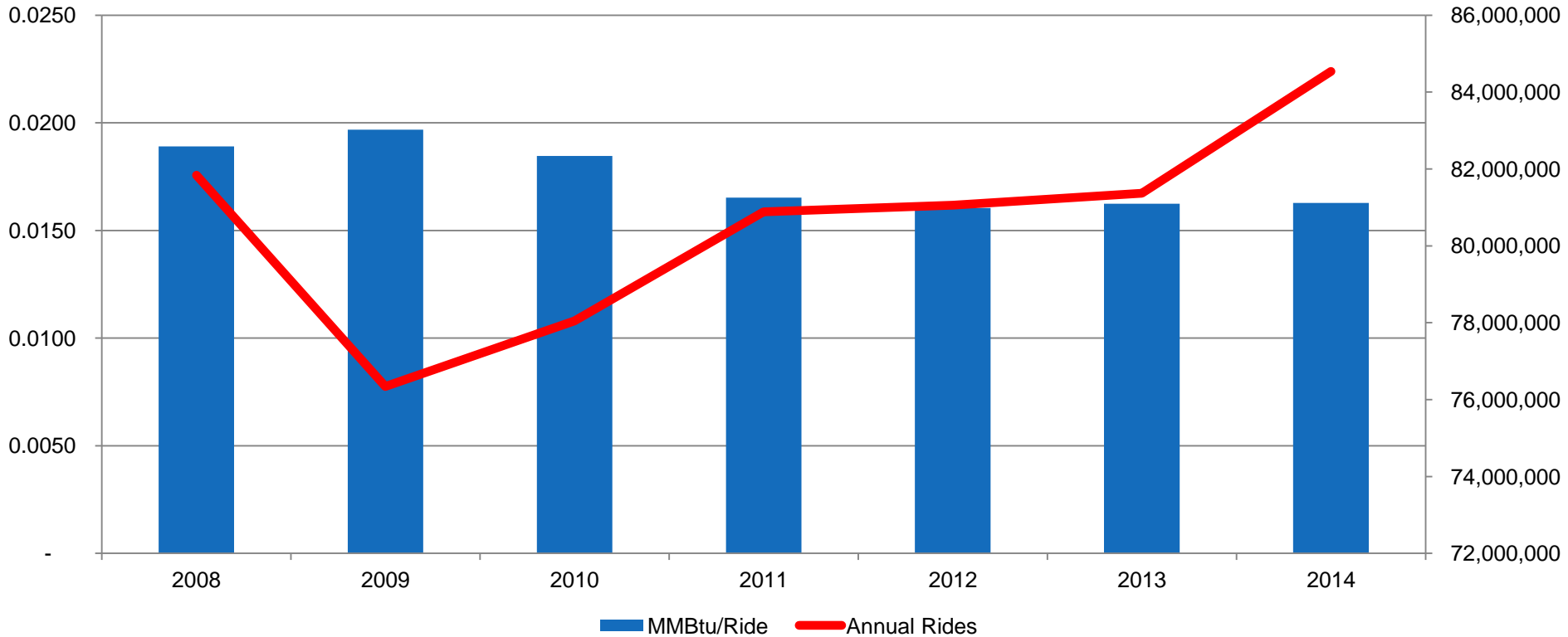
Metro Transit Total MMBtu





2008-2014 MT Total MMBTU

MMBtu/Ride & Annual Rides



Main Factors affecting 2014

Increases in consumption

