BUILDINGENERGY BOSTON

From Model to Meter: What Can We Learn from the Massachusetts LBER Data?

Lyn Huckabee, Massachusetts Department of Energy Resources
Chris Schaffner, The Green Engineer, Inc.

Curated by Kurt Roth

Northeast Sustainable Energy Association (NESEA) | March 24, 2026

Building Performance Exchange

Learn more and subscribe for email updates by visiting ***buildingperformance.exchange***

Chris

A statewide resource for people and organizations seeking to enhance performance and reduce carbon pollution in larger existing buildings.

BUILT ENVIRONMENT PLUS

MASSACHUSETTS CLEAN ENERGY CENTER

A program of Built Environment Plus and MassCEC

Speaker Introductions

Lyn Huckabee

Chris Schaffner

Consumer Energy & Policy Manager

Energy Efficiency Division, DOER

jerrylyn.huckabee@mass.gov

MASSACHUSETTS DEPARTMENT OF ENERGY RESOURCES

CEO and Founder

The Green Engineer, Inc.

chris@greenengineer.com

The Green Engineer Sustainable Design Consulting

Learning Objectives

- Understand the goals and mechanisms of the LBER program.
- Recognize the typical range of the gap observed between modeled and actual energy consumption.
- Describe key statistical trends indicated by the initial analysis of the Massachusetts LBER database.
- Explain how the findings from this statistical analysis could inform and refine future energy modeling practices and building design goals in the Northeast.

Agenda

- **Part 1 - the Large Building Energy Reporting Program (Lynn)**
  - DOER's Mission
  - What is Large Building Energy Reporting?
  - Why Benchmark Statewide?
  - LBER Reporting Process and Timeline
  - First Year LBER Results
  - 2024 Data Summary
- **Part 2 - What can we learn from the data (Chris)**
  - Predictive models vs actual data
  - Bulk analysis of the data
  - How can the data be improved going forward?
- **Discussion/Q&A**

Large Building Energy Reporting

For NESEA Building Energy Boston 2026

March 24, 2026

Presented by
Lyn Huckabee, Consumer Energy and Policy Manager

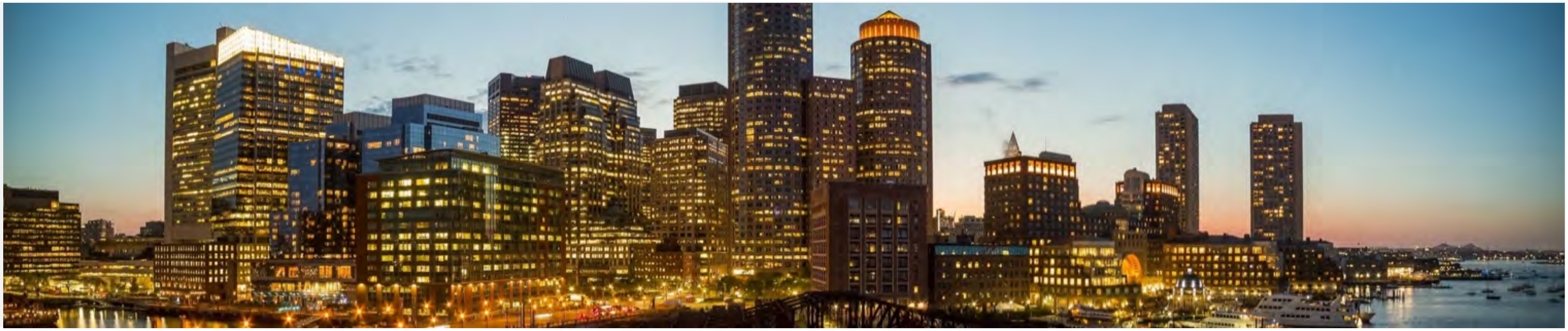
Table of Contents

DOER's Mission

The Department of Energy Resources' (DOER) mission is to create a clean, affordable, resilient, and equitable energy future for all in the Commonwealth.

- ***Who We Are***: *As the State Energy Office, DOER is the primary energy policy agency for the Commonwealth. DOER supports the Commonwealth's clean energy goals as part of a comprehensive Administration-wide response to the threat of climate change. DOER focuses on transitioning our energy supply to lower emissions and costs, reducing and shaping energy demand, and improving our energy system infrastructure.*

- ***What We Do***: *To meet our objectives, DOER connects and collaborates with energy stakeholders to develop effective policy. DOER implements this policy through planning, regulation, and providing funding. DOER provides tools to individuals, organizations, and communities to support their clean energy goals. DOER is committed to transparency and education, supporting the accessible access to energy information and knowledge.*



What is Large Building Energy Reporting

In 2022, the MA Legislature passed a law requiring:

- DOER to establish a program for reporting of energy use for buildings with a Gross Floor Area of 20,000 square feet or greater.
- Electric, gas, and steam utilities to provide the usage information they have on these buildings to DOER.
- Owners to provide other forms of energy usage.
- DOER to post the energy usage.
- That Boston and Cambridge continue implementing BERDO and BEUDO as planned.
- See: St. 2022, c. 179, § 41 codified as G.L. c. 25A, § 20.

Why Benchmark Statewide?

Reduce Operating Costs

Air Quality

GHG Reductions

Market Transparency

Connection to Energy Programs

Consistency Across Jurisdictions

Reporting Process and Timeline

March 30 – Covered Building List Published

April – Owners Notified by Mail

May 31 – DOER receives IOU data

June 30 – Deadline for building owner data

October 31 – DOER publishes data received

- March 30 list will include publicly available building updates
- Building owners can correct their building(s)' information at any time
- Building owners can start the process any time between 3/30 and 6/30
  Building owners can request exemptions and extensions
- Building owners can get help from the LBER Helpdesk to report delivered fuels, renewables, and muni utility data

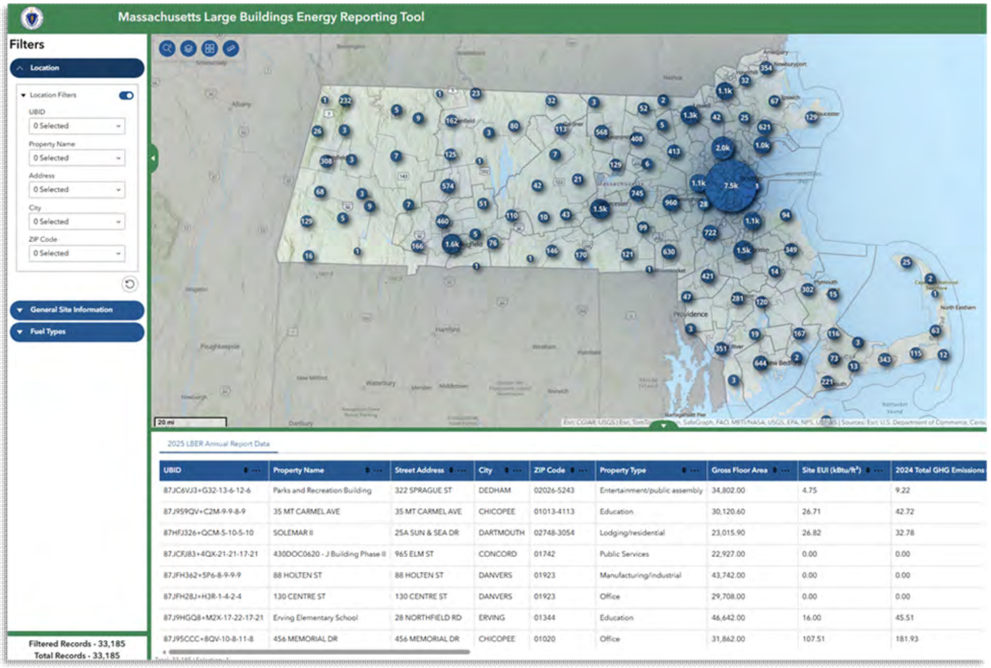
First Year LBER Results

What data did we get for 2024?

