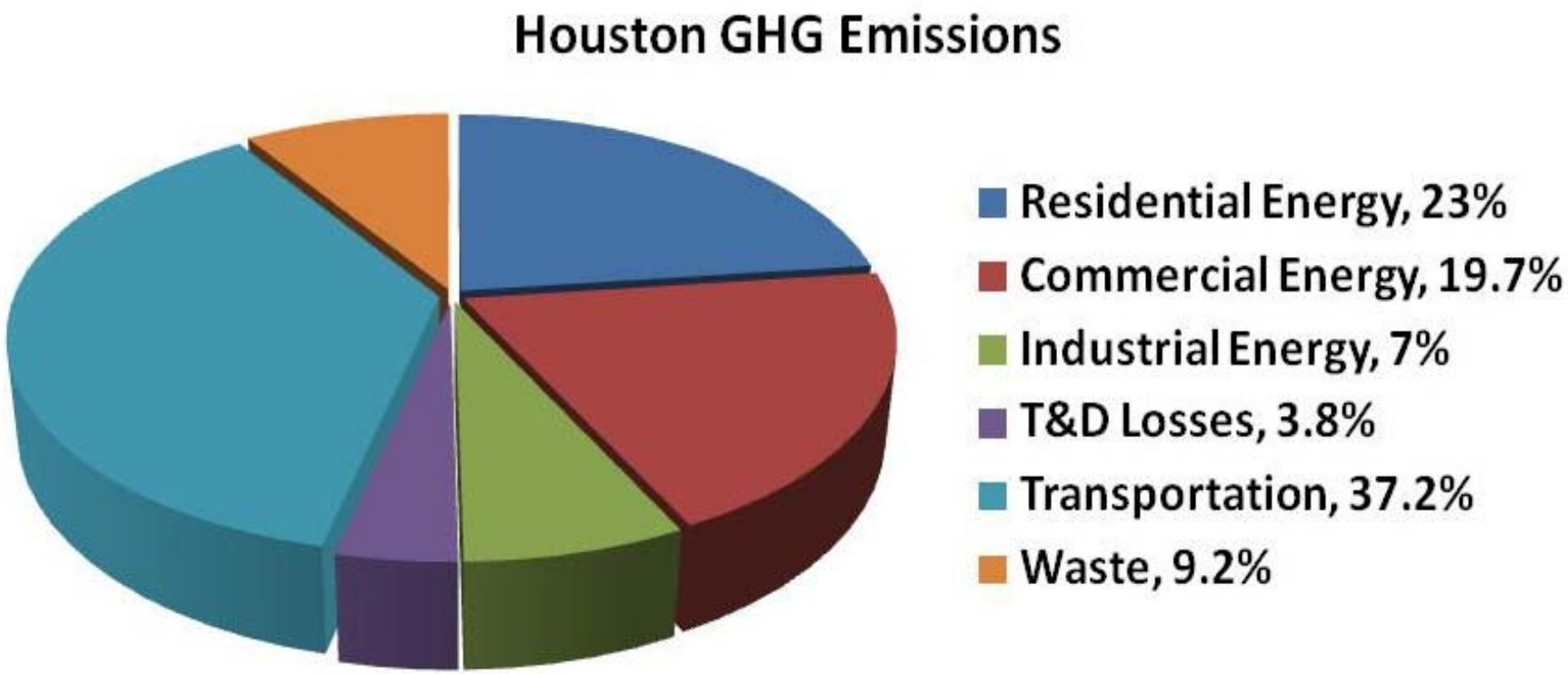
Houston's Energy Efficiency in Buildings Program

C40 Large Cities - Climate Summit

Sao Paulo 2011

City of Houston's Carbon Footprint

2007 Update



Green Buildings – City of Houston

Energy Efficiency Performance Contracting

- 80 buildings complete or underway
- $57 million spent to date
- 5.1 million square feet receiving energy conservation measures
- Office buildings, libraries, multi-service centers, police stations, fire stations, health centers, recreation facilities
- Utilize two ESCOs - Siemens Building Industries and Schneider Electric
- Financing through utility savings
- *Future work: EE in Schools*

Green Building – City of Houston

LEED Certified City Buildings

- 11 LEED Certified Buildings
- 14 Buildings will be LEED certified in 2011

Energy Star certification

- City starting process to Energy Star certify City Buildings:
  - LEED certified buildings
  - Buildings with completed energy efficiency work

Green Building – City of Houston

Green Building Resource Center

- Offering the public green building strategies
- 40 educational displays
- LEED Commercial Interior Gold Certified
- Educational website
  - ***www.codegreenhouston.org***

Green Building – City of Houston

LEED Gold Central Permitting Center

- Utilization of:
  - Low-flow fixtures
  - Wind turbines, Solar panels
  - Natural light utilization
  - Vegetated roof, Rainwater harvesting
- Other emerging green technologies

LEED Gold Fire Station 90

- Utilization of:
  - Low-flow fixtures
  - Drainage swales, Permeable pavement
  - Rainwater harvesting
  - Green Label certified carpet

Residential Energy Efficiency Program

Home Weatherization Program

- No cost for residents ($23 million grant funded program)
- 12-18% kWh reduction; as high as 20% over summer months
- High homeowner satisfaction
- Average savings = $50-$100 per month
- Used neighborhood approach to reach mass adoption

Renewables and Energy Efficiency

Five Star Energy Efficiency Homes Program

- Builder incentive (up to $50k) to provide energy efficiency measures and renewable energy
- Program for new affordable housing in Houston Hope neighborhoods
- Baseline home energy rating (HERS) of 60 or lower

Spotlight: Green Office Challenge

- Improve environmental performance of commercial buildings and business operations
- Engage at all levels of influence: Tenants, Property Managers, Building Owners, and Management Districts
- Ensure reductions align with City of Houston goals
  - Reduction goals for energy, waste and water range between 10 and 50 percent
- Owners use Portfolio Manager and Tenants use City of Houston scorecard to enter in baseline data and create goals
- Lead towards third-party certification (such as LEED, Energy Star)

Spotlight: Green Office Challenge

- 334 Participants (168 buildings owners and 166 tenants)
- Strong private sector support (raised over $200k to support program and hire staff)
- Strong non-profit support (ICLEI, CCI, USGBC and over 20 local non-profits focused on sustainability)
- Four month outreach program before program began; media campaign once program launched
- Robust website and social media: ***www.houstongoc.org***

Spotlight:
Green Office Challenge

Energy Efficiency Incentive Program

- **$3 million** dollar incentive program for commercial office buildings
- Provides up to **20 percent** of energy efficiency project (up to $200k)
- Funds set aside for **Class B and C** Buildings
- Funds set aside for projects **under $500k**
- Minimum **15 percent** energy savings

Spotlight:
Green Office Challenge

Importance of Green Buildings

- Energy conservation
- Waste reduction/recycling
- Water efficiency
- Cleaner transportation choices
- Property management/tenant engagement
- Education and behavioral changes at work can lead to changes at home

Future GOAL

- Work with School District to launch Houston Green School Challenge