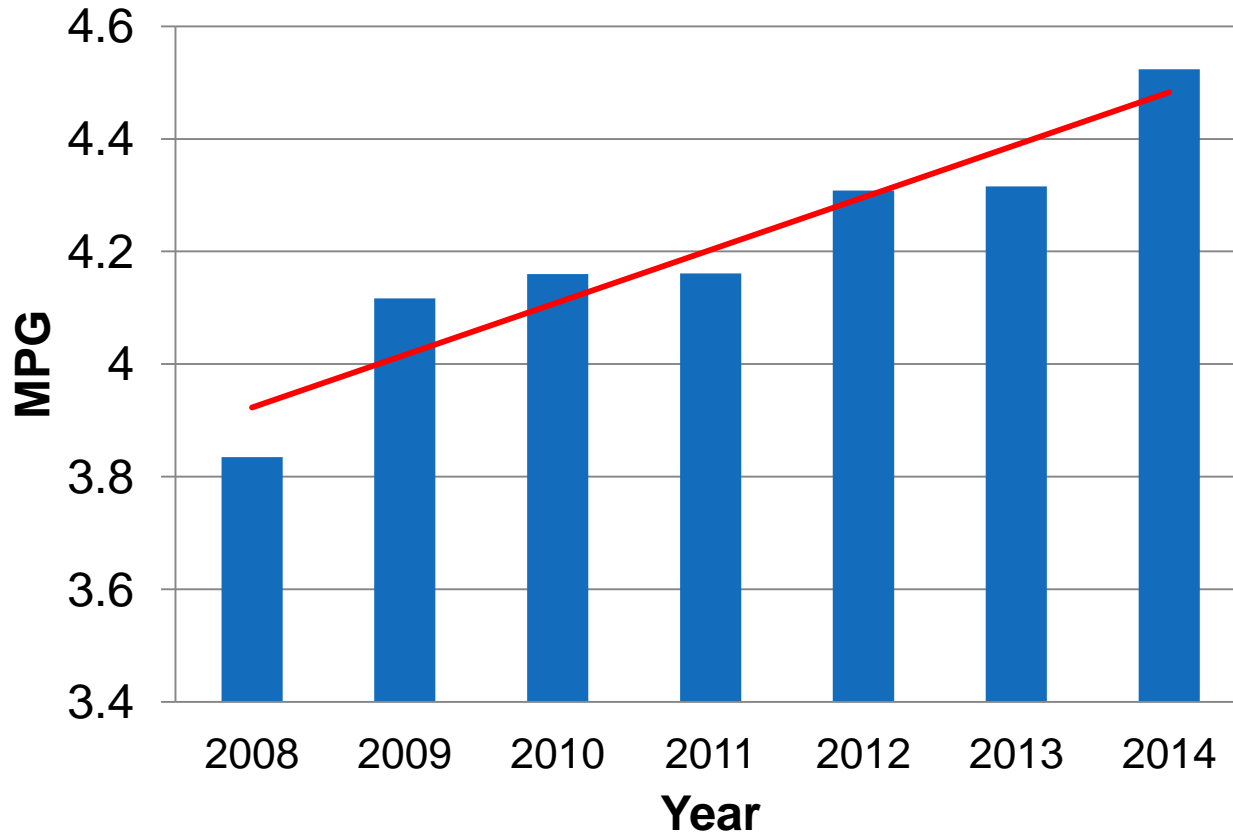
- ↑ Green Line energy for operations
- ↑ Increase in square footage

Positives 2014

- ↓ Bus fuel usage
- ↑ Increase in ridership
- ↓ Existing facilities performed well

