

# Benchmarking and Transparency



# Agenda:

- What is benchmarking
- Why implement a benchmarking policy
- Key decision points
- Tools to project manage
- Resources to write, pass, and implement a policy





# About The Institute for Market Transformation (IMT)



## Mission

Catalyze widespread and sustained demand for high-performing buildings.



## How we work

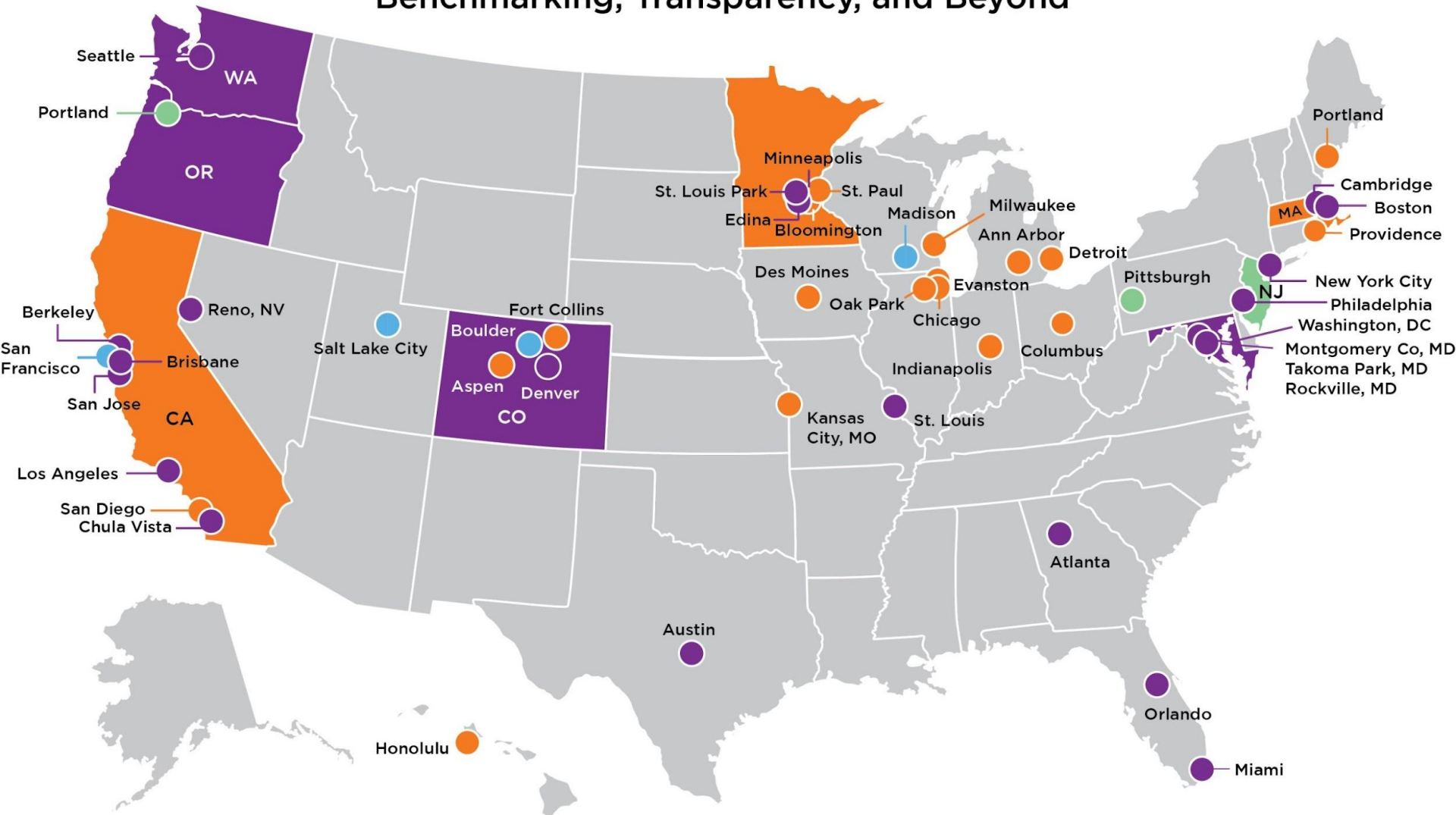
Advancing policies and business practices that enable people to build and operate healthy, high-performing buildings.

