AIA 2030 COMMITMENT

Project Performance Data for 2024

Highlighting Our Progress in Lowering Energy Intensity in Complex Projects

The Ottawa Hospital Campus Redevelopment
OTTAWA, ONTARIO, CANADA

(Featured on the front and back cover of this report.)

The Ottawa Hospital (TOH) Campus Redevelopment project, at over 2.3 million square feet, is representative of many of the large, high internal process load projects in HDR's portfolio that can make it difficult to achieve the AIA's 80% EUI reduction target. TOH came close, achieving a 70.2% EUI reduction in its energy model. So, while not a "top project" for the Health sector, it underscores our ability to reduce energy use intensity in complex projects.

DIRECTOR'S NOTE

COLIN ROHLFING

ASSOCIATE AIA, LEED AP BD+C, LFA

Vice President
Director of Sustainable Development

We **doubled** the number of AIA 2030 compliant projects from 2.9% to 6.8%

We **tripled** the amount of all-electric projects from 11.6% to 30.6%

We **doubled** the amount of modeling for embodied carbon from 20.9% to 49%

We **increased** energy modeling from 68.6% to 93.9% figures and design excellence at HDR.

Closely tracking and improving metrics each year takes us closer and closer towards the regenerative future that we seek to create.

Our participation in the AIA 2030 Commitment is integral to who we are as an architecture practice and is closely tied to one of our key foundational elements: "Towards a Regenerative Future." Closely tracking and improving metrics each year takes us closer and closer towards the regenerative future that we seek to create. The data in this 2024 progress report—the result of real-time tracking—also improves the level of design excellence that we deliver.

Interestingly, this large increase in energy modeling resulted in a significant negative impact to our overall Energy Use Intensity (EUI) reduction. How? Because we are modeling actual performance numbers, we are no longer using more favorable hypothetical code reductions. (Using hypothetical code values, our overall firm reduction would have been 60.7% versus the 53.2% we achieved.) We accept this short-term pain because we believe it will be worth the long-term gain of prioritizing the use of "real data" through our commitment to energy modeling as an integrated design principle.

Looking ahead, we are working to achieve a 70% firmwide EUI reduction within two years and an eventual end goal or "ceiling" of 75 to 80%, which is based upon our unique design portfolio that includes: 72% of projects with high process loads or projects that have a constrained site condition or are utilizing an existing central utility plant. Our promise is to get all projects to "net zero ready" levels so our clients and their communities can offset the rest.

Initiatives that will help us achieve this reduction include the launch of the Project Pulse dashboard for real-time AIA 2030 tracking, an energy modeling fee requirement for various project sizes, and increased training and involvement with our Building Performance Group on all key projects.

Thank you for your work and commitment in helping us get there. We look forward to partnering with all of you to improve our performance.

2024 BY THE NUMBERS

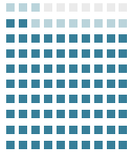
Key Achievements

Tracking and improving these metrics each year takes us closer and closer towards the regenerative future that we seek to create.