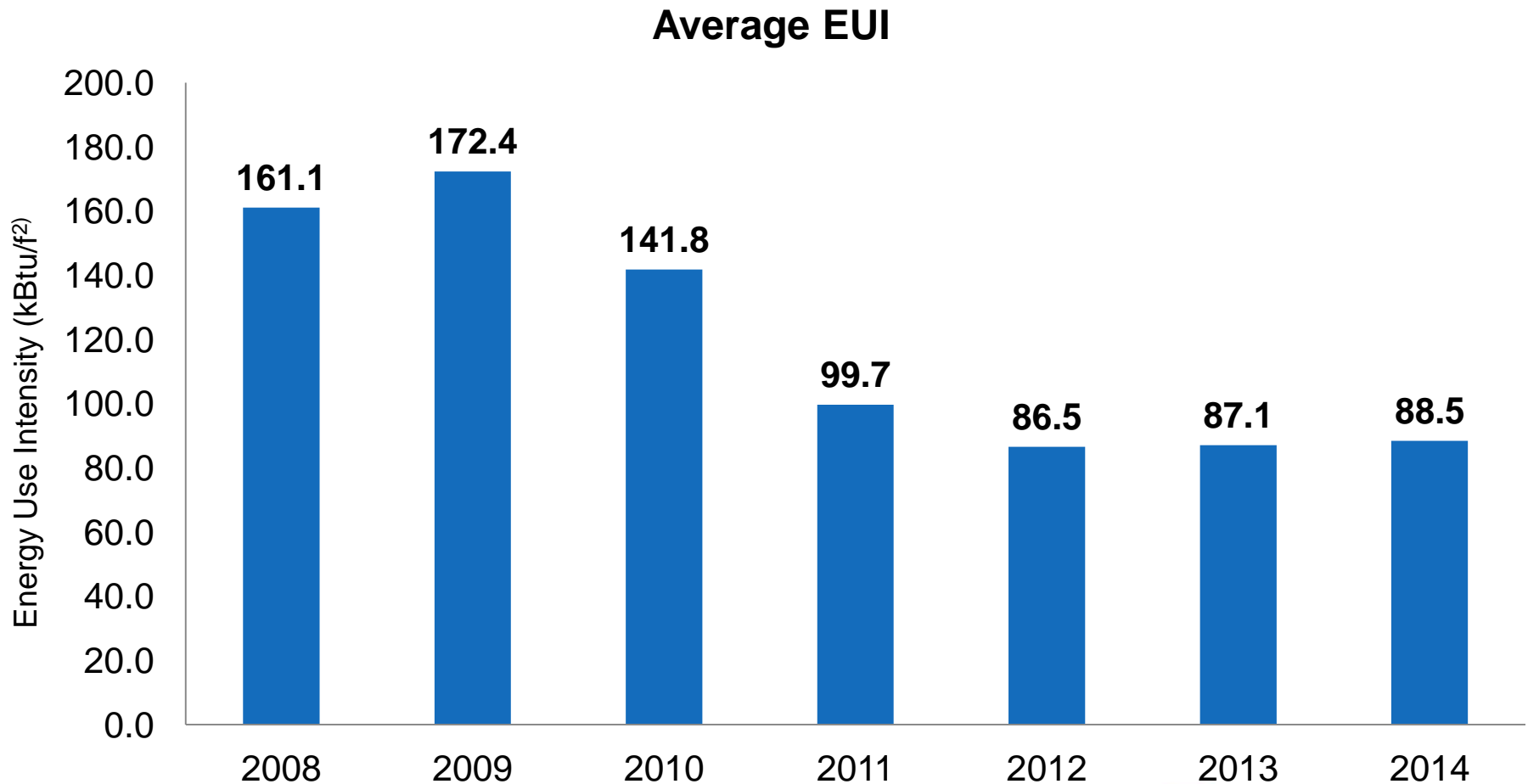


Bus Fleet MPG Increasing (Revenue)



- A 2/10th (4.82%) improvement in miles per gallon for the fleet in 2014 reduced the fuel used for the year by 342,928 gallons
- That is a savings of \$1,021,445