# Why Benchmarking + Building Performance Standards?

- Buildings waste ~30% energy and role in decarbonizing energy supply is not defined by markets
- Current energy-related renovation rates: 2% of commercial buildings and <.5% of residential buildings

*Photo: Onion Flats, by Sam Oberter*

# U.S. City, County, and State Policies for Existing Buildings: Benchmarking, Transparency, and Beyond



- Benchmarking required for public and commercial buildings
- Benchmarking and additional actions required for public and commercial buildings

- Benchmarking required for public, commercial, and multifamily buildings
- Benchmarking and additional actions required for public, commercial, and multifamily buildings



# What is Benchmarking?

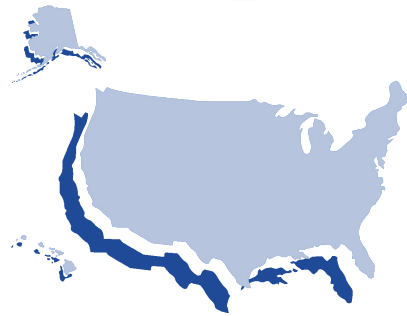


**Benchmarking** is the on-going review of building energy and water performance compared to itself, as well as other buildings of similar size, to ensure a building is using energy and water as anticipated over time and relative to peers.



Uses the free, web-based ENERGY STAR Portfolio Manager tool to report data.