TOTAL PROJECTS
222

EUI REDUCTION
53.2%

ALL ELECTRIC
30.6%



ENERGY MODELING
93.9%

EMBODIED CARBON MODELING
49%

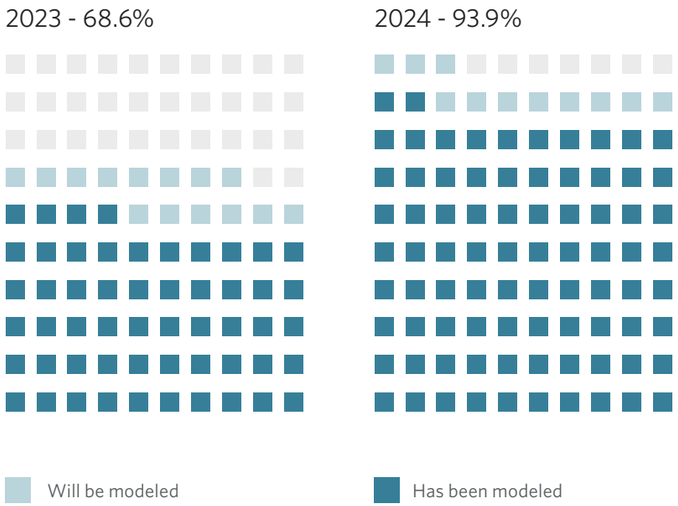
LPD REDUCTION
39.4%

2024 INSIGHTS

No More Hypotheticals

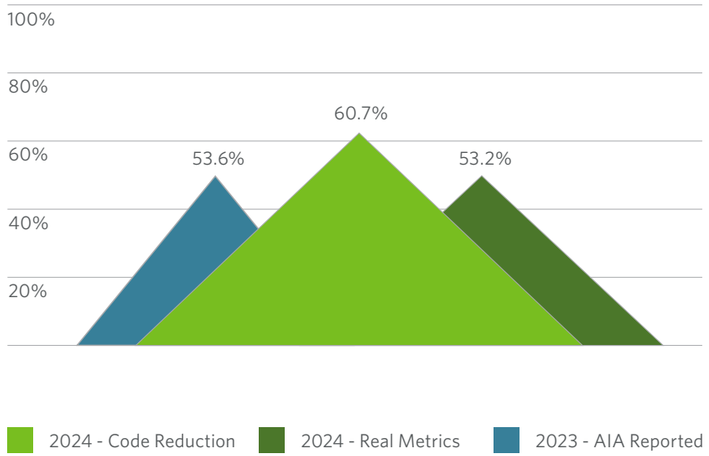
All energy reductions are now based on real modeling numbers versus estimated code compliance reductions. This is a more challenging—yet real—pathway towards decarbonization.

Energy Modeling: Improved Compliance



Modeling compliance saw a remarkable increase from 68.6% to 93.9% in just one year, highlighting significant progress and dedication to improvement.

EUI Reductions: Code Vs. Real Metrics



The movement towards real metrics and consistent reduction is a major win. If we had taken the code reduction similar to 2023, **our EUI reduction would have been 60.7%.**

The Challenge of High Process Loads

Mayo Clinic Anna-Maria and Stephen Kellen Building, *Rochester, MN, United States*

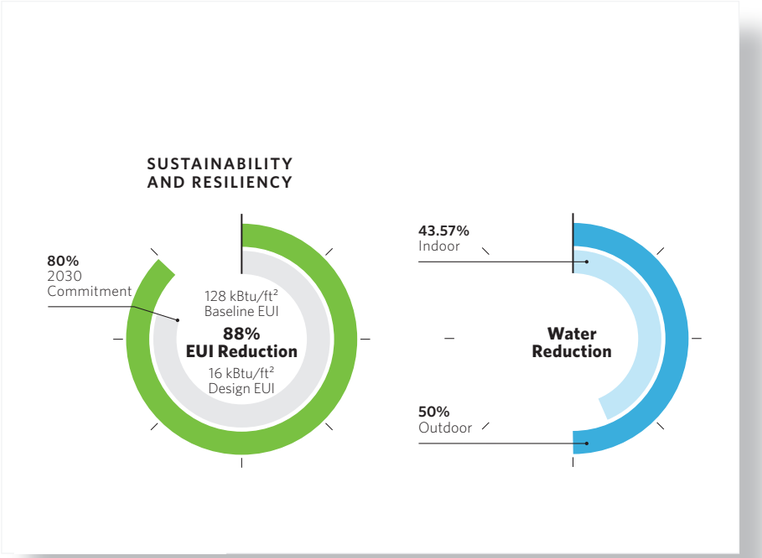
72% of HDR's design portfolio that consists of **high internal process load buildings** (i.e., hospitals, laboratories, data centers) for which EUI reductions are much more difficult.

2024 HIGHLIGHTS

Elevating Sustainable Design

HDR has incorporated AIA 2030 and AIA's Framework for Design Excellence metrics into our annual Opacity design award process.

AIA



1,695,837

Square feet of AIA-compliant projects

6.8%

AIA-compliant projects more than doubled from 2.9% to 6.8%

30.6%

Our fully electric square footage has tripled since 2023 from 11% to 30.6%

49%

HDR's focus on balancing both operational and embodied carbon doubled our embodied carbon modeling in just one year.

100%

We are targeting 100% energy modeling across all projects.

27

No. of office champions gathering project data and offering design support for performance improvement.

Portfolio showcases successful improvements in achieving carbon neutrality despite high process load challenges.

TOP 10 PERFORMING PROJECTS:
CROSS SECTOR

1

2

3

4

5

6

7

8

9

10

1 King County South Annex Facility, *United States*
2 Otay Mesa East Commercial Vehicle Enforcement Facility, *United States*
3 Sekwiw at Keefe Creek Townhomes, *Canada*
4 Girraween Public School, *Australia*
5 Hillsborough Mental Health & Addictions Acute Care Facility and Life Skills Centre, *Canada*
6 Riverina Redevelopment, *Australia*
7 Puente Hills Environmental Justice Center, *United States*
8 Riverina AWMA Base, *Australia*
9 NHS England Chassis Design, *United Kingdom*
10 Prince Edward County Memorial Hospital, *Canada*

PREDICTED EUI REDUCTION: FIRMWIDE

EUI REDUCTION
53.2%

> Our reduction stayed steady and aligns with the AIA average. While it didn't improve substantially, we consider it an important win since we modeled 25.3% more projects. It's also important to note that 72% of our square footage is high process load projects such as labs and hospitals.

We doubled the square footage that met the AIA target of 80% reduction.

