



The Merchandise Mart Energy Conservation

**Q2 CAE Stakeholder Series: Smart
Buildings & Grid Modernization**

May 31, 2018

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The Merchandise Mart Today

4.2 Million Square Feet



- 1930 Marshall Field & Company
- 1945 Joseph P Kennedy
- 1998 Vornado Realty Trust



320 Tenants
99% Occupancy



42% Showrooms and
Tradeshows
58% Office and Retail

Sustainability Timeline

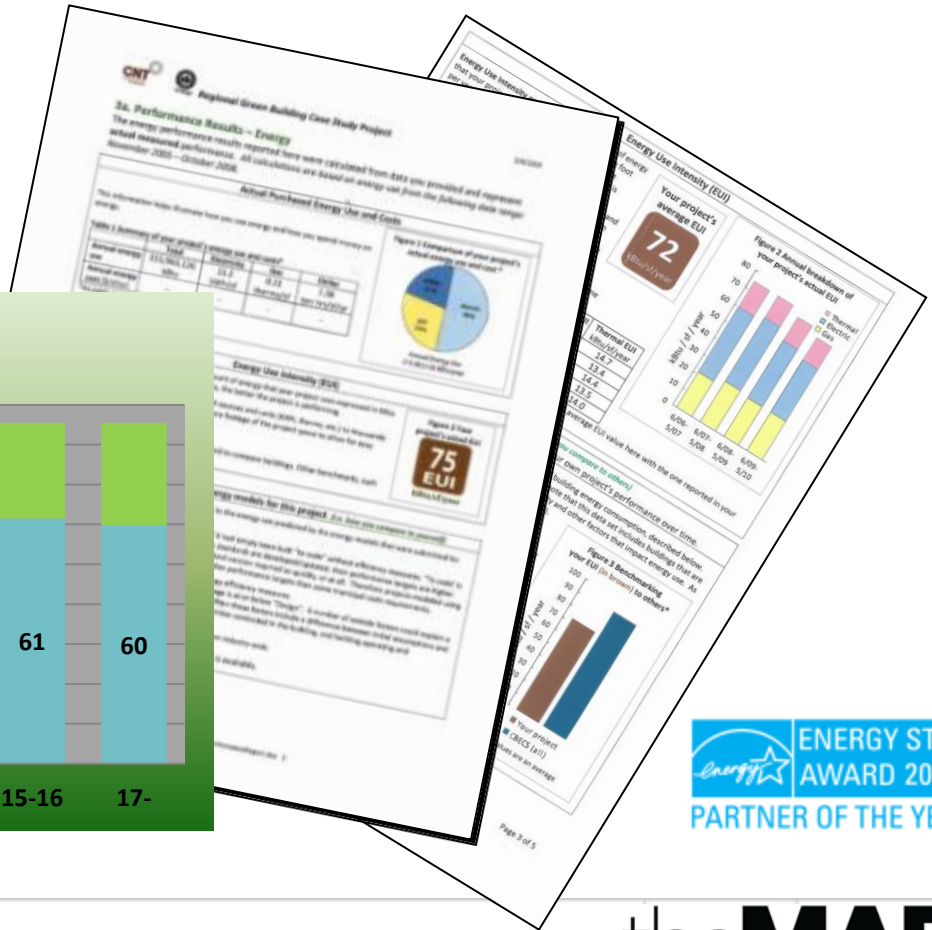
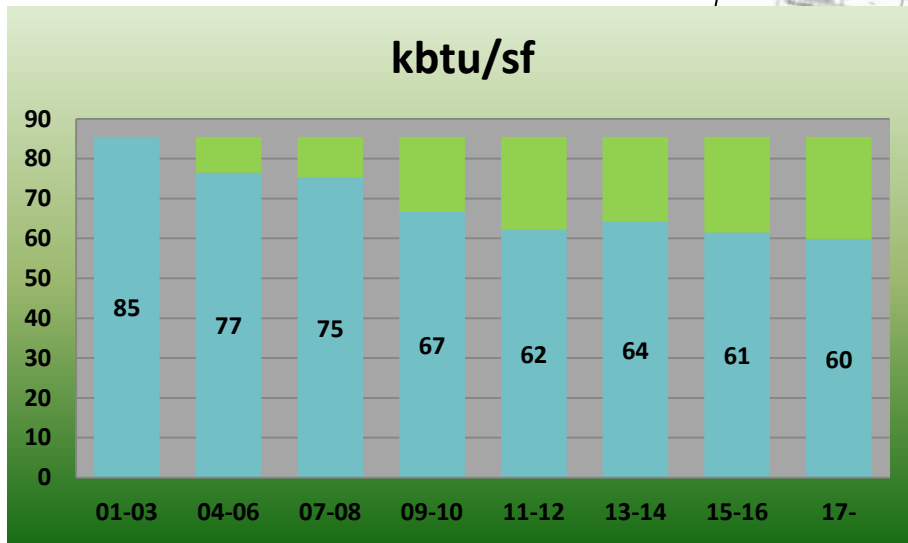