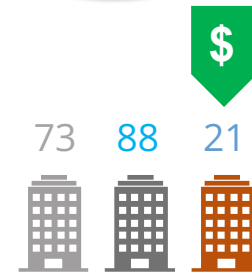
# Benchmarking process



Compare your building to a **national sample** of similar buildings

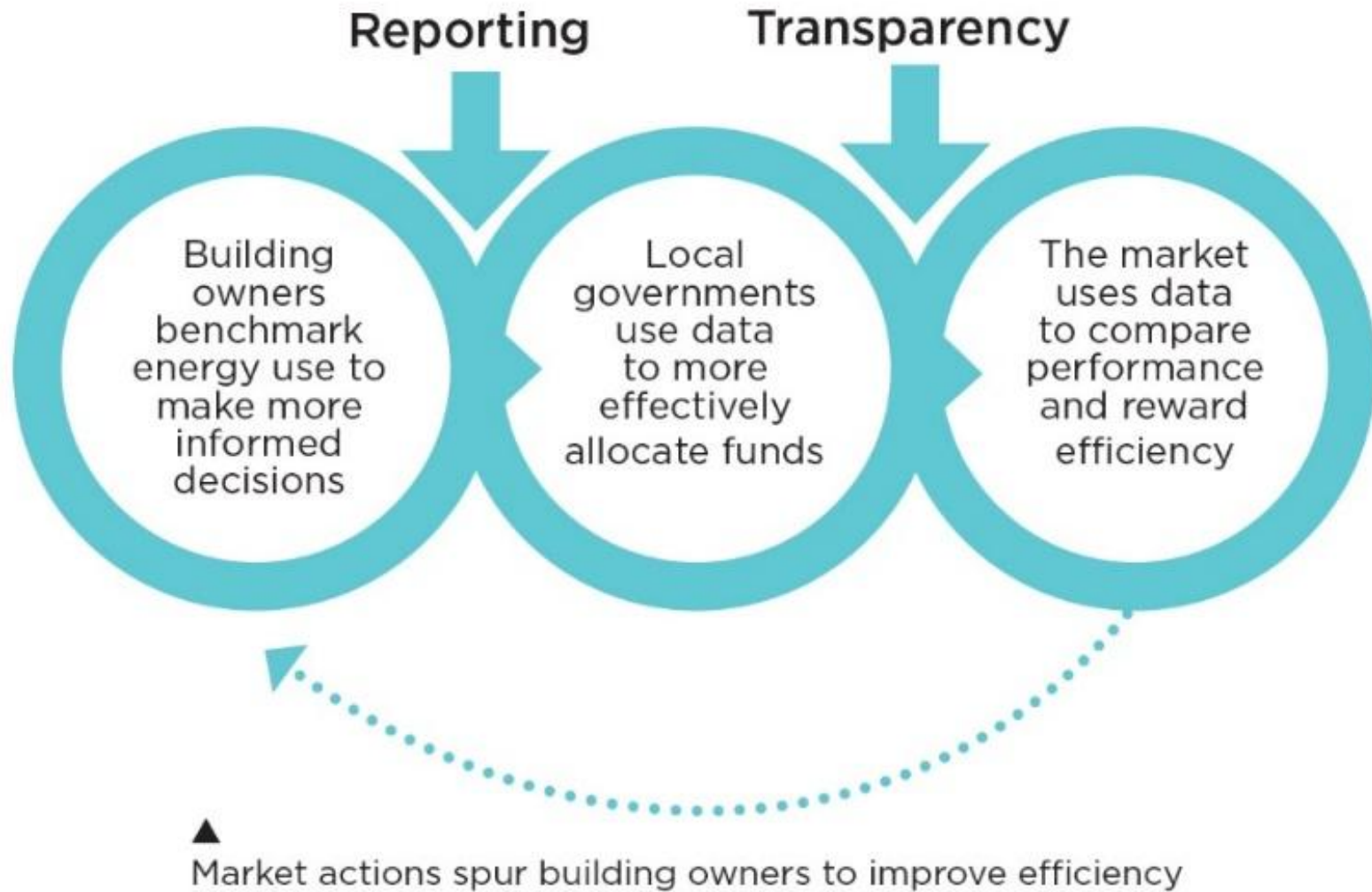


Compare your buildings of a similar type to **each other**



**Identify underperformers** in your portfolio & set priorities for staff time & investment capital

# Elements of a Benchmarking Policy





# Benefits of Transparency



- Collecting and sharing the data can help advance equity goals in tandem with economic and climate goals
- Bring to bear the power of the market
- Promote Tenant Engagement
- Job Creation & Economic Growth
- Direct resources to those most in need

# Sharing Data Transparency

## 2017 Building Energy Benchmarking

Seattle's Building Energy Benchmarking Program (SMC 22.920) requires owners of non-residential



More Vie

OSEBull...	DataYear	Building...	Primary...	Property...	Address	City	State	ZipCode	TaxParc...
------------	----------	-------------	------------	-------------	---------	------	-------	---------	------------

1	2017	NonResidenti...	Hotel
2	2017	NonResidenti...	Hotel
3	2017	Campus	Hotel
5	2017	NonResidenti...	Hotel
8	2017	NonResidenti...	Hotel
9	2017	Nonresidenti...	Other
10	2017	NonResidenti...	Hotel
11	2017	NonResidenti...	Other
12	2017	NonResidenti...	Hotel
13	2017	Multifamily ...	Mid-Rise Mu
15	2017	NonResidenti...	Hotel
16	2017	NonResidenti...	Hotel
17	2017	NonResidenti...	Hotel
18	2017	NonResidenti...	Hotel
19	2017	NonResidenti...	Hotel
21	2017	Nonresidenti...	Other

## Seattle Energy Benchmarking

Office of Sustainability & Environment

Search building name, address, or ID  Neighborhood Council District

**METRIC FILTERS** RESET ALL

Select a metric to see filtered results on the map

Show All Buildings

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Property Information

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Energy Performance Metrics

**Building EUI Quartiles** MORE INFO ▶

*Building EUI Quartiles cannot be calculated across building types. Select a building type above to view this metric.*

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**ENERGY STAR Score** MORE INFO ▶

