

**State, Local Governments Leveraging ENERGY STAR**  
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**GHG STRATEGIES IN A CHANGING CLIMATE**  
**AIR & WASTE MANAGEMENT ASSOCIATION**  
**NOVEMBER 16-17, 2011**

# Outline



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# ENERGY STAR Background & History



## ENERGY STAR

- Joint program of U.S. EPA, U.S. DOE to reduce GHG
- Introduced in 1992 as a voluntary certification program designed to identify and promote energy efficient products, i.e., computers and monitors.



**THE QUALITY OF OUR ENVIRONMENT IS EVERYONE'S RESPONSIBILITY**

U.S. Environmental Protection Agency • U.S. Department of Energy

- ENERGY STAR now certifies many additional products as well as new homes and buildings & plants
- In 2010 saved businesses, consumers, organizations \$18B
- Prevented 170 MMt GHG (33M vehicles)



# BATTLE OF THE BUILDINGS

EPA's NATIONAL BUILDING COMPETITION



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U.S. ENVIRONMENTAL PROTECTION AGENCY • U.S. DEPARTMENT OF ENERGY

ENERGY STAR

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Energy Star Now Available for New Multifamily High-Rise Buildings

EPA Announces List of Top Contenders in ENERGY STAR National Building Competition

EPA Announces New ENERGY STAR Requirements for Dishwashers and Furnaces

2012 Award Applications Now Available

Leading-Edge Products for Energy Efficiency Recognized for First Time by New ENERGY STAR Effort

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Cool Your World with ENERGY STAR @home

Most Efficient 2011

ENERGY STAR Podcast

ENERGY STAR in Affordable Housing

Recycling with ENERGY STAR

# Commercial Buildings Tools and Resources



To improve the energy efficiency of buildings

- Guidance Documents



**BE A LEADER—CHANGE OUR ENVIRONMENT FOR THE BETTER**

U.S. Environmental Protection Agency • U.S. Department of Energy

- Free on-line training
- Process to Assess Building Performance

# ENERGY STAR Portfolio Manager Data Base



## Interactive on-line database:

- All Buildings - Measure, track, benchmark energy use entering 12 months energy data, building parameters, zip code.
- 15 Building Designations - Score performance from 1-100 compared to building peers
- Peers information based on Commercial Bldg. Energy Consumption Survey
- Score of 75
  - performs better than 75% of peers (25 percentile)
  - eligible for ENERGY STAR certification
- Certified buildings 35% less energy, GHG



# BUILDING DESIGNATIONS



More than 50% of building's gross floor area (excluding parking lots, garages) must be defined by one of space types below.

## **Offices**

**Bank/Financial Institutions**

**K-12 Schools**

**Retail Stores**

**Hospitals (acute, children's)**

**Supermarkets**

**Houses of Worship**

**Data Centers**

## **Hotels**

**Medical Offices**

**Municipal WW Treatment Plants**

**Residence Halls/Dorms**

**Warehouses (refrig., nonrefrig.)**

**Courthouses**

**Senior Care Facilities**

Represent over 50% of US commercial space.

Energy Performance Targets available for non-eligible space types.

# Introduction to State, Local Policies



## State, local governments taking steps

- Protect environment
- Save GHG emissions
- Lower energy costs

## Adopting policies

- Reduce energy use
- Primarily commercial buildings
- Leverage ENERGY STAR tools





# Introduction to State, Local Policies



Eight municipal entities, five states

Policies established between 2005 and 2011

Require use of ENERGY STAR Portfolio Manager or equivalent tool

- Benchmark energy use
- Score when possible



# Introduction to State, Local Policies



## Similarities in Applicability/Requirements:

- Publicly and/or privately owned buildings
- Applies to minimum square footage
- Phased approach – square footage, date occupied
- Utilities support benchmarking
- Provisions to publicize benchmarking, scoring data



Hospitals



K-12 Schools

# Green Communities Ordinance

## Alpharetta, Georgia



Adopted – early 2009 by City Council

Goal – part of sustainable policies, practices

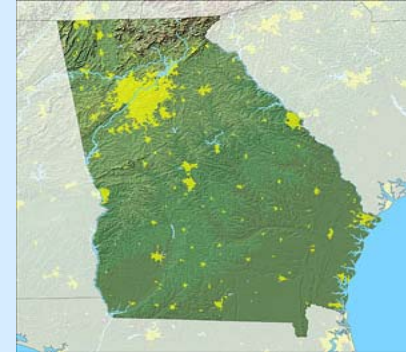
Applicability - public buildings

New buildings constructed, owned by City

- 5000+ sq. ft.
- LEED, ENERGY STAR Certified  
*or* EarthCraft Light Construction