- 33,626 buildings were identified for inclusion on the Covered Buildings List
- Owners claimed 13,174 buildings
- LBER received full or partial data for 14,480 buildings

Where can I view the 2024 data?

- View the data on the Large Building Energy Reporting Results page.
- Data is in a searchable map and can be exported as a spreadsheet for study by stakeholders.



2024 Data Summary

Successes

- Info on ~40% of buildings – high compared to other jurisdictions
- Path to automate process with IOUs

Missing

- Muni Utility Data
- IOU Matched Data
- Owner Reported Data

Moving Forward

- Expect steady state quality by 2029

For More Information on LBER and DOER

100 Cambridge St. - 9th Floor - Boston, MA 02114

doer.energy@mass.gov

x.com/massdoer

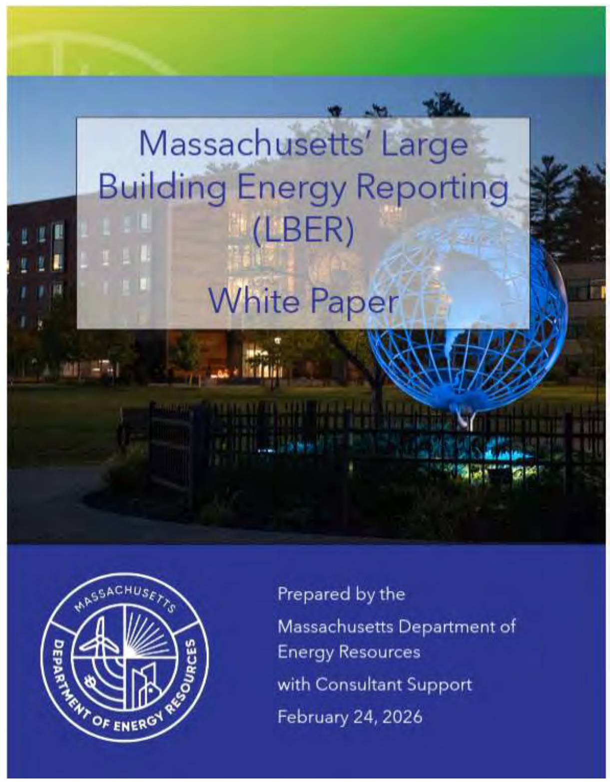
(617) 626-7300

www.mass.gov/orgs/massachusetts-department-of-energy-resources

Help for LBER

- Largebuildingreporting.mass.gov
- BER.DOER@mass.gov

Additional Implementation Detail



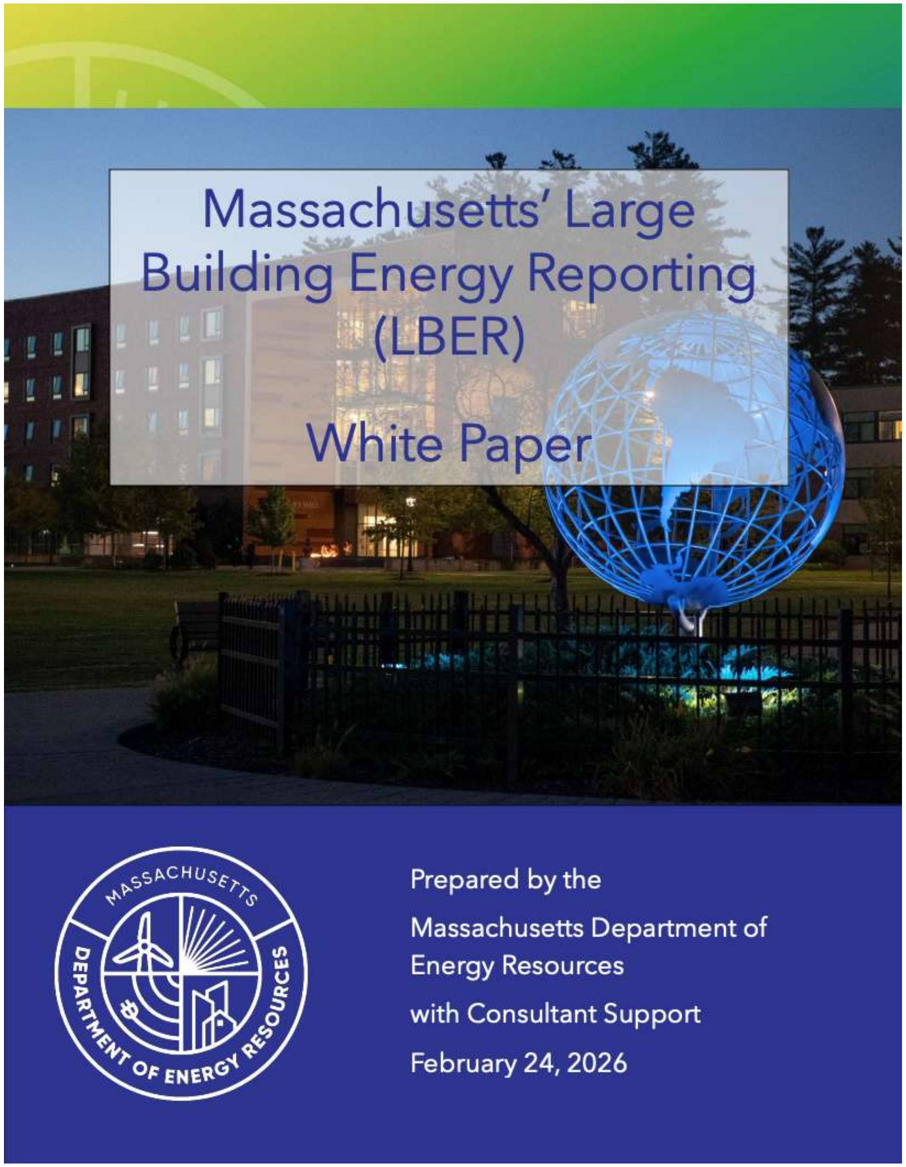
Read the White Paper here

This image cannot currently be displayed.

Thank You!

A Deeper Dive:

What Can We Learn from the Massachusetts LBER Data?



- DOER released a White Paper on February 24, 2026
- https://www.mass.gov/doc/2026-large-building-energy-reporting-white-paper/download

Table 10: Utility-Provided Data Match Rate by ENERGY STAR Portfolio Manager Building Category

A measurement of how many Buildings utility Distribution Companies could match to their records, resulting in utility companies submitting Energy Usage data to DOER

Building Type	Count of buildings that DOER sent to utilities for reporting	Count of Buildings with Electricity Data Matched	Count of Buildings with Natural Gas Data Matched	Count of Buildings with Both Electricity and Natural Gas
Banking/financial services	65	43	41	31
Education	2,600	1,267	1,228	750
Entertainment/public assembly	779	401	335	209
Food sales and service	141	85	70	52
Healthcare	584	361	350	245
Lodging/residential	7,721	4,470	3,715	2,715
Manufacturing/industrial	2,422	1,269	1,297	827
Mixed use	295	171	177	125
Office	2,652	1,551	1,395	946
Parking	4,807	1,990	1,998	1,249
Public services	123	49	44	23
Religious worship	669	391	358	250
Retail	564	340	296	205
Technology/service	2,113	1,253	1,187	819
Services	282	145	141	88
Utility	346	223	190	121
Warehouse/storage	106	46	44	25
Other	2,246	1,244	1,223	778
Total	28,515	15,299	14,089	9,458

33,626 buildings identified, but only 94,58 buildings with complete, matched data

28%

Emissions by Building Type

Table 13: Total GHG Emissions by ENERGY STAR Portfolio Manager Building Category

Based on the subset of Buildings that have been claimed and complied with the LBER program

Building Type	Total Annual GHG Emissions ($MTCO_2e$)	Average Annual GHG Emissions ($MTCO_2e$)
Banking/financial services	11,031	283
Education	656,755	384
Entertainment/public assembly	56,513	151
Food sales and service	13,236	181
Healthcare	522,133	1,475
Lodging/residential	7,003,188	1,934
Manufacturing/industrial	439,352	433
Mixed use	67,032	554
Office	512,489	342
Parking	437,334	216
Public services	13,756	222
Religious worship	60,703	136
Retail	11,613	37
Technology/service	259,982	235
Services	5,844	56
Utility	586,012	1,632
Warehouse/storage	93,465	1,833
Other	102,734	86
Total	10,853,172	750

Even in the subset of large buildings, residential is by far the biggest source of emissions at 64.5 %

Other sectors +/- 5%
Education – 6.0%
Utility – 5.4%
Healthcare – 4.8%
Office 4.7%

Table 8: Average Site EUI (Energy Use Intensity) by ENERGY STAR Portfolio Manager Building Category [17]

Site EUI is a metric that indicates a building's annual energy usage relative to its size. The average is based on buildings with enough data to generate a metric. In some cases, buildings had less than 12 months of energy usage data reported.

