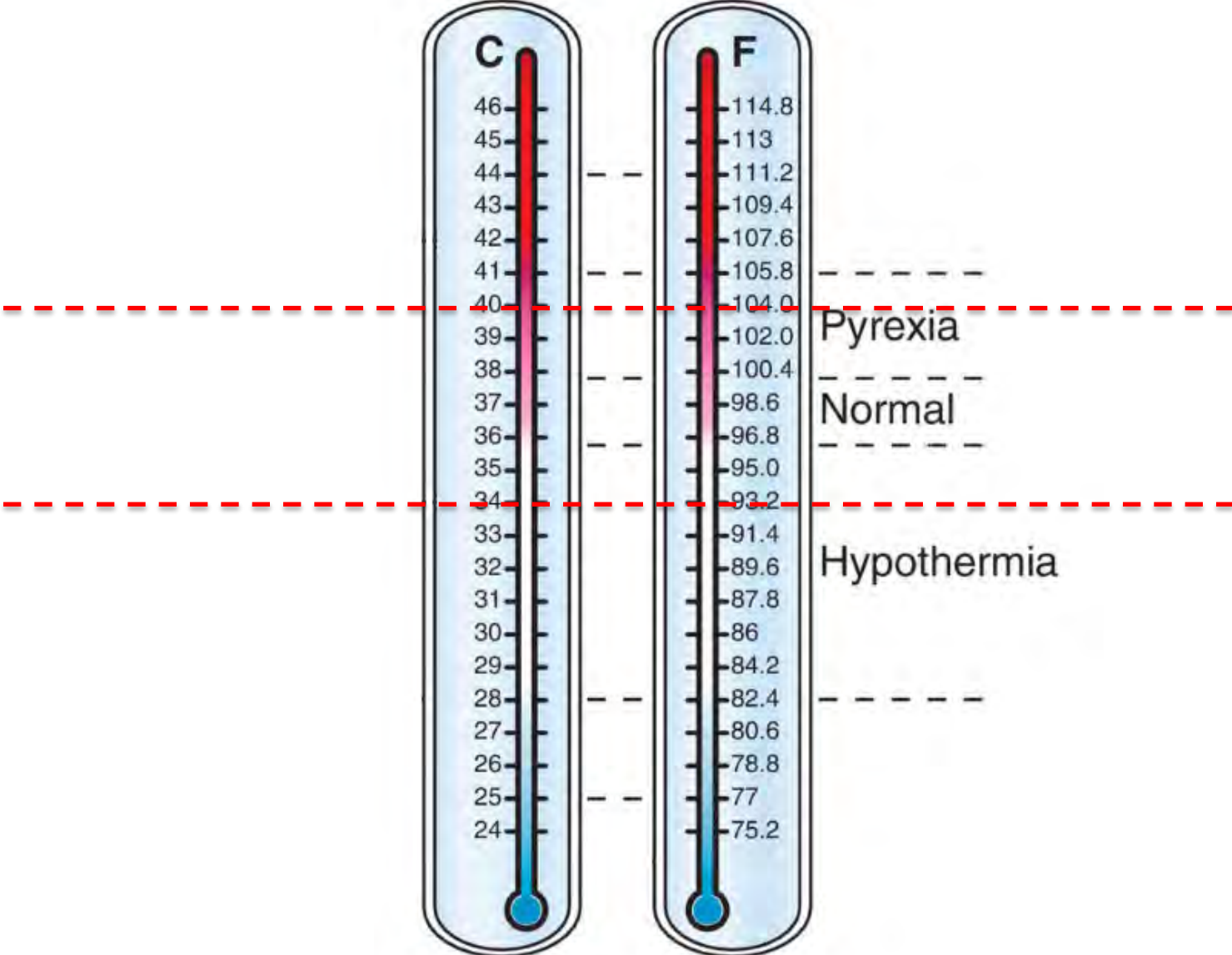


Why 80 x 50?

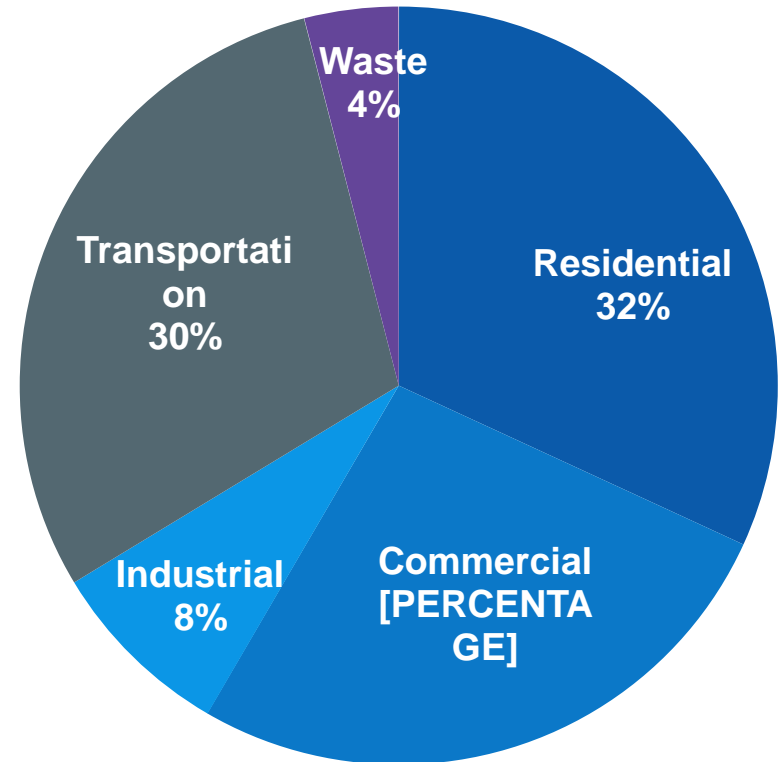


The Importance of Commercial Buildings

Improving **energy efficiency in buildings** is critical to achieving 80 x 50.