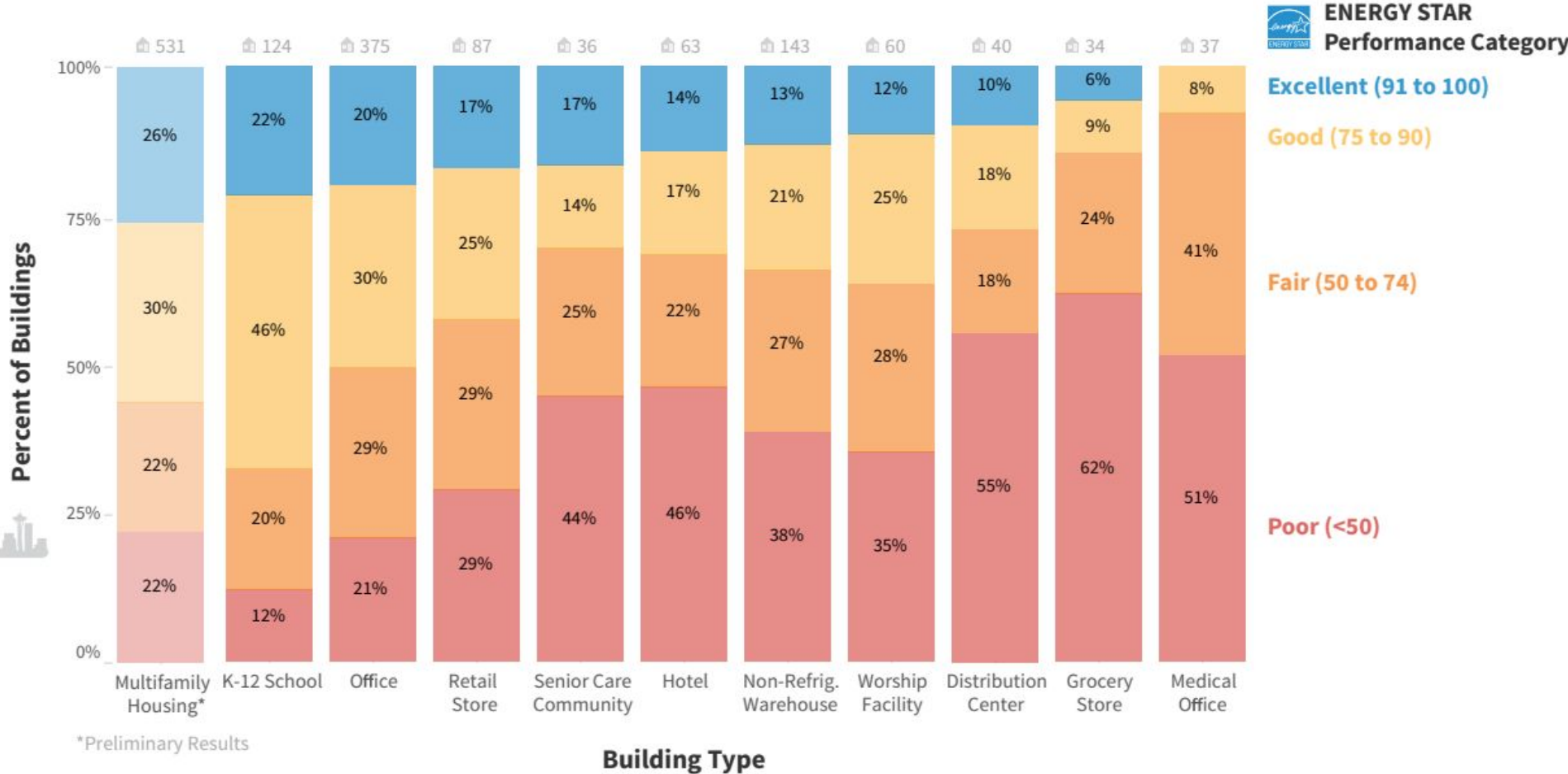
MEDIAN FOR ALL BUILDINGS: 78

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**Site Energy Use Intensity** MORE INFO ▶