Building Type	Average Site EUI (kBtu/ft²)
Banking/financial services	59
Education	66
Entertainment/public assembly	50
Food sales and service	102
Healthcare	92
Lodging/residential	151
Manufacturing/industrial	99
Mixed use	70
Office	51
Other	49
Parking	160
Public services	66
Religious worship	22
Retail	54
Services	25
Technology/science	377
Utility	399
Warehouse/storage	23
Portfolio-Level EUI	90

Average Site EUI for residential is 3x national average (151 vs. 52.9 kBTU/sf/yr)

This must be an artifact of the incomplete data

Models vs Actual Data

Are Energy Models any good as Predictive Tools?

I've been obsessed with this for a while

- Presented at BE10 - 2010
- Presented at NESEA 2021
- We wrote a paper about it in 2020

2010 - Overall Project Comparison

Project Comparison					
#	Project	Project Size (sq. ft.)	Energy Star Target Rating	Predicted Site EUI (kBTU/sf/yr)	Actual Site EUI (kBTU/sf/yr)
1	Doyle Conservation Center	12,000 sf	79	33.2	42.8
2	University Offices	40,000 sf	85	43.6	44.1
3	Cambridge City Hall	33,216 sf	57	29.1	58.8
4	Commercial Office - NH	350,000 sf	83	88.0	83.8
5	Class-A Office Development - MA	200,000 sf	78	N/A	84.4
6	Commercial Office - RI	570,000 sf	77	27	85
7	University Research Lab	412,000 sf	N/A	258	505
8	Graduate Student Residences	275,000 sf	40	100.5	107.6
9	Campus Center and Student Residences	60,000 sf	N/A	127	190

2010 - Lessons Learned

•Median Error – underpredicted by 40%

•Some of our models are just wrong

•Models reflect the “potential” of the building – but operations are the key

•In general LEED buildings are out performing “average” buildings

•Even our best buildings don’t reach the Architecture 2030 standards – we have to do better

•Owners are reluctant to have energy data publicized, but that might be the best way to motivate improvement.

BUILDINGENERGY BOSTON

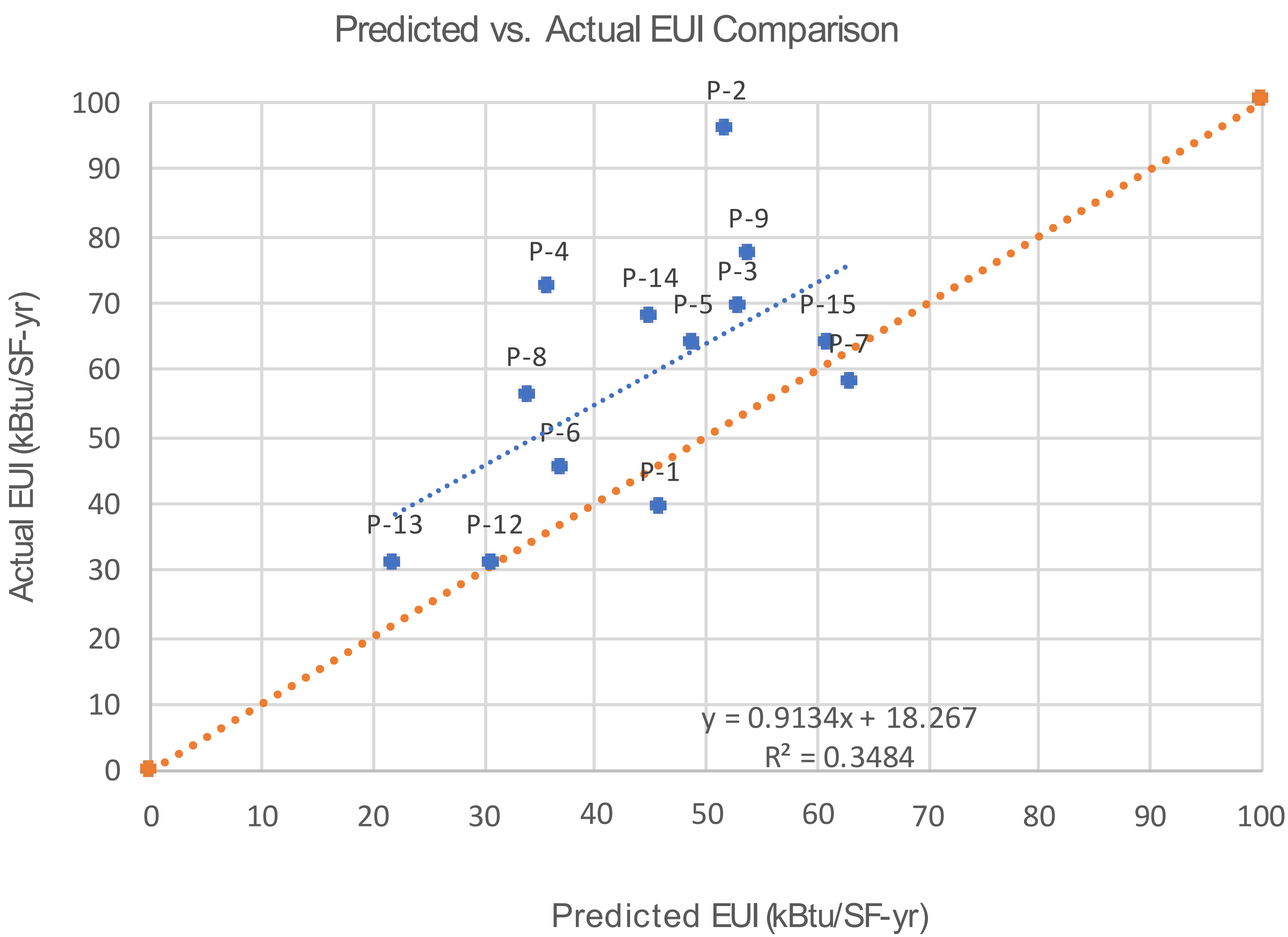
Comparing the Operating Performance of High Performing Public Buildings to their Design

Marie Nolan and Christopher Schaffner
(The Green Engineer)

Curated by Ksenia Ruuska (University of Massachusetts)

Northeast Sustainable Energy Association (NESEA) May 6, 2021

"…actual EUIs are generally higher than predicted EUI in this study… the shift in the regression is approximately 18 kBtu/SF…"



2021 - Why do Models Differ from Reality?