- 2005 Audit for LEED EB
- 2006 Form Energy Committee
- **2007 LEED EB Certification Silver**
- 2007 Energy Audit Lighting Retrofits
- 2008 VFD retrofits
- 2009 VFD retrofits
- 2010 LED retrofits
- 2011 Steam traps Audit for LEED EB:OM
- 2012 Energy Audit Tenant Lighting Retrofits
- 2013 Radiator Steam Supply Retrofit
- **2013 LEED EB:O&M Certification Gold**
- 2014 Exhaust Fan/Damper Retrofit
- 2014 Tenant Electricity Audit (EDF)
- 2015 Water – fixture retrofits
- 2016 New compost collection system
- 2017 RESET and Audit for LEED EB:OM
- 2018 RESET, FITWEL, ARC

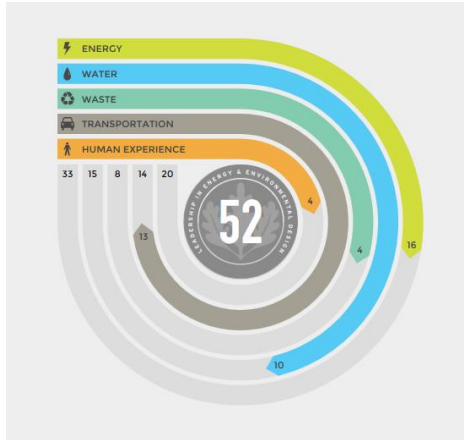
Current Results

- Self Financed
 - Since 2007 invested \$3,250,000
 - 22 Projects
 - Annual savings \$860,000
 - Incentives \$700,000

30% reduction since 2001
20% reduction since 2006



2018 - Certifications

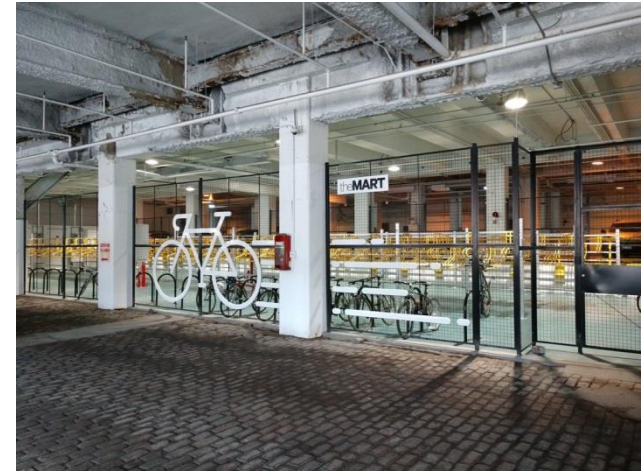
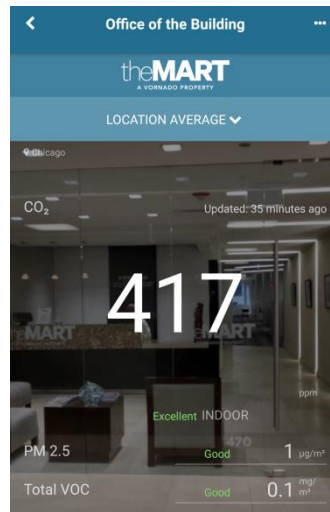
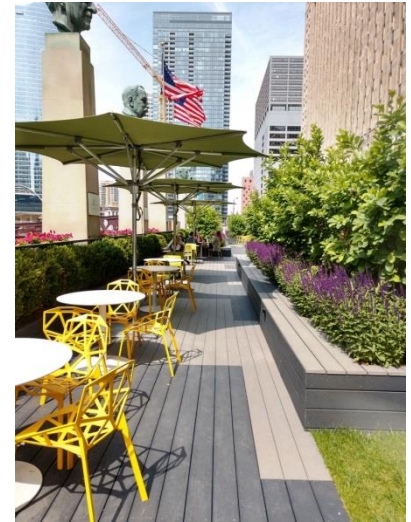


the**MART**
A VORNADO PROPERTY



Effective June 1, 2018

theMART will be a smoke free campus.



Q3 2018 – Battery for Frequency Regulation



System Size

- (2) 125 KW Inverters
- (2) 166 KWH Batteries

- Supports the Grid in the Greater Chicago Area
- Revenue Generation in the Wholesale Energy Market - PJM



Q4 2018 – Art on the Mart