3,538 OUT OF 3,538 BUILDINGS

# Analyze Data for Opportunities





# Benchmarking Associated with Reduced Energy Consumption

## Chicago

↓ 4.4%

Energy consumption in properties reporting for 4 consecutive years

\$12.7M

Bill savings/year

## Minneapolis

↓ 3.4%

Energy Consumption from 2014-2016

\$ 21 M

Cumulative bill savings

## New York City

↓ 6%

Cumulative reduction over three years

## Seattle

↓ 3%

Reduction in properties reporting for three or more years

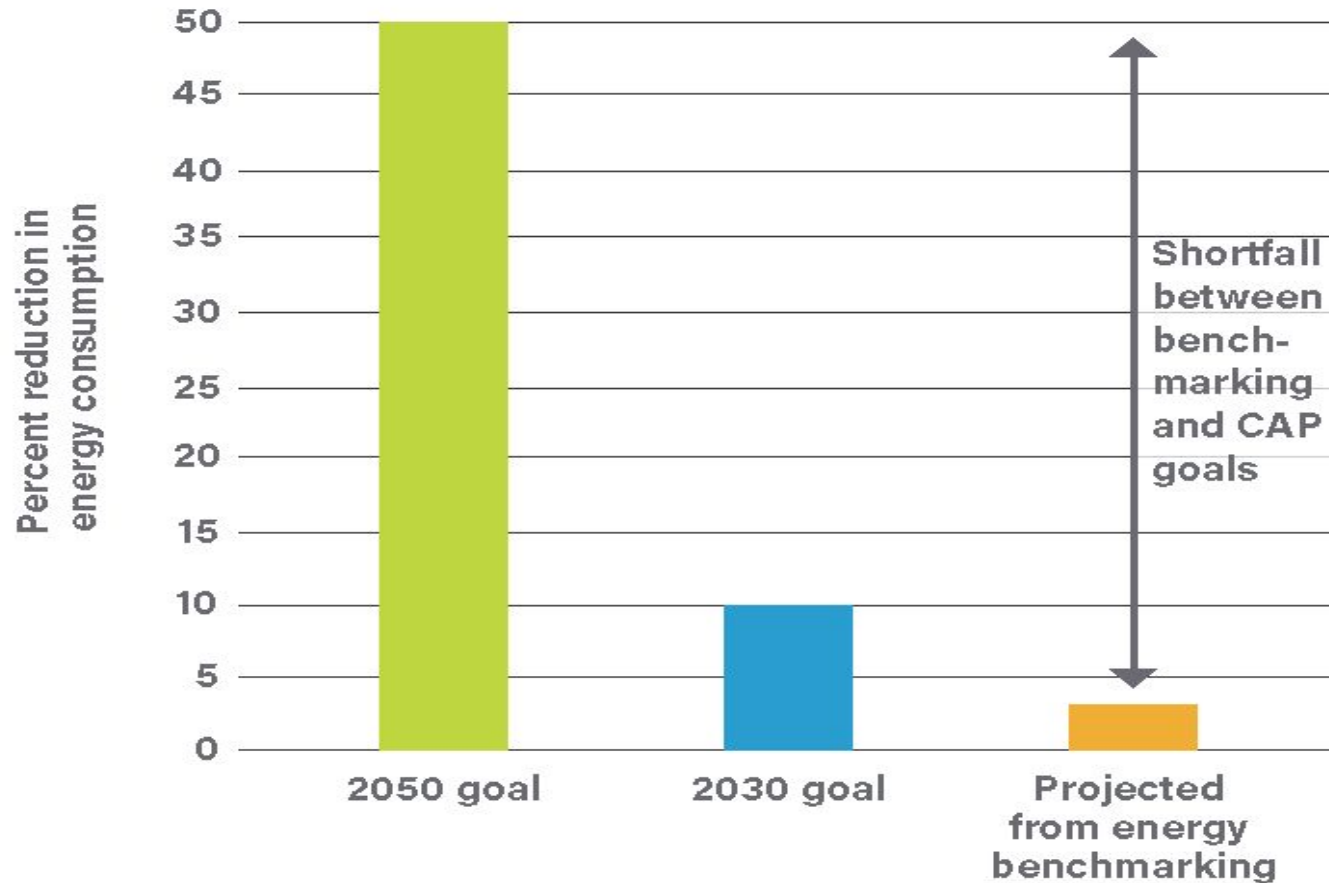
## San Francisco

↓ 7.9%

Cumulative reduction over three years

# Beyond Benchmarking

## Benchmarking alone cannot achieve our CAP goals



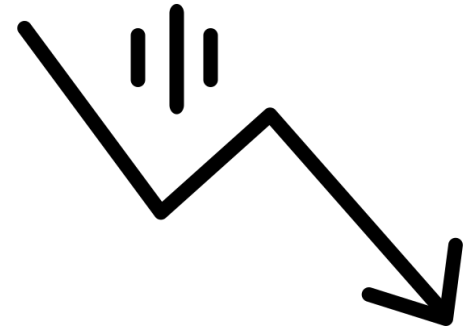
# Beyond Benchmarking



Audits



Re-Tuning/RCx



Building  
Performance  
Standards



# The State of Building Performance Standards (BPS) in the U.S.

## Members of the National BPS Coalition as of July 2024

 Passed BPS     Committed to passage of BPS



# BPS Around the United States

	WA State	St. Louis, MO	Boston	Denver	Montgomery County
Year Adopted	2019	2020	2020	2020	Pending
First Compliance Deadline	2026	2025	2025	2024	~2026
Minimum Threshold Performance by building type	<b>Site EUI</b> targets are 15% less than 2009-2018 averages	Standards set no higher than 35 <sup>th</sup> percentile <b>site EUI</b> (so 65+% of buildings must improve)	<b>GHG emissions</b> set by building type on an emissions intensity basis,	Interim targets according to the building's "trajectory" from its baseline site EUI performance in 2019 to the <b>final site EUI</b> for its property type.	In development to be set in regulation, based on <b>site EUI</b>
Covered Buildings	Commercial > 50K sq. ft.	Commercial and multifamily > 50K sq. ft.	Commercial and multifamily > 20K sq. ft.	Commercial and multifamily >25K sq. ft.	Commercial and multifamily > 25K sq. ft.
Compliance Cycle	5 years	4 years (6 years for affordable housing and houses of worship)	5 years until zero carbon is met	Long-term target with 3 year interim check ins	Long-term target with 4 year interim check ins



Pause for Q&A





## Key Decision Points



# Equity in Benchmarking



**CITY  
ENERGY**

A JOINT PROJECT of NRDC + IMT

MARCH 2021

## INCORPORATING EQUITY INTO ENERGY BENCHMARKING REQUIREMENTS:

GUIDANCE FOR POLICY AND PROGRAM  
PRACTITIONERS



## BUILDING PERFORMANCE STANDARDS

PREPARED FOR THE  
American Cities  
Climate Challenge

A FRAMEWORK FOR EQUITABLE POLICIES  
TO ADDRESS EXISTING BUILDINGS

JULY 2021



# Key Questions

- How can benchmarking and building performance policies support your equity and climate goals?
- What is your community's building stock make up?
- Do your utilities provide benchmarking data?
- Are you benchmarking municipal buildings? Is there a local voluntary program underway?
- Are there current energy efficiency and/or financing programs to support energy efficiency action in your jurisdiction?