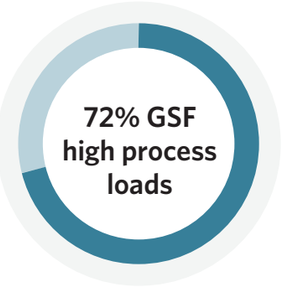
25.1% of our projects met our internal goal reduction of 60%.

Projects in Pulse
(26.8 million GSF)

- Interior only: **82 projects** (1.9 million GSF)
- Whole building: **140 projects** (24.9 million GSF)

Projects Exceeding Targets
(140 projects)

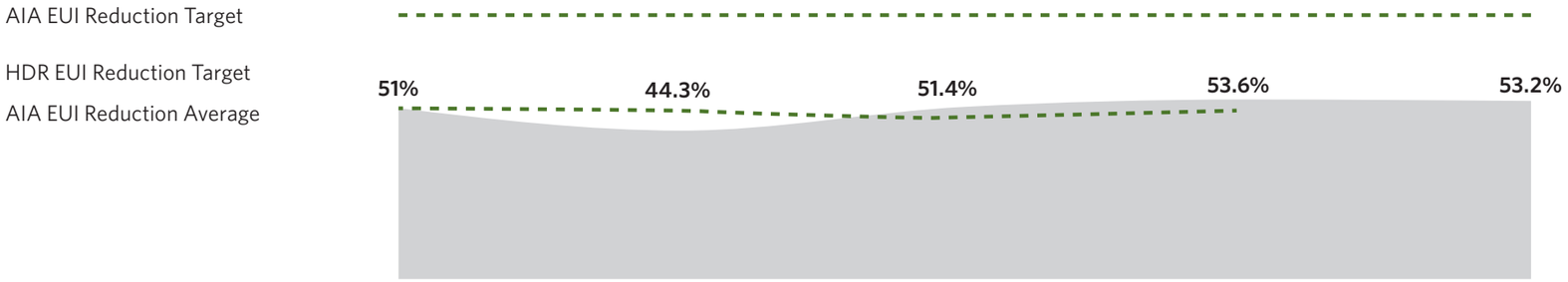
- Exceeding HDR's Target - 60% : **34 projects**
- Exceeding AIA's Target - 80% : **8 projects**



Process Loads
(140 projects)

- Low Loads: **6.9 million GSF** (64 projects)
- High Loads: **18 million GSF** (76 projects)

Firm EUI Reduction Metrics Over 5 Years



Reporting Year	2020	2021	2022	2023	2024
Difference to AIA Average	-0.3%	-6.0%	3.4%	3.6%	N/A
Difference to AIA Target	-29.0%	-35.7%	-28.6%	-26.4%	-26.8%

PREDICTED EUI REDUCTION: MARKET SECTOR

HEALTHCARE

EUI Reduction
51.3%
Difference to HDR Target
-8.7% ⬇

Process Loads

88% | 12%

- # Projects with high loads 27 (12,721,646 GSF)
- # Projects with low loads 16 (1,734,286 GSF)

CIVIC

EUI Reduction
59.9%
Difference to HDR Target
-0.1% ⬇

Process Loads

30% | 70%

- # Projects with high loads 12 (885,838 GSF)
- # Projects with low loads 18 (2,084,660 GSF)

FEDERAL

EUI Reduction
53.5%
Difference to HDR Target
-6.5% ⬇

Process Loads

24% | 76%

- # Projects with high loads 06 (928,018 GSF)
- # Projects with low loads 17 (2,909,597 GSF)

EDSCICOM

EUI Reduction
49.1%
Difference to HDR Target
-10.9% ⬇

Process Loads

60% | 40%

- # Projects with high loads 25 (3,645,071 GSF)
- # Projects with low loads 16 (2,389,453 GSF)

ENGINEERING

EUI Reduction
23.0%
Difference to HDR Target
-37.0% ⬇

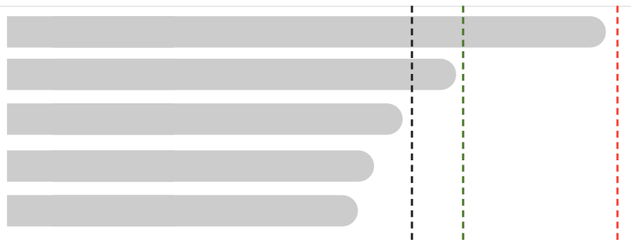
Process Loads

49% | 50%

- # Projects with high loads 12 (724,773 GSF)
- # Projects with low loads 14 (753,066 GSF)

Actual EUI Reduction
HDR Target - 80%
AIA Target - 60%

Market Sector	Rank	Total GSF	# Projects	EUI Reduction ▼
Engineering	1	14,455,953	43	74.2%
Civic	2	2,970,498	30	59.9%
Federal	3	3,837,615	23	53.5%
Healthcare	4	6,034,524	41	51.3%
EdSciCom	5	1,477,839	26	49.1%



