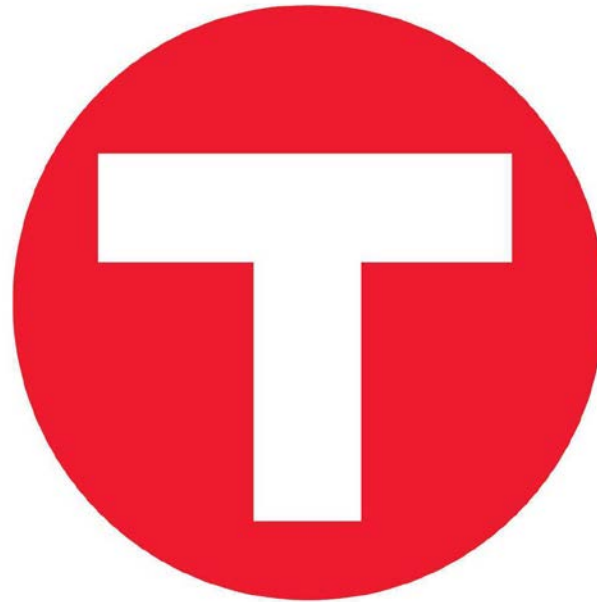




# Metro Transit Sustainability/Energy Annual Update



**Transportation Committee**  
August 8<sup>th</sup>, 2016

Jeff Freeman  
Engineering & Facilities

# Metro Transit Sustainability/Energy Update

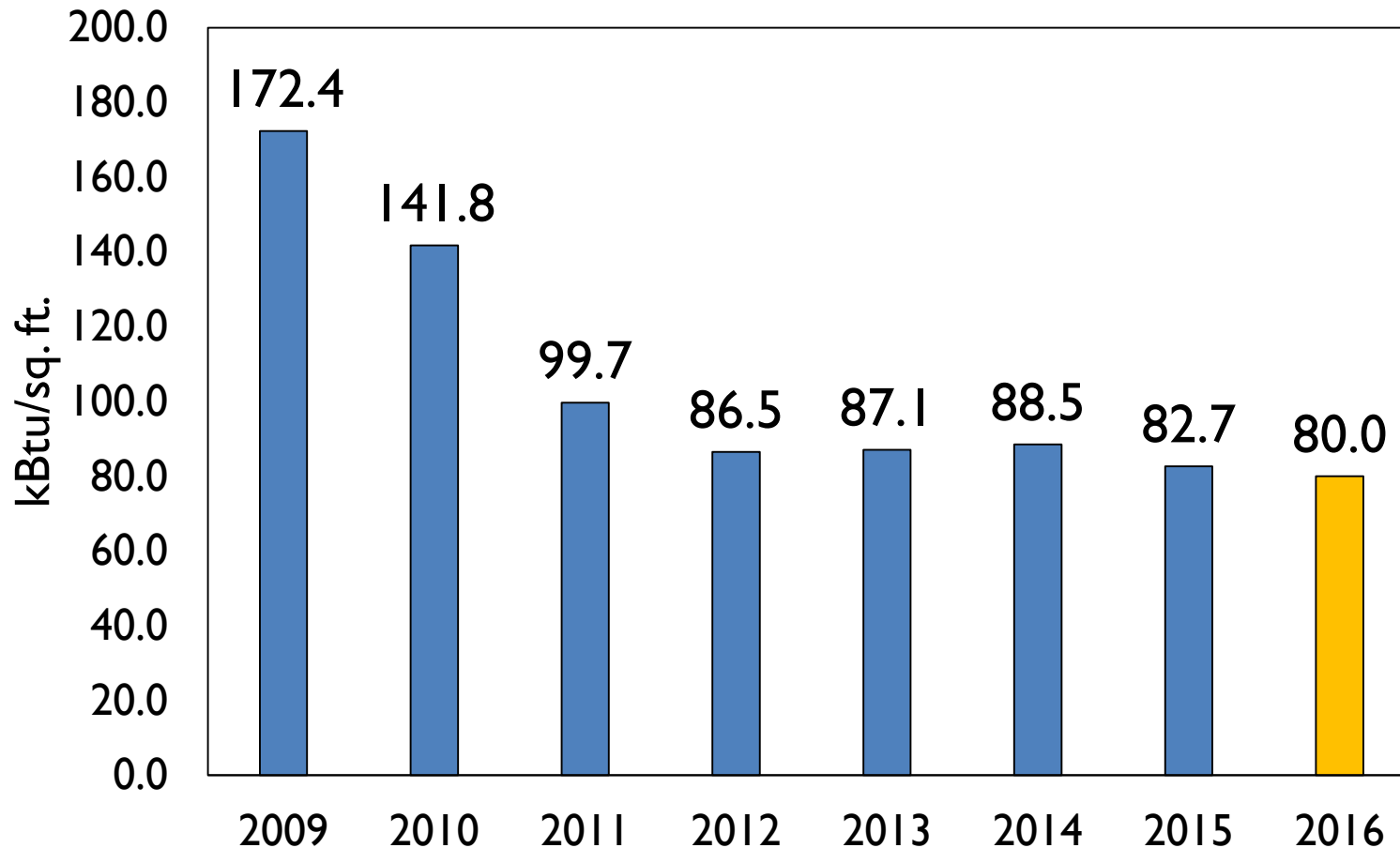
- Purpose, Leadership and Collaboration
- 2015 Energy Report
- 2015-2016 Projects and Initiatives
  - Electric Bus
  - Solar
  - MT Police Building
  - New Minneapolis Bus Garage
  - Be The Solution
- 2016-2017 Future Initiatives