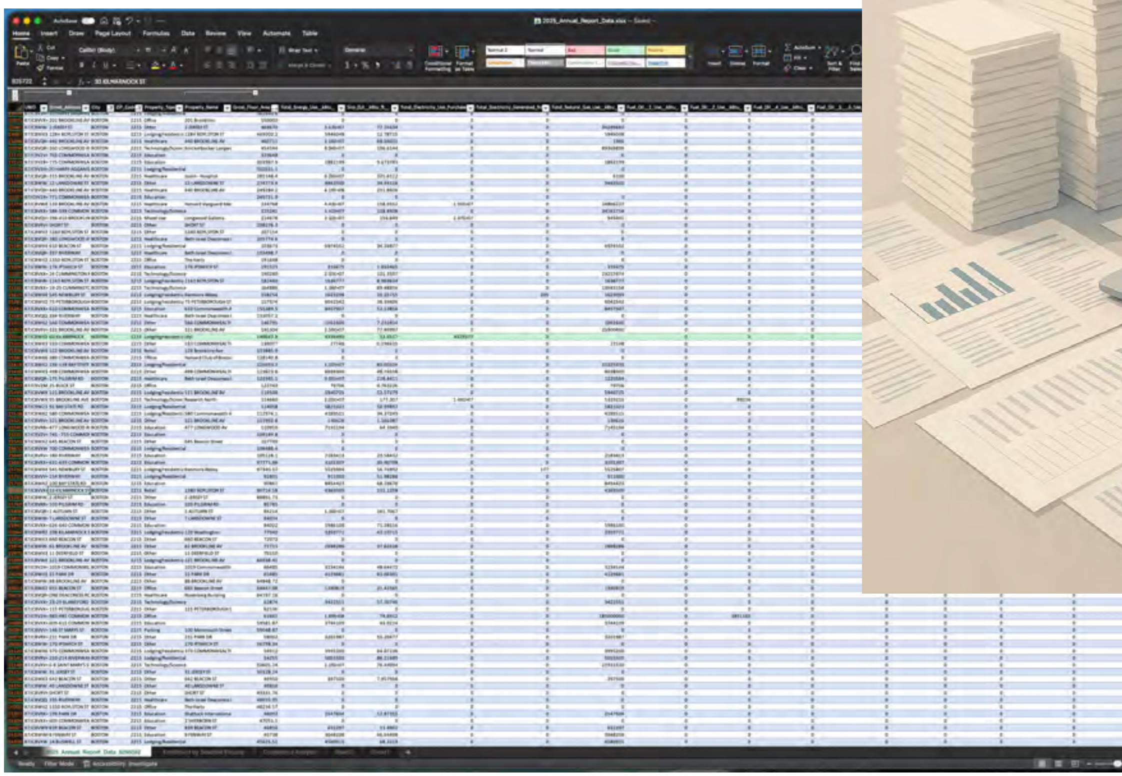
- The hardest thing to predict is human behavior – schedules, plug loads, occupancy inevitably change
- We assume systems operate perfectly
- A few elements are forced by modeling protocols (lighting controls)
- Weather – Typical Year vs Actual
- Lack of feedback means we keep repeating our mistakes

?

2021 - Final Words

- Models are design tools, but their results show potential, not performance.
- Engage the facilities staff early, commission, train, and maintain
- Keep it simple
- Follow up, and learn from mistakes
- It's not over when you hang the plaque

The LBER data gives us a new chance to look at this question



LBER Data Filtering and Selection Process

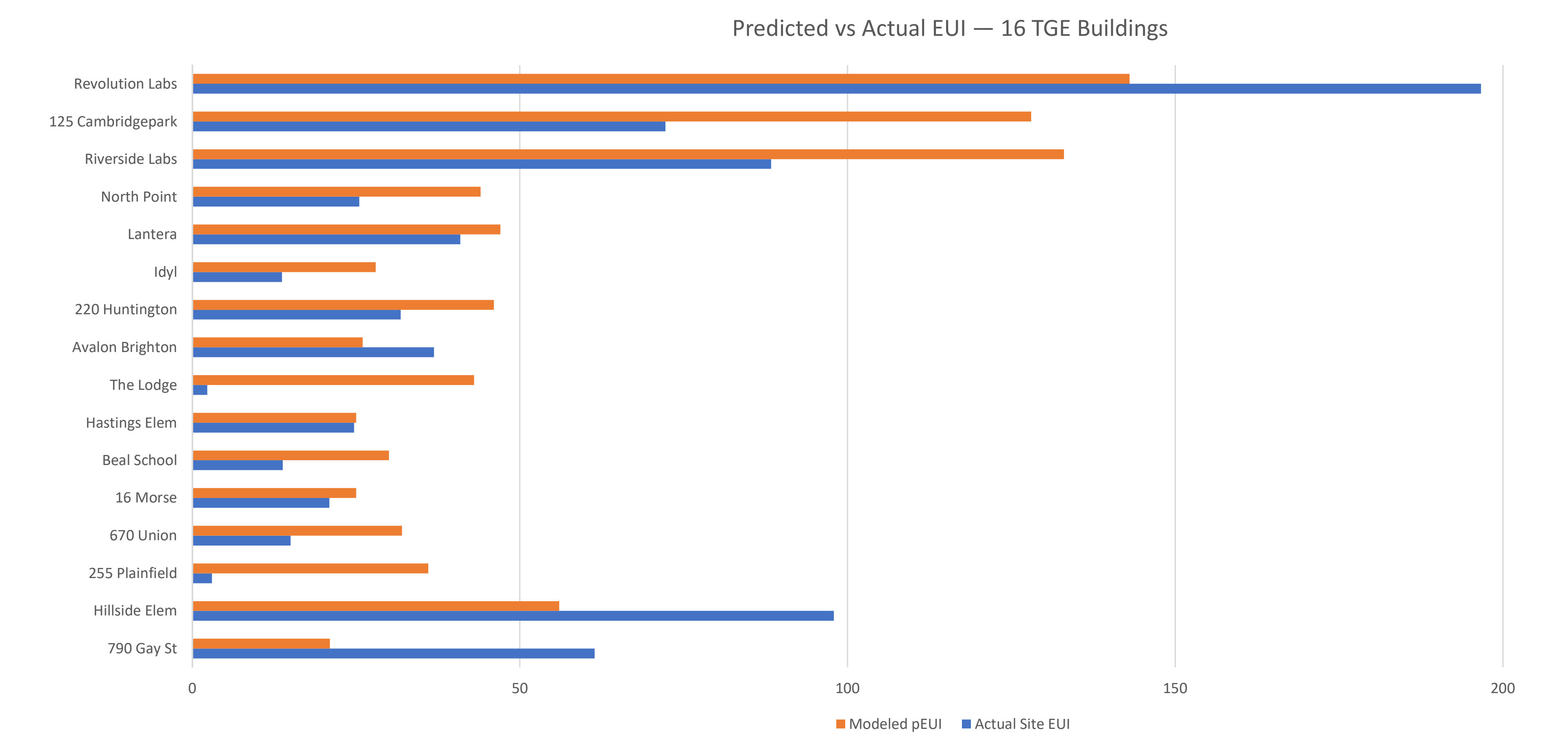
- We identified 130 of our projects as likely to occur in the LBER data.
- From that, we found:
  - 73 projects with no data reported
  - 28 projects with incomplete reports (site EUI = 0)
  - 7 projects with multiple buildings at address and/or inconsistent data
  - 4 projects listed separately, but appearing as combined buildings in the database

18 projects reported usable site EUI data, and 14 were used for analysis after removing 4 outliers (unexpectedly very low EUI)

2025 LBER Annual Report — Conference Analysis Dashboard

PHASE 1: Predictive Models vs Actual Data — 16 TGE buildings compared: Actual Site EUI vs Modeled pEUI