# Policy Development: City Staff Resources

## Key Actions

- Host internal meeting and external meetings to gain buy-in and create policy
- Identify Mayor/Council champion and external champions
- Determine role for Utilities and engage them throughout the program
- Ability to allocate resources for a budget to manage program and internal owner(s) for compliance and program management

## Key Roles

- Decision Maker/Sustainability Director attends overview and strategy sessions, approves content and strategy, removes internal roadblocks, and hosts meetings where Director level leadership is needed
- Project manager sets agendas and hosts meetings, create covered buildings list, create project plans, manages facilitators, and develops city specific content and documentation

# Work Streams and Timelines

SETTING THE FOUNDATION  
PRE-ORDINANCE PASSAGE

0-6 MONTHS  
AFTER ORDINANCE

6-9 MONTHS BEFORE FIRST  
COMPLIANCE DATE

AFTER FIRST  
COMPLIANCE DATE

Engage the Community

Engage Utilities

Develop an Inventory of Covered Buildings

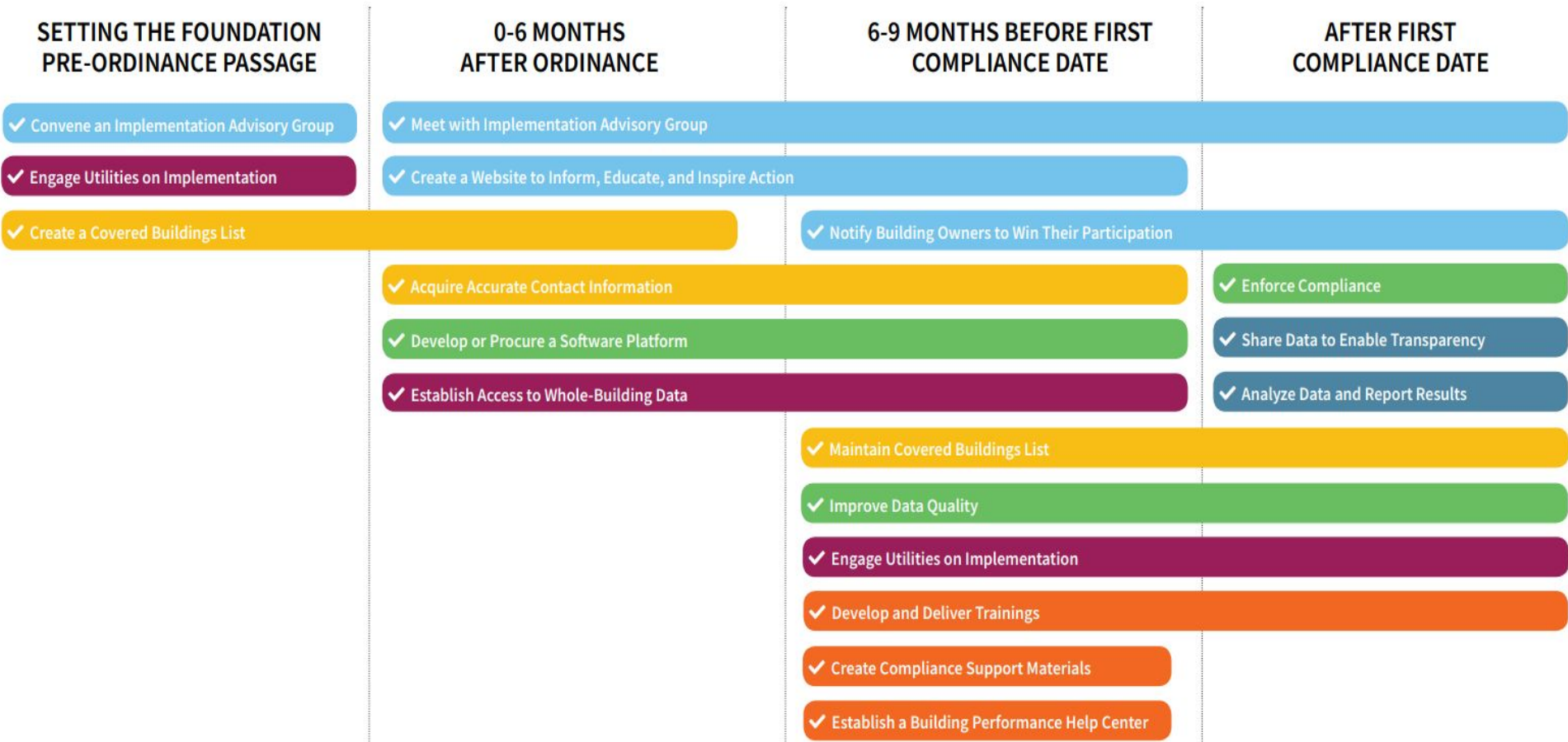
Collect and Manage Building Data

Educate to Improve Compliance

Communicate  
Results

# BUILDING PERFORMANCE POLICY IMPLEMENTATION TIMELINE

- Engage the Community
- Develop an Inventory of Covered Buildings
- Collect and Manage Building Data
- Engage Utilities
- Educate to Improve Compliance
- Communicate Results