# Metro Transit Leadership & Collaboration

- Thrive Work Group
  - Climate change and sustainability focus
- CCEST
  - Climate Change & Environmental Sustainability Team
- IPPAT
  - Interagency Pollution Prevention Advisory Team
- Xcel Energy & Connexus
  - External collaboration

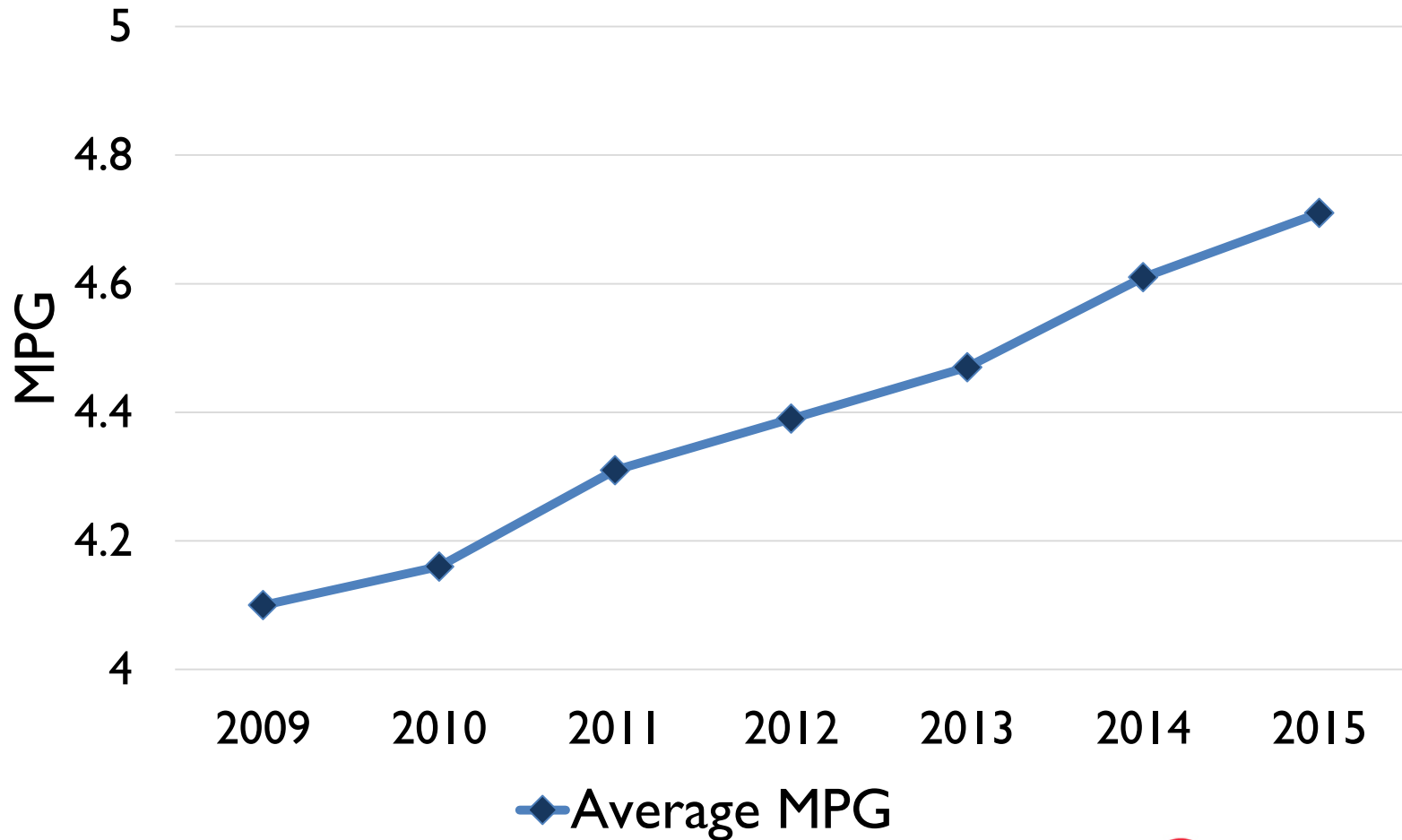