Property Name	Street Address	Property Type	City	Gross Floor Area (ft²)	Actual Site EUI (kBtu/ft²/yr)	Modeled pEUI (kBtu/ft²/yr)	Difference	% Difference	Over/Under Predicted	Abs Difference
790 GAY ST	790 Gay St, Westwood	Education	WESTWOOD	70,183	61.4	21	40.4	192.3%	Under-predicted	40.4
Hillside Elementary School	28 Glen Gary Rd, Needham	Education	NEEDHAM	51,545	97.9	56	41.9	74.8%	Under-predicted	41.9
670 UNION ST	670 Union St, Springfield	Education	SPRINGFIELD	40,218	15.0	32	-17.0	-53.2%	Over-predicted	17.0
16 MORSE STREET	16 Morse St, Foxborough	Education	FOXBOROUGH	49,627	20.9	25	-4.1	-16.4%	Over-predicted	4.1
Major Howard W. Beal School	214 Lake St, Shrewsbury	Education	SHREWSBURY	99,908	13.8	30	-16.2	-54.1%	Over-predicted	16.2
Hastings Elementary	7 Crosby Rd, Lexington	Education	LEXINGTON	69,830	24.7	25	-0.3	-1.0%	Over-predicted	0.3
Avalon Brighton (av010)	139 Washington St, Brighton	Lodging/residential	BRIGHTON	71,525	36.9	26	10.9	42.0%	Under-predicted	10.9
220 HUNTINGTON AV	220 Huntington Ave, Boston	Lodging/residential	BOSTON	145,323	31.8	46	-14.2	-30.9%	Over-predicted	14.2
Idyl	60 Kilmarnock St, Boston	Lodging/residential	BOSTON	140,644	13.7	28	-14.4	-51.3%	Over-predicted	14.4
Lantera at Boston Landing	125 Guest St, Boston	Lodging/residential	BOSTON	387,083	40.9	47	-6.1	-13.0%	Over-predicted	6.1
North Point Maint. Facility	11 Education St, Cambridge	Public Services	CAMBRIDGE	34,388	25.5	44	-18.5	-42.1%	Over-predicted	18.5
Riverside Labs	20 Riverside Rd, Weston	Technology/Science	WESTON	80,702	88.3	133	-44.7	-33.6%	Over-predicted	44.7
PPF OFF 125 Cambridgepark Dr	125 Cambridge Park Dr, Cambridge	Technology/Science	CAMBRIDGE	218,825	72.2	128	-55.9	-43.6%	Over-predicted	55.9
REVOLUTION LABS LLC	1050 Waltham St, Lexington	Technology/Science	LEXINGTON	216,431	196.6	143	53.6	37.5%	Under-predicted	53.6



Predicted vs Actual EUI — 16 TGE Buildings
Revolution Labs
125 Cambridgepark
Riverside Labs
North Point
Lantera
Idyl
220 Huntington
Avalon Brighton
The Lodge
Hastings Elem
Beal School
16 Morse
670 Union
255 Plainfield
Hillside Elem
790 Gay St
0
50
100
150
200
Modeled pEUI
Actual Site EUI

Summary of Results

Average Modeled pEUI: 56.0 kBTU/sf/yr

Average Reported Site EUI: 52.8 kBTU/sf/yr

Biggest miss: 192% more than the model

Most accurate: 1.0% less than the model

Issues with analysis

- Small sample size
- Commercial buildings may not be fully leased and occupied
- Quality control issues in reported data
- First year of operation may include start up and construction artifacts

Case Study - Westwood Pine Hill School

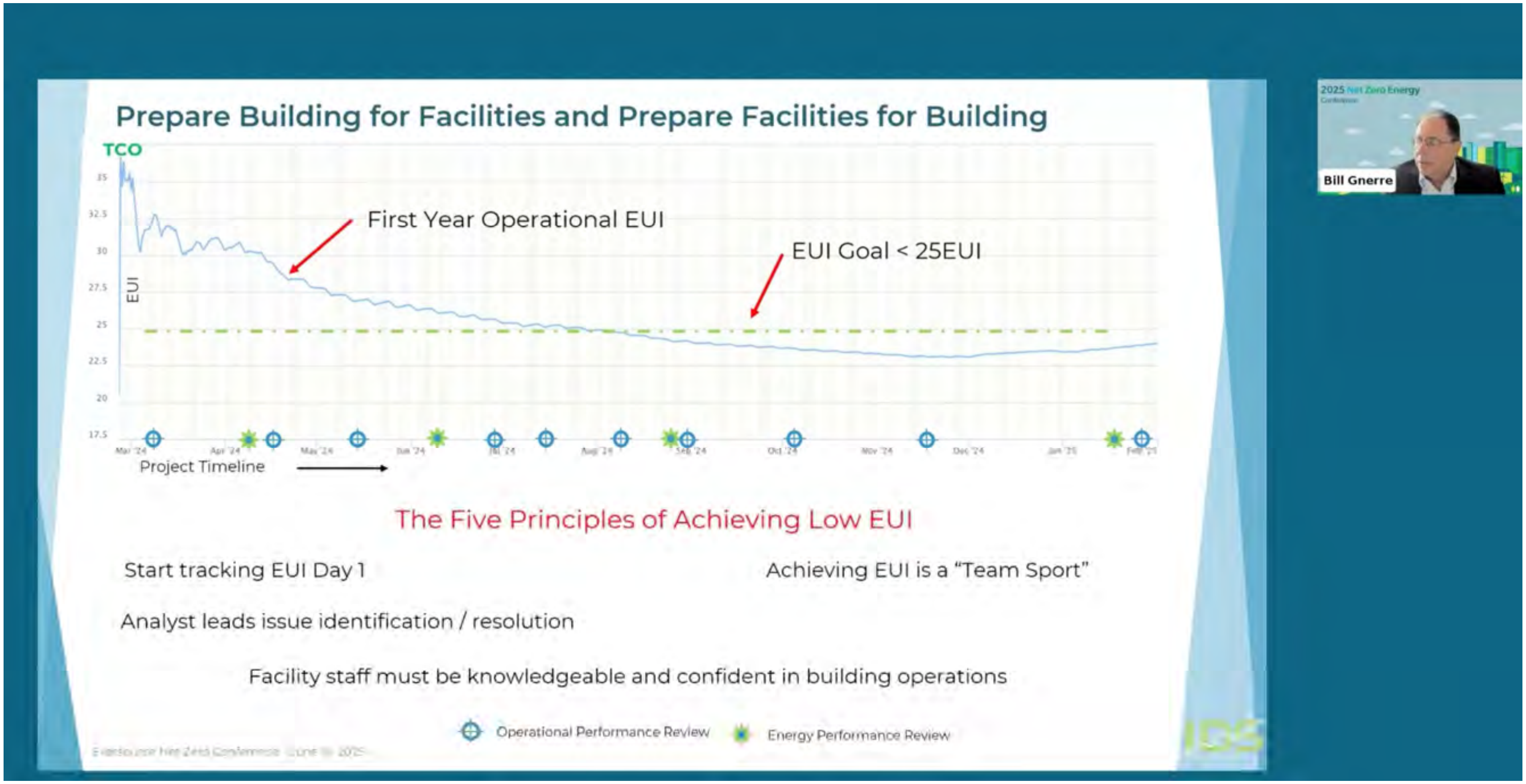
- All Electric Elementary school targeting NZE
- Multiple Models: Thornton Tomasetti, GGD Consulting Engineers, and The Green Engineer, Inc.

Westwood Pine Hill School

- Modeled EUI 21 kbtu/sf/yr
- LBER Reported EUI 61.4 kbtu/sf/yr
- Rigorous POE funded by Eversource brought EUI under 25 kbtu/sf/yr