# Implementation Resources & Costs

City	FTEs per 1000 Bldgs	Bldgs covered by ordinance	Total FTEs
Atlanta	2	1,000	2
Boulder	3.6	450	1.6
Chicago	0.39*	3,850	1.5
Minneapolis	2.5	802	2
Philadelphia	0.7	3,000	2
Portland, OR	1.5	1,000	1.5
San Francisco	0.74	1,700	1.25
Seattle**	.83	3,300	2.75

\*Chicago contracts out help center services to Elevate Energy

\*\* Seattle's numbers include their benchmarking and tune-up programs





Resources




# Key Resource: USDN Building Energy Hub

**USDN** | urban sustainability  
directors network

☰ 🔍 ✎

## Building Energy

Overview USDN Programming Offerings Building Energy Resources ☰ More



## Energy Benchmarking and Transparency

Energy Benchmarking and Transparency Policies require the reporting and disclosure of energy consumption data for privately owned buildings.

Energy benchmarking is the process of measuring a building's energy and water use over time. It allows comparison of buildings' energy use to similar buildings or to their own past performance. Benchmarking is the basis of effective energy management and is considered an operational best practice in the commercial real estate industry.

By collecting this data from building owners and making it available to the public, state and local governments provide the foundation for building decarbonization by raising awareness of buildings' energy consumption, identifying buildings that are ripe for energy efficiency improvements, and spurring investment into better building performance.

You will find resources below that will help you implement an energy benchmarking policy. These resources will be updated as new information becomes available.

- General Background
- Planning
- Policies/Ordinances
- Utility Data Access
- Implementation
- Case Studies
- Other Resources

# Collective Action Group Recordings

- [Introduction to Benchmarking and Collective Action Group](#)
- [Stakeholder Engagement](#)
- [Data and Stakeholder Engagement Discussion](#)
- [Utility Engagement](#)
- [Utility Engagement Discussion](#)
- [Implementation Preparation](#)
- [Software and Implementation Discussion](#)

# Equity Guidance and Framework



MARCH 2021

## INCORPORATING EQUITY INTO ENERGY BENCHMARKING REQUIREMENTS:

GUIDANCE FOR POLICY AND PROGRAM  
PRACTITIONERS



## BUILDING PERFORMANCE STANDARDS

A FRAMEWORK FOR EQUITABLE POLICIES  
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JULY 2021

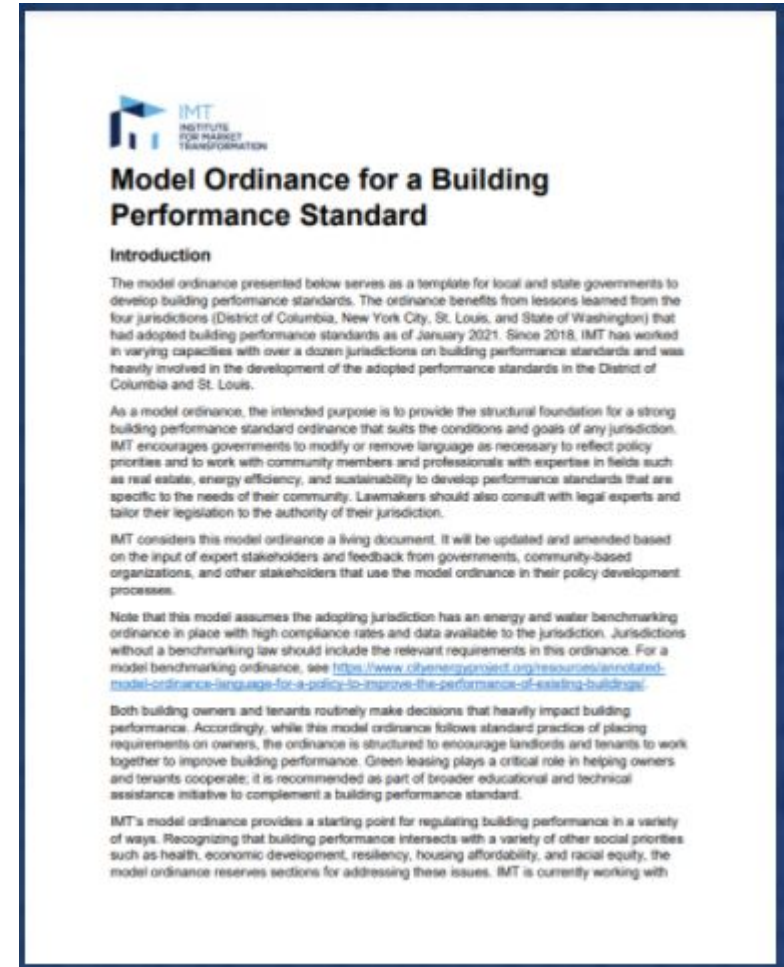
PREPARED FOR THE  
American Cities  
Climate Challenge