# Average Energy Use Intensity (kBtu/sq. ft.)

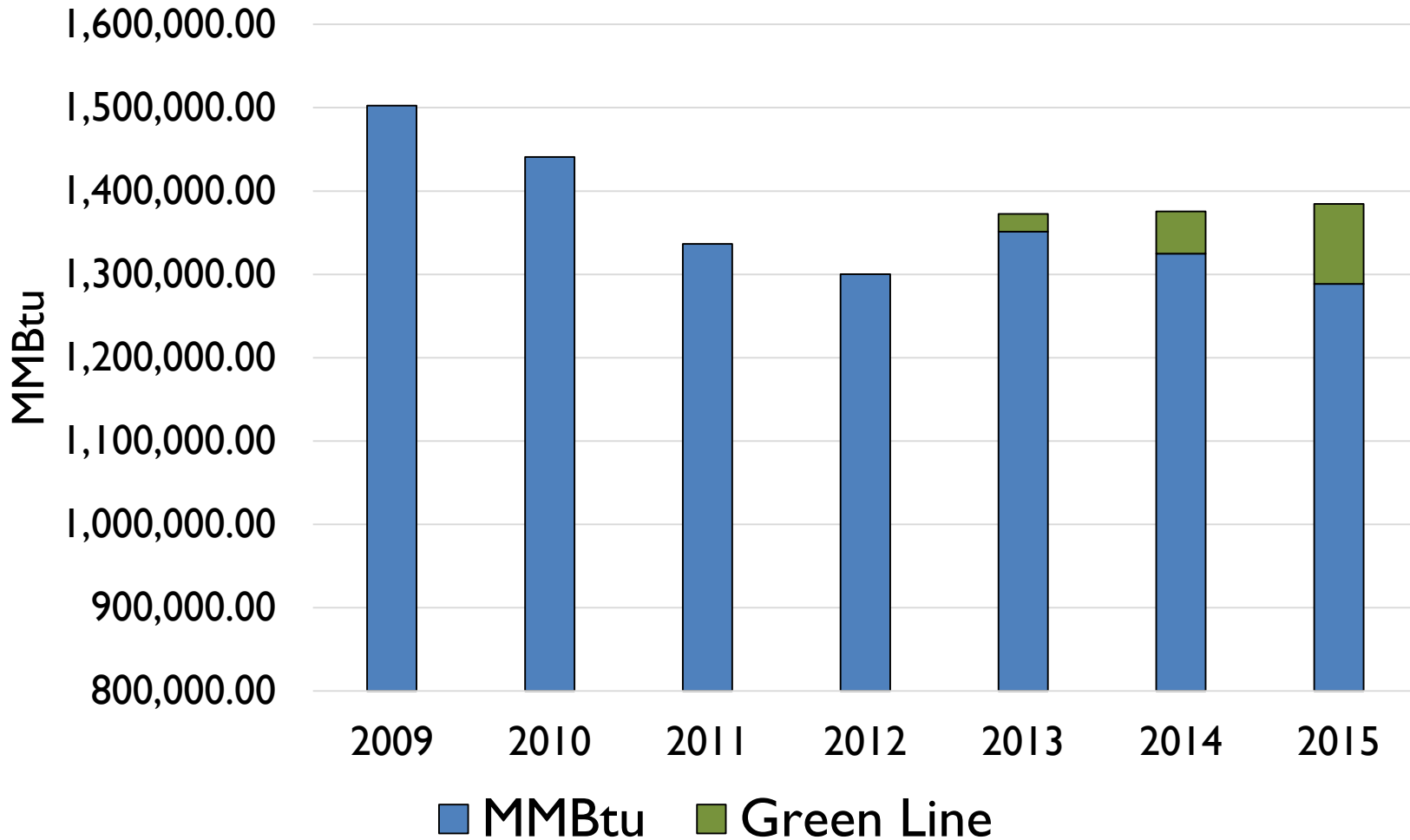


\*Weather normalized facility data for major support facilities

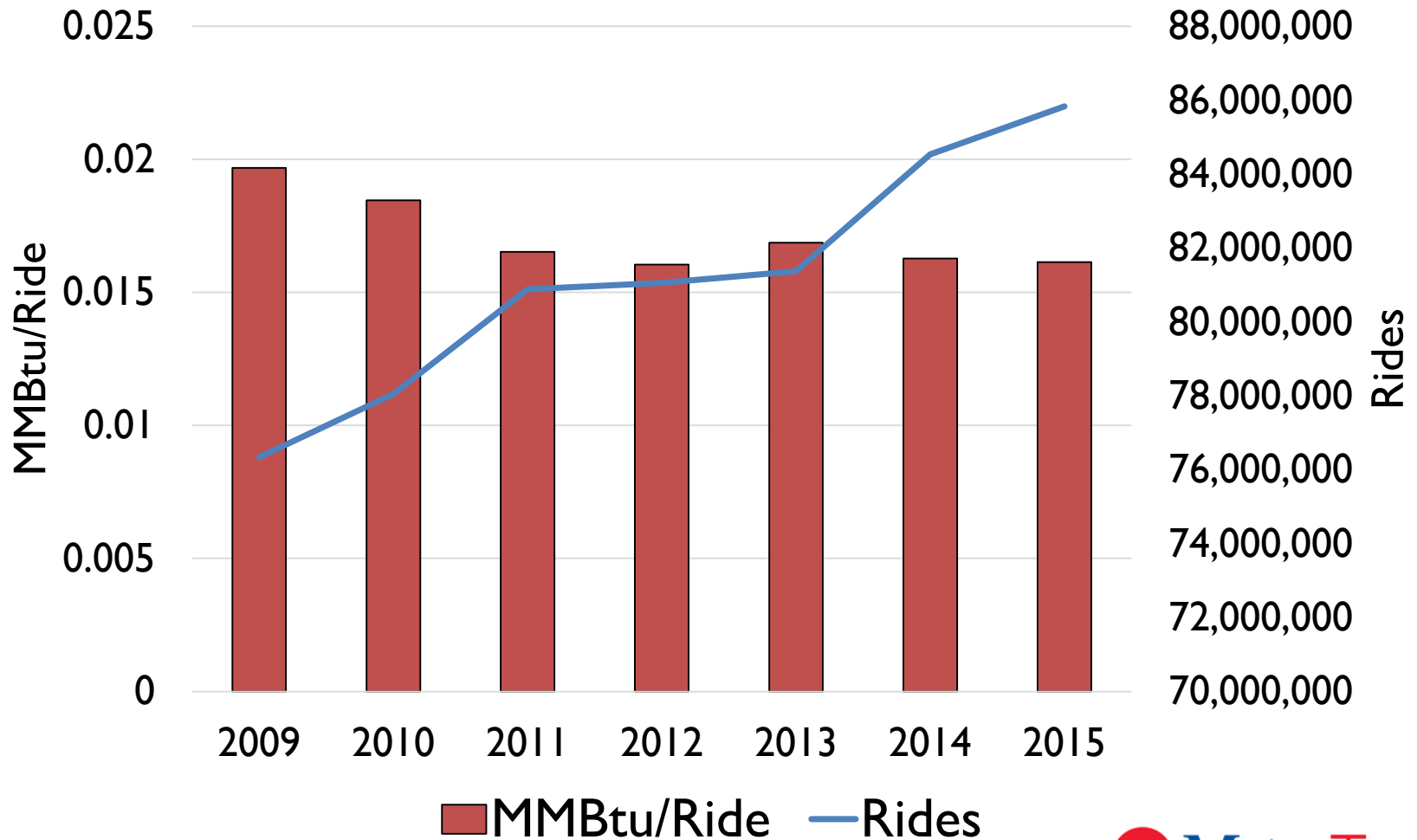
# Revenue Fleet MPG Increasing



# Metro Transit Total MMBtu



# MMBtu/Ride & Annual Ridership



# Electric Bus

- Regional Solicitation Grant for 5 electric buses to service Central Avenue Corridor
- Metro Transit will continue to pursue LoNo Grants and other funding opportunities for electric buses moving forward
- Electric Bus Feasibility Considerations
  - Developing technology
  - Power System Standardization
  - Capital Costs
  - Battery Range
  - Route Matching
  - Winter Heating