https://www.youtube.com/watch?v=rtxjntw2Q_c

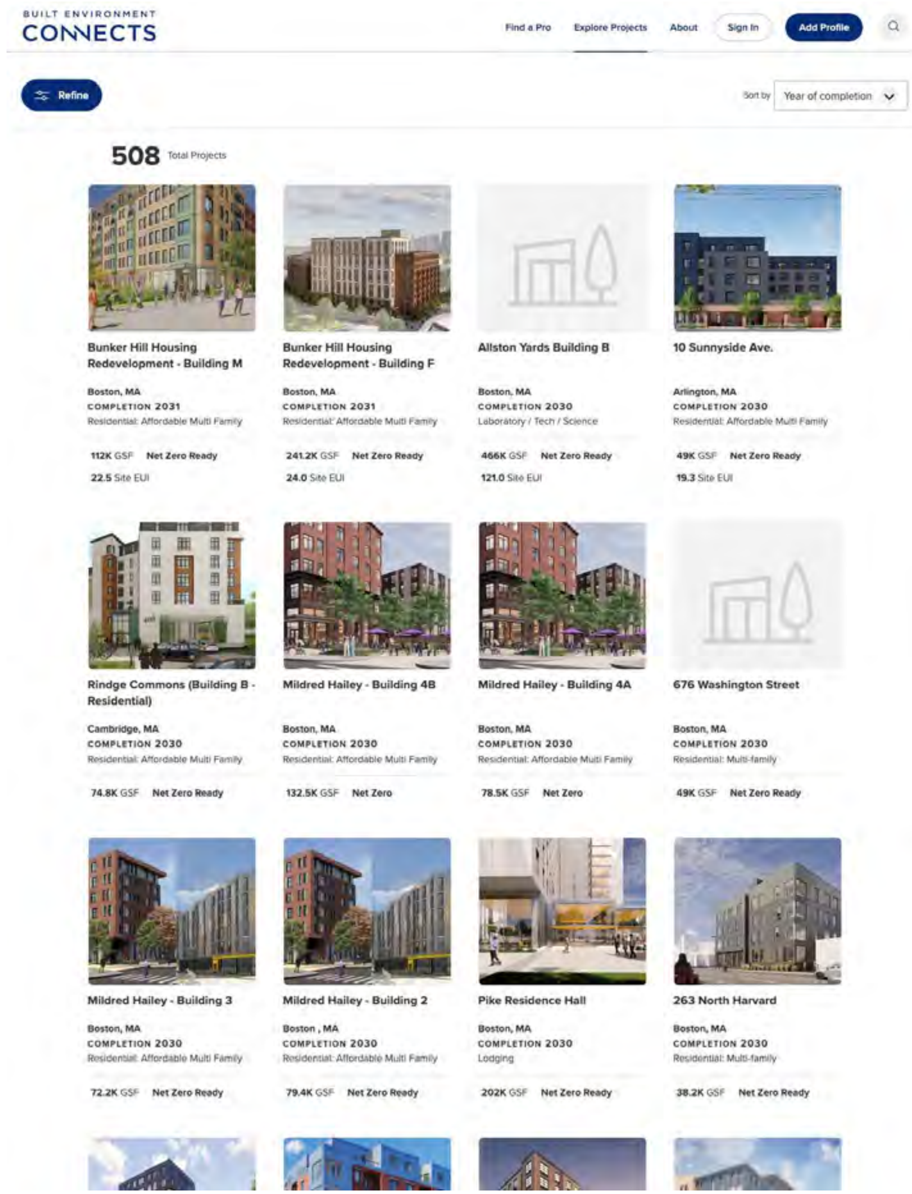
Westwood Pine Hill School



Work Performed by Interval Data Systems – Bill Gnerre

Looking at other Prominent Buildings

- **BE+ Connects reported EUI vs LBER Data**
- **Well known buildings from the Boston skyline**



BE+ Connects EUI vs. LBER Data

Project Name	Project Address	GSF	BE+ EUI	LBER EUI
Abraham Lincoln School	New Bedford MA	45,000	23	not reported
Div of Fisheries & Wildlife HQ	Westborough MA	45,000	27.3	23.9
Distillery North	516 E 2nd St Boston MA 02127	37,000	11	not found
King Open School	Cambridge MA	273,000	25/10	23.3
Josiah Quincy Upper School	Boston, MA 02116	178,000	24.2	40.3
Charleston Labs	420 Rutherford Ave Boston MA	101,500	98	not found
Rindge Commons	430 Rindge Ave Cambridge MA	27,600	23.6	not found
MIT Graduate Junction	269 Vassar st. Cambridge MA	326,100	41	not reported
Kenzi at Barlett station	2503 Washington Street, Roxbury, MA	57,600	10.9	not found
BU Data	Boston MA	330,000	42	not found
Boardwalk Campus	Acton MA	175,000	20.9/0	0
Bristol Community College	Fall River MA	50,600	51	not found
North Shore CC Health	Danvers	60,000	46	61.8
Finch Cambridge	675 Concord Ave Cambridge	101,000	26.3	not found
Prudential Center	800 Boylston St. Boston, MA			electricity not reported
One Congress	One Congress St, Boston			not found
Atlantic Wharf	280 Congress Street, Boston			not reported
Boston City Hall	20 City Hall Sq, Boston			not reported

- Most projects had no data, or did not appear in the data at all.
- The buildings that did report generally looked pretty good

Conclusions: Models vs Actual

- Nothing I have said in the past has changed
- The data available from the first year of LBER isn’t complete enough yet to draw many other conclusions
- It's clear that buildings can perform as modeled, but it takes work.
- Good models predict the potential of the building, but are not a guarantee

How does this inform and refine future energy modeling practices and building design goals?

Modeling

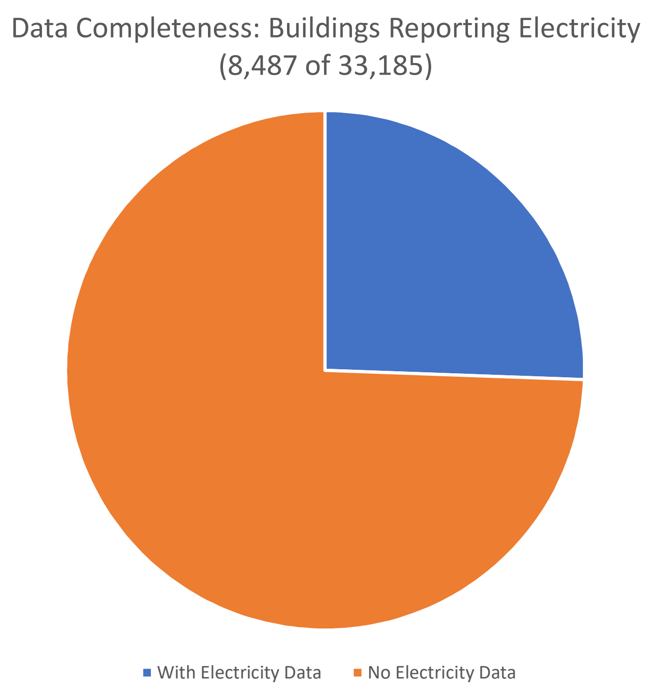
- Predictive models may not be the best use of time and resources
- If we want models to be predictive, we should have appropriate modeling protocols
- Need a better understanding of typical unregulated loads – many of our assumptions are out of date

Design Goals

- The aggressive design goals being used by programs like Mass Save are achievable, but only with work
- We should spend less money on models and more on post-occupancy work