2008-2014 Average Energy Use Intensity



*Weather Normalized Facility Data 7

Facilities Payback



- Invested total of \$9.0M to date
- Cumulative savings out \$13.6M to date

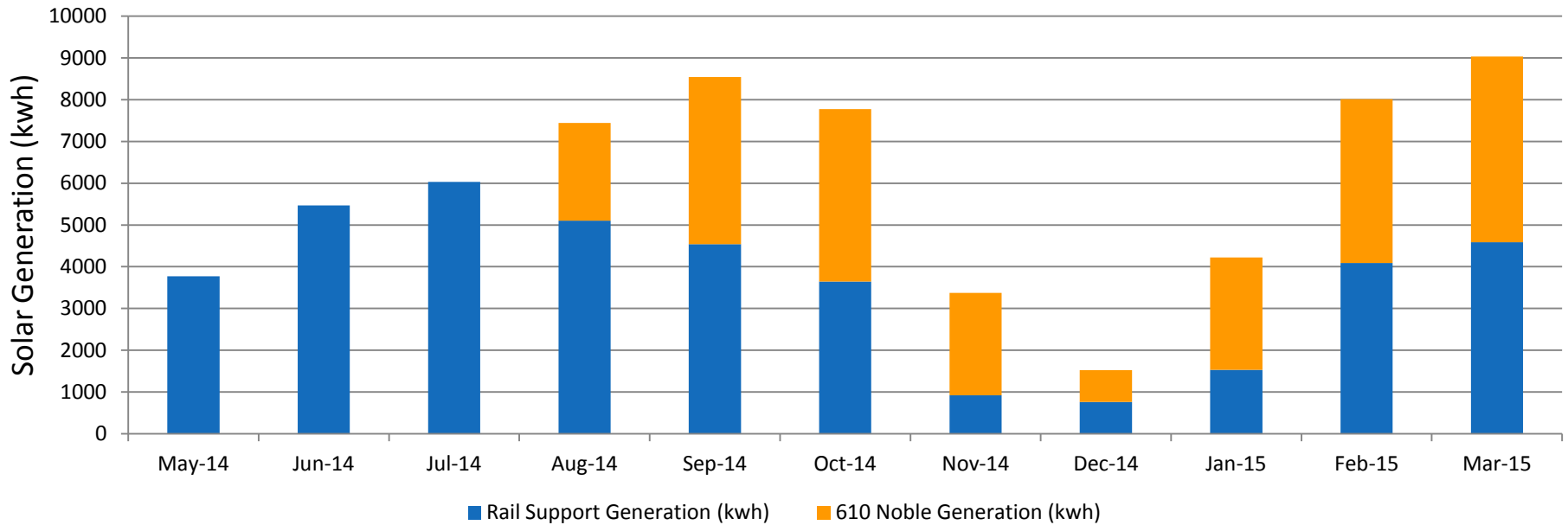
Solar Power



- 610 and Noble P&R produces - 25% total use
- Solar Portfolio – 3MW at 6 facilities