New buildings renovated by City

- ENERGY STAR certified *or*
- Follow LEED guidelines



State of Georgia

# **Council Bill 116731, Ordinance No. 123226**

## **Seattle, Washington**



**Signed – February 2010, by Mayor**

**City Goal - improve existing building energy performance  
20% by 2020 compared to 2005**

**Applicability - public, private nonresidential buildings  
> 10K sq. ft.  
- multi-family 5+ units**



**Seattle from Elliot Bay**

# **Council Bill 116731, Ordinance No. 123226**

## **Seattle, Washington**



Utilities providing service required to

- Maintain 24 mos. energy data capable of PM upload
- Upload upon authorization owner rep

Building owners must provide:

- City w/ benchmarking report, score from PM, similar tool
- Upon request benchmarking report, score to
  - current, prospective tenants,
  - potential buyers, lenders



Puget Sound

# **Council Bill 116731, Ordinance No. 123226**

## **Seattle, Washington**



**Non-residential reporting phased in based on sq. ft.,  
occupancy**

- **Beginning with buildings >50,000 sq. ft.**
- **Occupied before January 2010**
- **Comply as of October 2011**
- **Initial compliance at 30%**

**Multi-family reporting phased in based  
on occupancy**

- **Occupied before January 2011**
- **Must comply effective April 2012**



**near  
Estate/Multi-family Housing**

# Existing Commercial Buildings Energy Performance Ordinance San Francisco, CA



Signed - February 2011, by Mayor

Expected Results - reduce CO2 by > 70.8K tons, save \$600 M

Private, public commercial buildings >10K sq. ft.

Must be benchmarked, scored using PM

Phased in compliance for private bldgs., based on sq. ft.

- > 50K sq. ft., must report Annual Energy Benchmark Summary to City
- As of Oct. 2011, annually by April 1
- 4M sq. ft. reported
- Owners provide Summary to tenants

City to publish Annual Energy Benchmark Summaries

- For private bldgs., > 50K
- June 2012

First annual municipal building report available spring 2012



Westin San Francisco Airport

# **ENGROSSED SECOND SUBSTITUTE SENATE BILL 5854**

## **State of Washington**



**Passed - by legislature April 2009**

**Goal – reduce net annual energy by 70%**

- **From residential, non-residential construction permitted**
- **Under 2031 energy code**
- **Baseline 2006 energy code**



301 116<sup>th</sup> Ave., Bellevue, WA

**As of Jan. 2010 utilities to maintain recent 12 mos. energy data**

- **Compatible with PM, equivalent tool**
- **Non-residential & qualifying public building customers**
- **Upload upon owner, operator authorization**



# ENGROSSED SECOND SUBSTITUTE SENATE BILL 5854

## State of Washington



Property owners, operators to disclose PM energy data

- To prospective lessees, buyers, lenders
- As of January 2011, > 50K sq. ft.

As of July 2010 qualifying public agencies

- Use PM, equivalent, benchmark, score
- Buildings w/ new, renewed lease must score 75 unless
  - audited *and*
  - conservation measures are to be performed



State of Washington

December 2012 State Department of General Administration

- Prepare biennial summary report
- Statewide master benchmarking account
- Expect all state, college bldgs. benchmarked before report

# House Bill 1464

## State of Hawaii



Enacted – 2009 by legislature, effective July

State Goal - 70% clean energy by 2030, reduce GHG,  
improve economy

As of December 2010 state departments with  
design, construct responsibilities

- Benchmark using PM, equivalent
- > 5K sq. ft. or uses >8K kwh/yr
- Use info. to determine energy efficiency investments

Most agencies initiated effort

- 147 buildings initiated master account, partially populated
- Dept. of Educ. input 150 schools, 300 libraries



State of Hawaii

# Federal Energy Management Program



Federal Bldg./Courthouse, Honolulu, HI

## Federal Energy Management Program

- As of 2010 agencies lease ENERGY STAR spaces
- Reduce energy use intensity 30% by 2015
- As of 2020 new designs to achieve net zero by 2030



# Summary



**Thirteen municipal or state government policies**

**Five examples more recent policies**

**Goals – reduce energy, cost, GHG**

**All incorporate benchmarking w/ PM, equivalent tool**

**Seattle, San Francisco, Washington Policies**

- **Seattle policy applies to residential and public, private non-residential**
- **San Francisco, Washington cover public, private, commercial or non-residential**



**Mt. Rainer from Bellingham Bay**

# Summary



## Seattle, San Francisco, Washington Disclosure Requirements

- All require, phased in based on sq. ft. (>50K to > 10K)
- Seattle phased in based on occupancy dates
- San Francisco, Seattle owners report to City
- Seattle, Washington State owners report to tenants/lessees, buyers, lenders
- San Francisco owners report to tenants
- City of San Francisco, Washington prepare summary reports

## Seattle, Washington State require utilities

- Maintain energy data for most recent 12 or 24 months
- Upload upon authorization



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