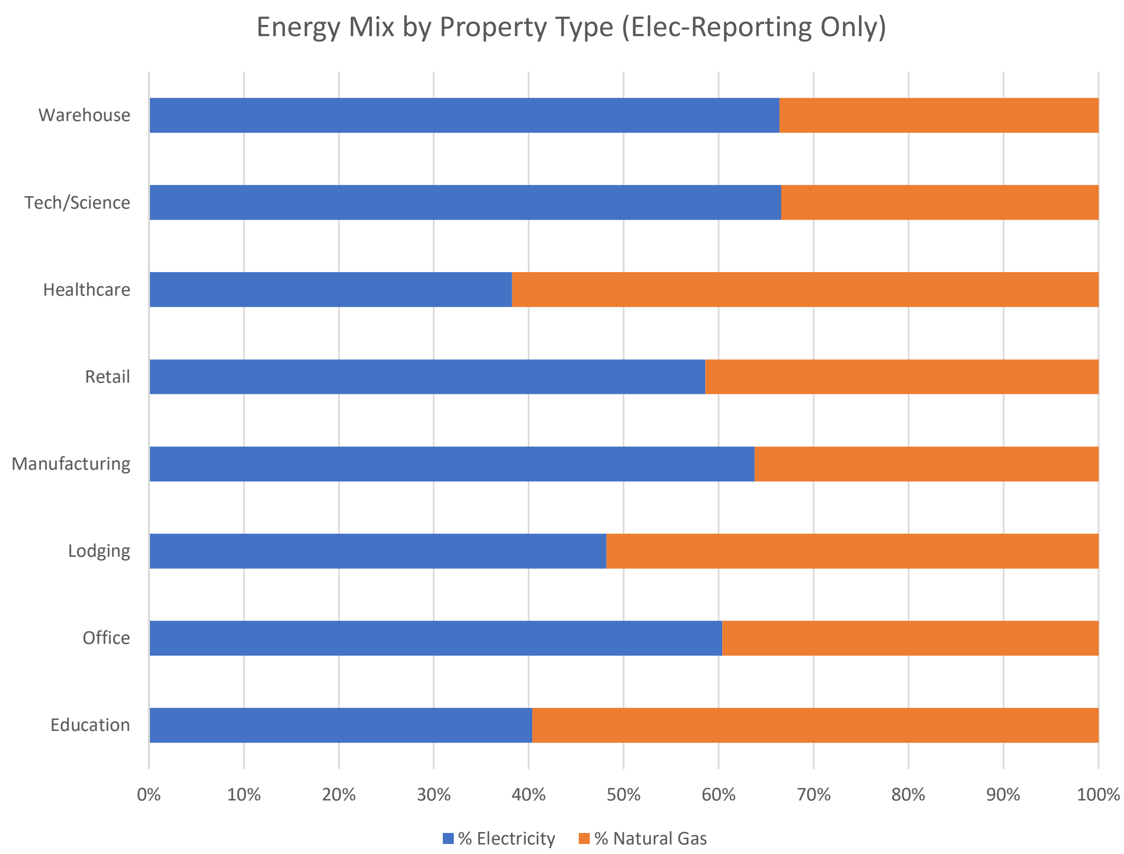
Bulk analysis of LBER data

Data Completeness & Quality

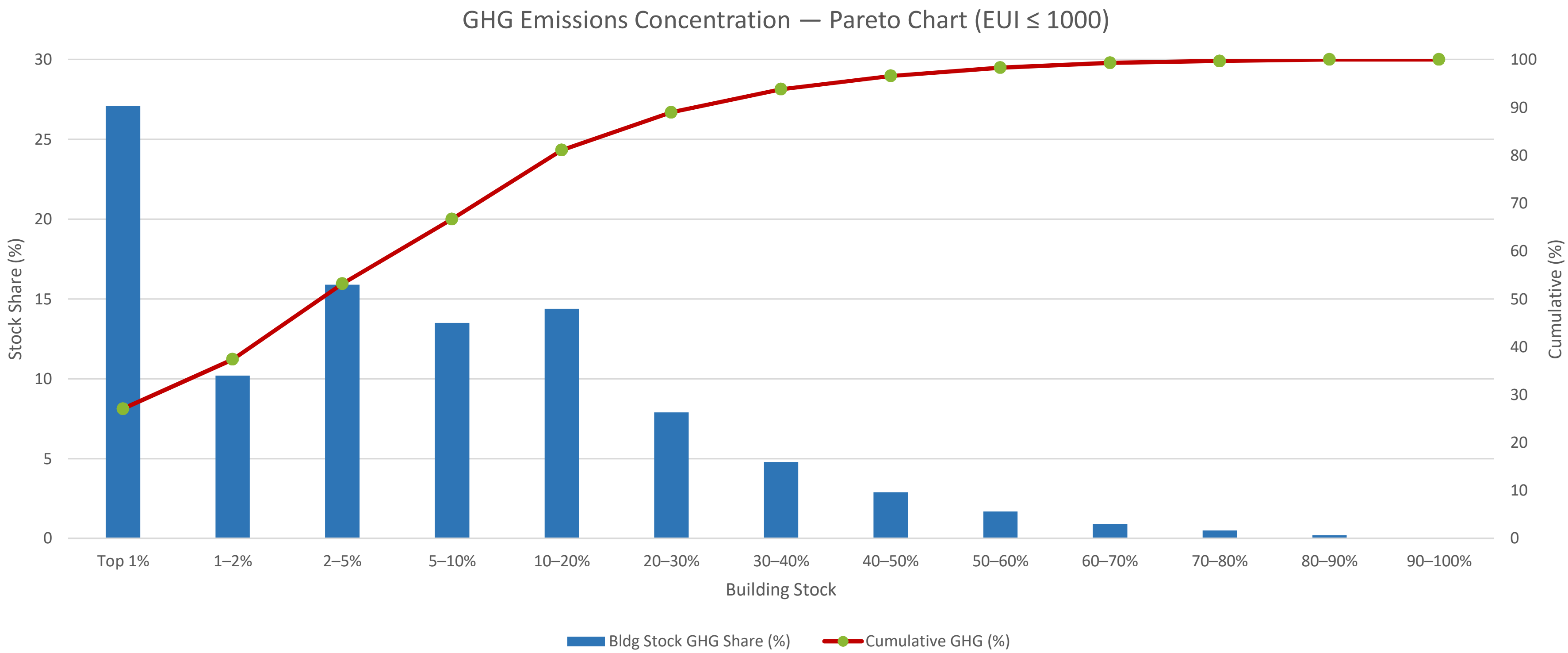


PHASE 4: Data Quality Issues & Recommendations			
4A: Data Completeness Summary			
Metric	**Count**	**% of Total**	**Assessment**
Total buildings in dataset	33,185	100.0%	Full dataset
Buildings with Site EUI > 0	13,969	42.1%	⚠ Only 42% report energy data
Buildings with Site EUI = 0	19,216	57.9%	⛔ 58% have NO energy data
Buildings with GHG data	13,937	42.0%	⚠ Similar gap to EUI
Buildings with electricity data	8,487	25.6%	⚠ Only 26% report electricity
Buildings with natural gas data	6,433	19.4%	⚠ Only 19% report gas
Buildings with onsite renewables	108	0.3%	Very few report renewables
Buildings with district steam	271	0.8%	Concentrated in urban areas
Extreme EUI outliers (>1000 kBtu/ft²)	~500+		⛔ Likely data quality issues
Property types with case inconsistencies	7		⚠ Duplicate categories (e.g., Manufacturing/industrial vs Manufacturing/Industrial)

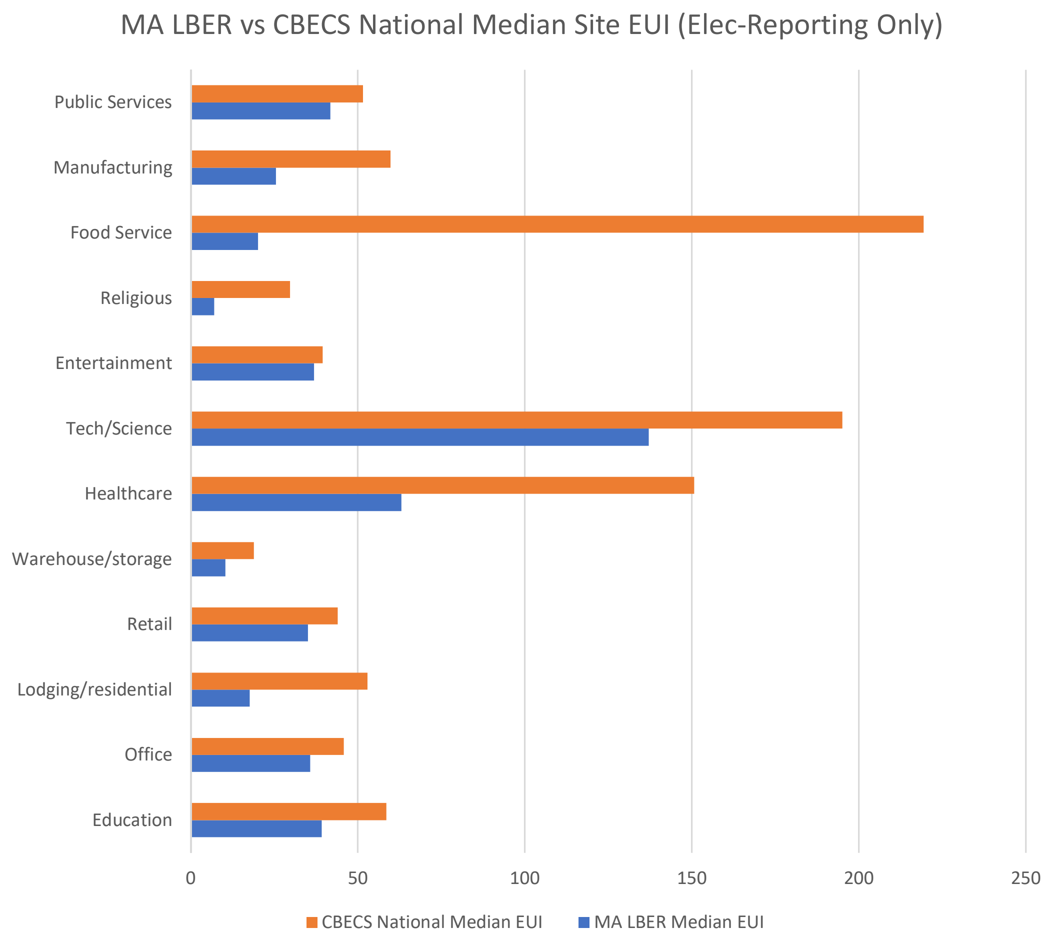
Typical Energy Mix by Use Type



Emissions vs size – a lot of emissions in a small number of buildings



LBER Data vs National Averages – CBECs



PHASE 3: MA LBER Data vs National Averages (CBECS / ENERGY STAR)