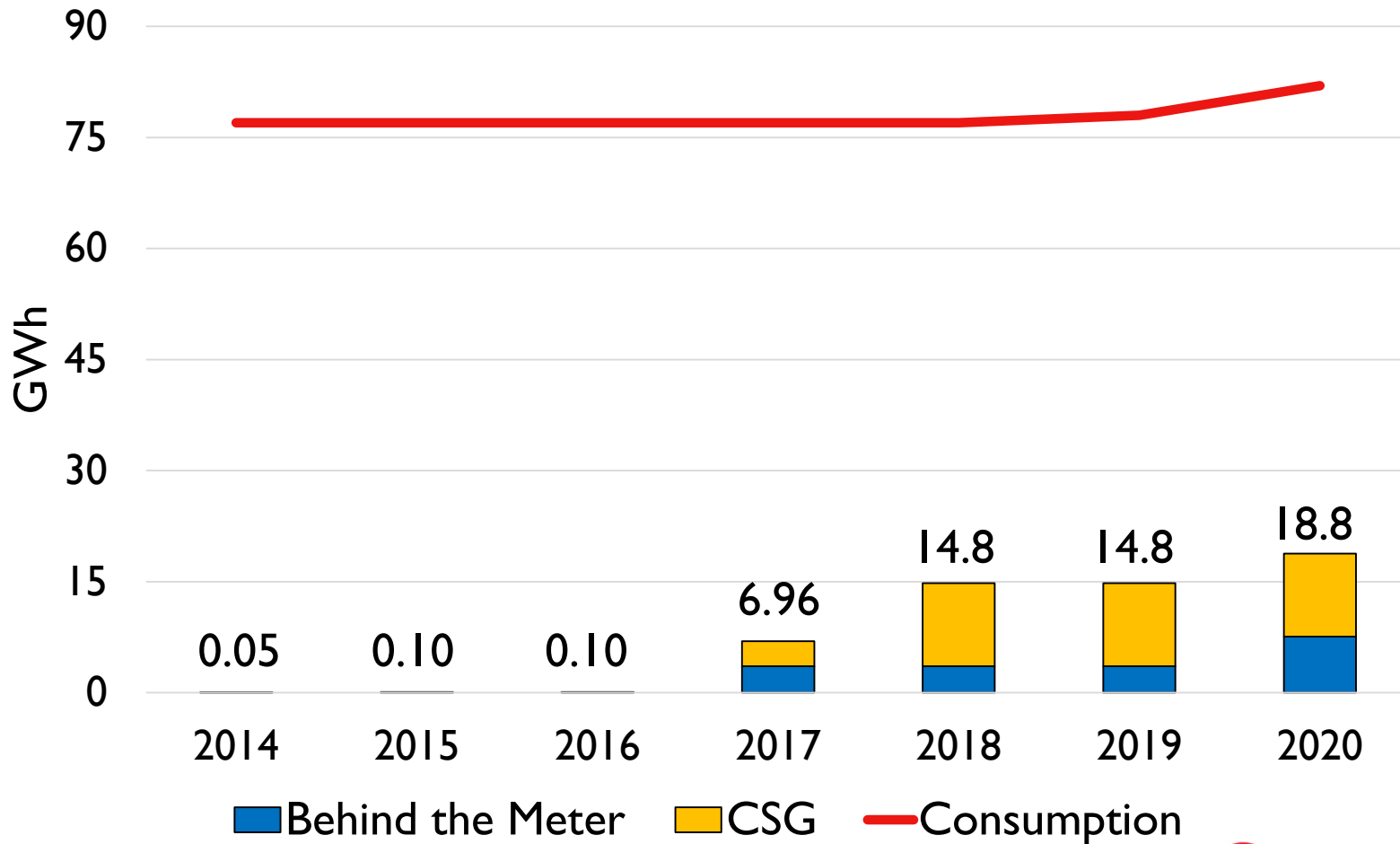


# Metro Transit Solar Portfolio

- *Council Owned*
  - 9 MW at Seneca, Empire, and Blue Lake CSG
  - Metro Transit subscribed to 3.6 MW or 40%
  - Accounts include: 28<sup>th</sup> Avenue P&R, 20 LRT Stations, 7 transit centers & Transfer Road
- *US Solar*
  - 4 MW subscribed to 3 Blue Line Traction Power Substations
- *Maplewood Mall*
  - Solar system in design
- *Solar Portfolio*
  - Future 3-4MW at 6 facilities