- **68%** of NYC's GHG emissions come from the energy used in buildings
- **90%** of NYC buildings that exist today will still exist in 2050
- **26%** of New York City's Greenhouse Gas Emissions is attributable to commercial buildings

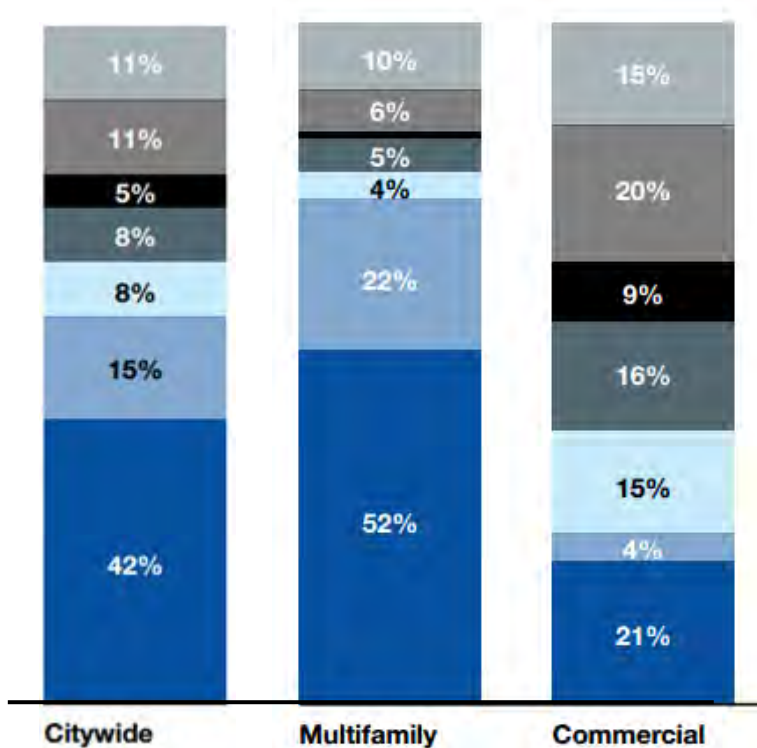
2015 NYC GHG Emissions by Source



Source: 2015 NYC GHG Inventory

The Importance of Commercial Tenants

2014 NYC GHG Emissions from Large Buildings by End Use



Tenant energy consumption from lighting, plug loads and supplemental systems account for **40 – 60%** of building GHG emissions



Owner and Tenant Coordination Issues and Barriers

- Lack of transparency in tenant versus owner energy use
- Increasing energy demands from plug loads and IT equipment
- Lack of coordination between owner HVAC systems and tenant controlled supplemental systems
- Limited operations and maintenance for shared building systems
- Oversizing and/or sub-optimal design of systems in new tenant fit-outs

NYC Carbon Challenge Participants



27 Commercial Firms



1. Allen & Overy LLP
2. Barclays
3. Barnes & Noble
4. BlackRock
5. **Bloomberg LP**
6. Citi
7. Credit Suisse
8. **Deutsche Bank**
9. Environmental Defense Fund (EDF)
10. **Etsy**
11. Goldman Sachs
12. **Google**
13. Interpublic Group
14. JB&B
15. JetBlue
16. JP Morgan Chase
17. Kirkland & Ellis. LLC
18. Morgan Stanley
19. Natural Resources Defense Council (NRDC)
20. Paul, Weiss, Rifkind, Wharton & Garrison LLP
21. Pfizer
22. PVH Corp.
23. Stooch & Stroock & Lavan LLP
24. Sumitomo Corporation of Americas
25. UBS
26. Viacom
27. White & Case LLP

13 Commercial Owners



1. Durst Organization
2. Fisher Brothers
3. Forest City Ratner Companies
4. Hines
5. Industry City
6. Normandy Real Estate Partners
7. Related Companies
8. Rockefeller Group
9. **Rudin Management Company, Inc.**
10. RXR Realty
11. Silverstein Properties, Inc.
12. SL Green Realty Corp.
13. Vornado Realty Trust



Singer Building - 1908



Metropolitan Life Insurance Company Tower - 1909



Woolworth Building - 1911



Chrysler Building - 1911



Empire State Building - 1931



World Trade Center - 1972





Brooklyn Bridge - 1883



Verrazano Narrows Bridge - 1964



First Houses - 1935



Eggs Benedict - 1860



Trinity Church - 1846



Cary Building - 1857



Verizon Building - 1927



Lever House - 1952



56 Leonard - 2016



Pearl Street Power Station - 1882



**TRANSFORMING AFFORDABLE
HOUSING: MID-RISE PASSIVE
HOUSE RETROFIT WITH
RESIDENTS IN PLACE**

1:30PM – 3:00pm!!!!

EAST VILLAGE ROOM

RiseBoro - 2017



Cornell Tech - 2017