Source: ENERGY STAR Portfolio Manager US National Median Table (Aug 2024), based on 2018 CBECS

Property Type	MA LBER Median Site EUI	CBECS National Median Site EUI
Education (K-12 School)	39.2	58.5
Office	35.7	45.8
Lodging/residential (Multifamily)	17.6	52.9
Retail	35.1	44.0
Warehouse/storage	10.3	18.9
Healthcare (Hospital)	63.0	150.7
Technology/Science (Laboratory)	137.1	195.0
Entertainment/public assembly	36.9	39.5
Religious Worship	7.0	29.7
Food sales and service	20.1	219.4
Manufacturing/industrial	25.5	59.8
Public Services	41.8	51.5

Community Equity

- Hard to see real differences
- Some difference in EUI between schools in critical needs communities and others shows up in the data
- Critical 42.4, others 33.8
- But highest need vs. 10 richest communities shows high needs communities have lower EUI (51 vs 55)
- Opportunities in many communities – Boston has 223 schools with an average EUI of 64.0

5B: Top 25 Highest-Need Districts — Energy Performance of School Buildings

District / City	High Needs %	Low Income %	English Learners %	High Needs #	# Education Bldgs (LBER)	Avg Site EUI (kBtu/ft²/yr)	Total GHG (MT CO_2e)	Total Floor Area (ft²)	CEC Priority Level
Lawrence	91.9%	82.8%	43.4%	11,968	25	22.1	3,770	2,889,795	Critical
Chelsea	90.3%	76.4%	46.1%	5,331	8	12.3	403	972,358	Critical
Holyoke	89.0%	84.2%	19.2%	4,222	19	48.4	387	1,718,106	Critical
Springfield	88.2%	82.9%	18.5%	20,917	61	33.0	5,567	5,886,605	Critical
Lynn	87.2%	73.6%	45.4%	13,956	24	0.0	0	2,222,847	Critical (no EUI)
Southbridge	86.8%	79.8%	20.5%	1,580	6	81.9	438	483,032	Critical
Fall River	86.4%	77.7%	26.9%	9,768	26	22.2	2,101	3,123,658	Critical
Everett	85.2%	68.9%	43.4%	5,969	8	16.6	56	55,688	Critical
New Bedford	85.1%	77.3%	25.6%	10,689	38	55.4	7,980	4,739,761	Critical
Brockton	83.6%	72.3%	34.2%	12,315	11	61.1	1,623	962,126	Critical
Lowell	82.1%	69.4%	29.9%	11,905	54	51.7	5,701	4,619,211	Critical
Worcester	80.9%	69.8%	31.3%	20,235	186	39.7	10,074	18,926,886	Critical
Boston	80.9%	68.3%	33.6%	36,208	223	64.0	882,729	24,997,706	Critical
Fitchburg	80.4%	69.7%	22.7%	4,351	31	55.2	7,220	2,658,085	High
Randolph	77.7%	62.5%	24.7%	2,278	7	52.2	777	500,058	High
North Adams	75.2%	68.3%	1.1%	813	15	12.2	218	1,212,300	High
Malden	74.8%	59.1%	29.5%	4,600	14	31.6	1,625	1,132,703	High
Marlborough	74.4%	60.5%	30.5%	3,285	13	17.2	857	1,425,008	High
Chicopee	71.6%	64.2%	8.5%	4,772	19	11.1	302	1,901,961	High
Haverhill	71.6%	60.8%	14.8%	5,591	37	60.4	1,325	5,153,678	High
Leominster	70.1%	57.9%	16.1%	3,834	15	30.2	1,250	1,351,000	High
Revere	70.0%	55.2%	35.8%	5,500	10	28.4	890	780,000	High
Salem	69.5%	57.3%	21.2%	2,800	12	42.1	1,100	950,000	Medium-High
Pittsfield	68.2%	60.1%	7.5%	3,200	18	35.6	780	1,500,000	Medium-High
Taunton	67.8%	56.4%	12.3%	4,100	15	28.9	650	1,200,000	Medium-High

2E: School EUI — Critical Needs Communities vs 10 Richest Towns

EUI from MA LBER data (EUI ≤ 1000 filter). High Needs % from MA DESE 2025-26 enrollment.
Wealth ranking from ACS Census data.
Weighted avg EUI = total energy ÷ total floor area across all buildings (weighted by # buildings).
EUI ≤ 1000 filter applied.

CRITICAL NEEDS COMMUNITIES (High Needs ≥ 80%)

City	# Education Buildings	Avg Site EUI (kBtu/ft²/yr)	High Needs %	Low Income %
Lawrence	21	62.9	91.9	82.8
Chelsea	8	12.3	90.3	76.4
Holyoke	3	48.4	89.0	84.2
Springfield	46	33.0	88.2	82.9
Southbridge	1	81.9	86.8	79.8
Fall River	19	22.2	86.4	77.7
New Bedford	32	55.4	85.1	77.3
Brockton	9	61.1	83.6	72.3
Lowell	20	51.7	82.1	69.4
Worcester	51	39.7	80.9	69.8
Boston	127	64.0	80.9	68.3
Fitchburg	26	55.2	80.4	69.7
CRITICAL NEEDS AVG	**363**	**51.0**	**85.5**	**75.9**

10 RICHEST TOWNS (by ACS Median Household Income)

City	# Education Buildings	Avg Site EUI (kBtu/ft²/yr)	High Needs %	Low Income %
Dover	2	8.1	22.7	6.4
Weston	3	22.2	29.8	8.1
Wellesley	31	88.3	27.1	8.1
Lexington	13	78.5	33.5	10.4
Winchester	8	51.0	27.4	7.4
Needham	14	57.3	27.0	7.1
Concord	1	38.5	23.5	8.2
Brookline	29	15.1	40.6	14.5
Newton	28	59.1	35.0	13.7
Lincoln	2	8.3	28.7	8.2
RICHEST TOWNS AVG	**131**	**55.0**	**29.5**	**9.2**

Key Statistical Trends

- The data available from the first year of LBER isn't complete enough yet to draw many firm conclusions, but we can see a few things
- Housing is an area to focus on: 70% of emissions
- The biggest emitters are significant: 80% of emissions from 20% of buildings

How can the data be improved going forward?

- How do we get more covered buildings to submit?
- What to do about Municipal utilities?
- Automatic reporting needs a better check
- Third-party verification may be required – BERDO & BUEDO have it

Conclusions

- The Large Building Energy Reporting program has the potential significantly reduce emissions from our existing building stock
- There are growing pains, but as the data improves in subsequent years, we'll be able to see more trends and identify more actions
- Our focus needs to be on the big emitters – that is where we can have the quickest impact
- As designers and modelers we need to change the dialog from modeled to actual and normalize energy disclosure

Q & A

BUILDINGENERGY BOSTON

Please fill out an evaluation for this session

TQRCG

or: nesea.org/eval

Northeast Sustainable Energy Association (NESEA)