# Metro Transit Solar Participation

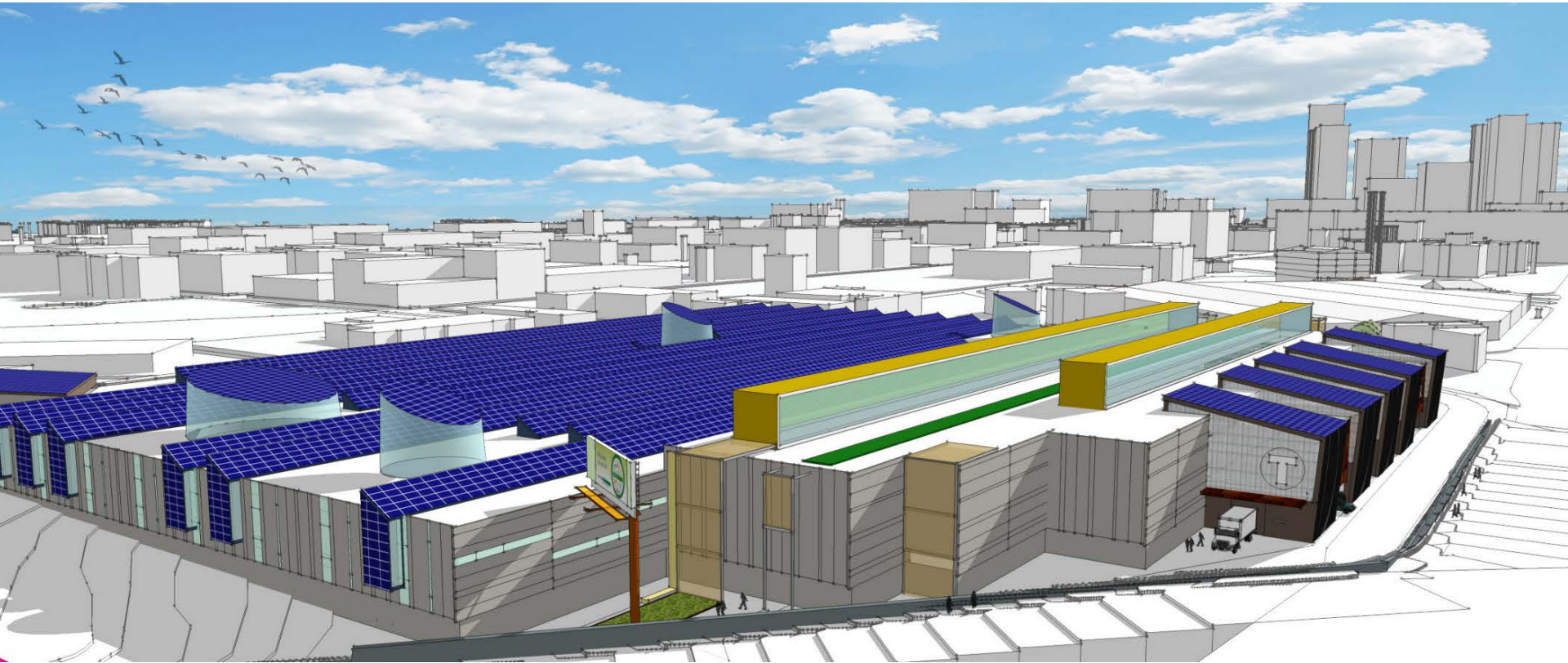


# Metro Transit Police Building



Sustainability initiatives: daylighting and advanced LED controls, geothermal heating and cooling, enhanced building envelope, solar ready rooftop, EUI goal of 30

# New Minneapolis Bus Garage



Sustainability initiatives: solar ready roof, reuse of Ragstock materials, LED lighting, improved recycling system, rainwater storage, EUI goal of 50

## ***Be The Solution is...***

A council-wide employee engagement program to encourage employees to make responsible choices to enhance resource efficiency and environmental stewardship

- ✓ Engage & empower employees
- ✓ Increase employees' knowledge and awareness of Council's sustainability initiatives
- ✓ Support Thrive 2040
- ✓ Essential to achieve APTA Platinum recognition



## Other Sustainable Highlights

- Purchase of 2 Nissan Leaf Electric Vehicles
- 2016 Annual Earth Day Celebration
- CRWD Water Grant
  - Transfer Road Rain Gardens
- 28<sup>th</sup> Avenue P&R Lighting retrofit
  - 30% cost & energy savings comparing January → June of 2015 vs. 2016



## 2016 → 2017 Projects & Initiatives

- APTA 2017 Sustainability & Public Transportation Workshop
- Enhanced Traction Power Energy Storage
- LED Lighting Retrofits
- Sustainability Studies & Audits
  - Electric Bus
  - Water Conservation
  - Waste Audit: Heywood Office
  - Compressed Air Study
- Renewable Energy Initiatives
  - Geothermal start-up: Cedar Grove Transit Center
  - On-site solar: Maplewood Mall P&R



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TRANSPORTATION  
ASSOCIATION*

# Questions?



Be the Solution

Jeff Freeman

[Jeff.Freeman@MetroTransit.org](mailto:Jeff.Freeman@MetroTransit.org)

612-349-7527