# IMT's Model Ordinances

- [Benchmarking Model Ordinance](#)
- [BPS Model Ordinance](#)
- [Summary of BPS Ordinance](#)
- [Model Utility Data Access Law](#)



# Additional City Examples and Templates

**CITY ENERGY PROJECT RESOURCE LIBRARY**

The City Energy Project partnered with the City of Atlanta to create and implement customized, innovative energy efficiency programs. The lessons learned, and the City Energy Project Resource Library are available to other cities.

**Browse the City Energy Project Resource Library**

This curated set of resources can help your government to craft and implement energy efficiency programs that manage energy efficiency in initial public buildings.

[City Examples](#) - Public website that can be accessed by partners

## City Examples



FAQs

### [Atlanta Building Efficiency FAQs](#)



Atlanta presents frequently asked questions on its website in efforts to support building owners who are seeking technical assistance and information on compliance requirements.



Template

### [Atlanta Extensions or Exemptions Request Form](#)



Atlanta requires that properties request an exemption or an extension to the requirements of the Commercial Buildings Energy Efficiency Ordinance by completing a form and supporting evidence to demonstrate eligibility.



Support letter

### [Atlanta Notification to Comply](#)



Atlanta created a post card for building owners and managers, stating reporting deadlines, and promoting an upcoming training event, and information on accessing the city's building efficiency help center.

# City Policy Comparison Tools



## Comparison of U.S. Commercial Building Energy Benchmarking and Transparency Policies

- City policy comparison
- Maps
- Blog posts
- Reports

IMT | 2020 | Graphics



Share

This matrix compares the requirements of commercial building energy benchmarking and transparency policies in cities and states around the U.S. This document is updated regularly as new policies pass or existing policies are updated. *Updated 10/2021.* It is part of a suite of matrices that provide quick, high-level comparisons of policy types across jurisdictions. Other matrices in this suite include:

- [Comparison of U.S. Building Audit, Tune-Ups, and Retrocommissioning Policies](#)
- [Comparison of U.S. Building Performance Standards](#)

IMT also has an extensive, and ever-growing suite of resources dedicated to exploring building performance policies, available at [IMT Policy Center](#).

Tag(s): [Cities](#), [Commercial Buildings](#), [Energy Benchmarking](#), [States](#)

Program Area(s): [Policy](#)

The image shows a thumbnail of a data matrix with columns for various policy metrics and a prominent 'Download PDF' button to its right.

# EPA ENERGY STAR Tools, Resources, & Support

- ENERGY STAR is a U.S. EPA voluntary program that helps businesses and individuals achieve superior energy efficiency through partnership and leadership commitment, tools and resources, and recognition for top performance
- Two staff on the Buildings program at ENERGY STAR support U.S. jurisdictions implementing initiatives that focus on existing commercial and/or multifamily buildings to save energy, reduce greenhouse gas emissions, and stimulate economic growth
- To get rolling, please review the [Benchmarking and Buildings Performance Standards Policy Toolkit](#) or just reach out: [Hall.Brendan@epa.gov](mailto:Hall.Brendan@epa.gov) (Brendan) and [Hatcher.Caterina@epa.gov](mailto:Hatcher.Caterina@epa.gov) (Katy)





# Support Examples

- **Reviewing draft requirements** to ensure they align with goals and can be implemented in ENERGY STAR Portfolio Manager, the program's free, industry-standard benchmarking tool;
- Creating connections to the **ENERGY STAR team that supports utilities trying to develop data access solutions**;
- Developing a **summary of Portfolio Manager activity and aggregate performance** in a jurisdiction;
- Walking through **tools and resources to run a competition or voluntary campaign**;
- **Helping train up jurisdictions on Portfolio Manager** and collecting data through it, and sharing a list of recommended metrics;
- Creating awareness of **ENERGY STAR training and help desk resources**;
- Detailing common approaches taken by jurisdictions to **promote data quality**;
- **Strategizing on how best to train building owners and managers on benchmarking**;
- **Making introductions and highlighting best practices across the network**; and
- **Educating on 1-100 ENERGY STAR Scores and ENERGY STAR Certification.**

# Development & Implementation Partners



Center for Energy and Environment



**ELEVATE** ENERGY  
Smarter energy use for all



**IMT**  
INSTITUTE  
FOR MARKET  
TRANSFORMATION



**Southface**

*\*Not an exhaustive list of all organizations supporting building policy work*



# Q&A

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