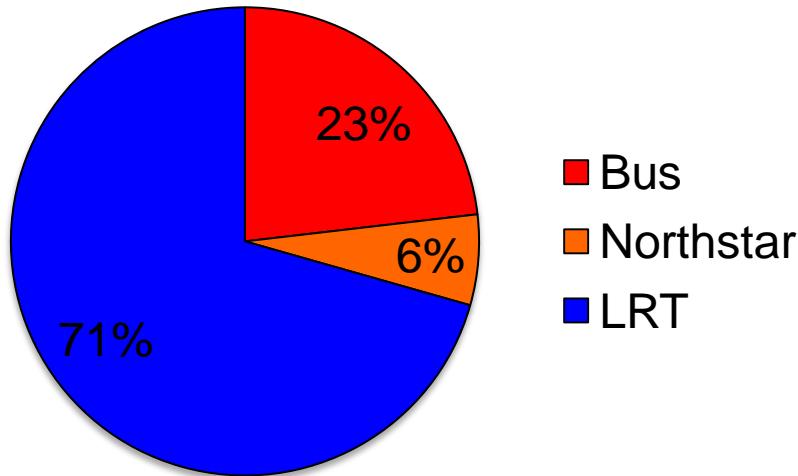
Monthly Solar Power Generation

Monthly Solar Generation

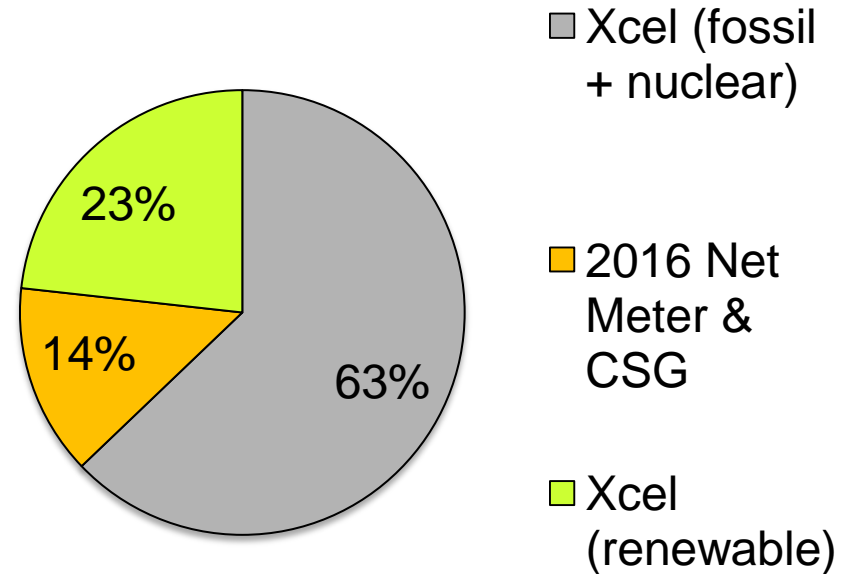


2016 Electrical Profile Metro Transit

Electric Usage (by Mode)
75,000,000 kWh total

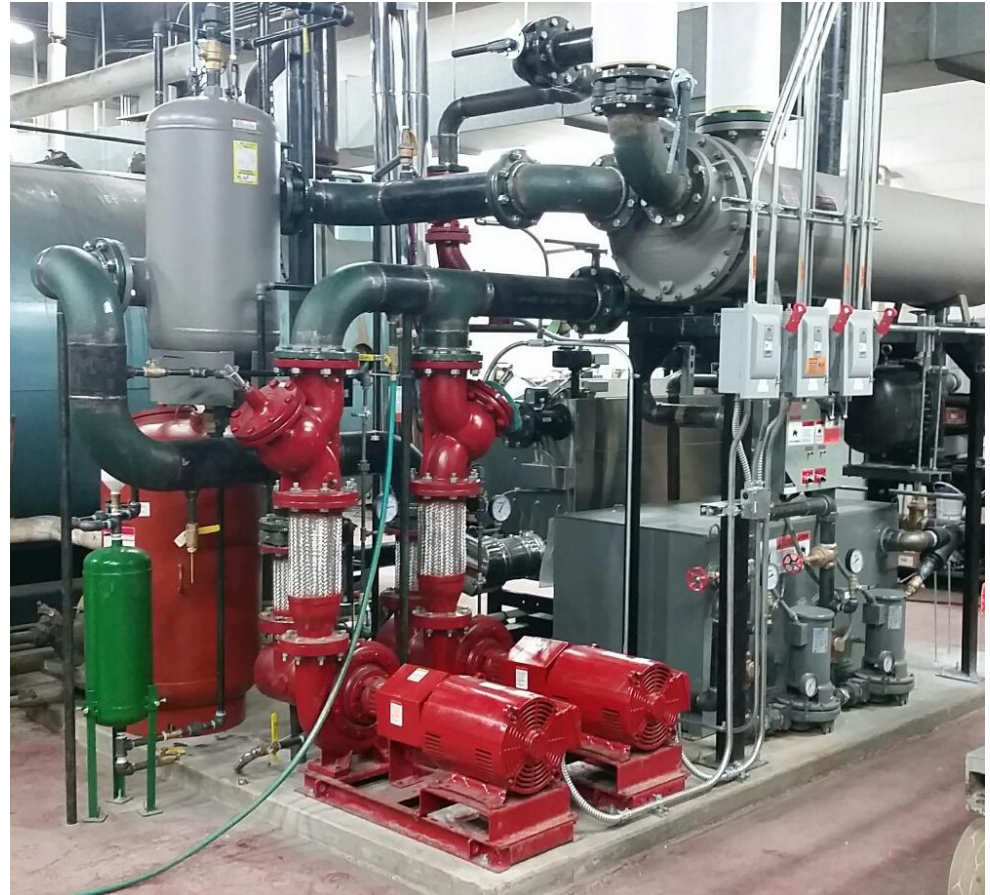


Electricity (by Source)
Total -75,000,000 kWh
Solar-10,500,000 kWh



2014 Highlights

- OHB Heating System
- Exterior lighting retrofit at EMTF and FTH
- FTH façade improvements
- Testing of EV charging stations



2015/2016 Projects

- Traction Power - Energy Storage Equipment
- Lighting – Continue exterior light conversion to LED
- Studies – Electric Bus, District Energy, Water Usage, Hazardous Waste, Solid Waste, Electric non-revenue fleet
- Thrive WG on Sustainability & Climate Change



2015-2016 Energy Goals

- Average EUI of 85 kBtu/sq. ft.
- 2015-2016 larger solar installations at support facilities, approximately 3 mega watts
- Traction Power - Energy Storage Equipment
- Measure the CO₂e that transit offsets in the region
- Continue lighting retrofits at facilities
- Continue increase in fleet fuel economy

Questions?



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