AIA EUI Reduction Target (80%)
HDR EUI Reduction Target (60%)
AIA EUI Reduction 2030 Average (53.6%)
EUI Reduction *Above* AIA 2030 Average
EUI Reduction *Below* AIA 2030 Average

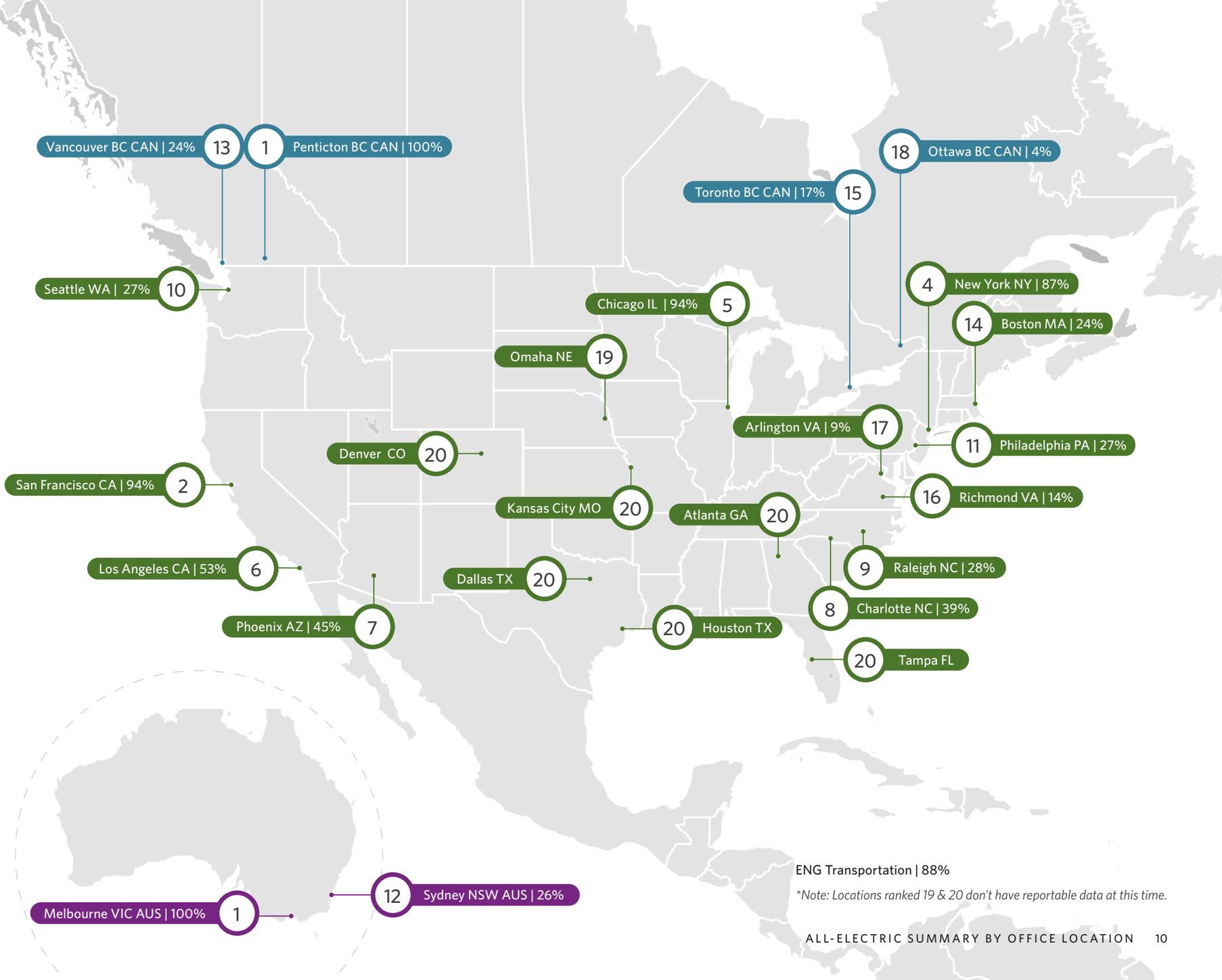
ALL-ELECTRIC SUMMARY
BY OFFICE LOCATION

ALL ELECTRIC
30.6%

"The percentage of all-electric projects tripled from last year and highlights the commitment of our clients to achieve future decarbonization.

NET ZERO PROJECTS
56

Fifty-six projects completed in 2024 are now "net zero ready" and have the potential for renewable offsets.



ENG Transportation | 88%

**Note: Locations ranked 19 & 20 don't have reportable data at this time.*

ENERGY MODELING: FIRMWIDE

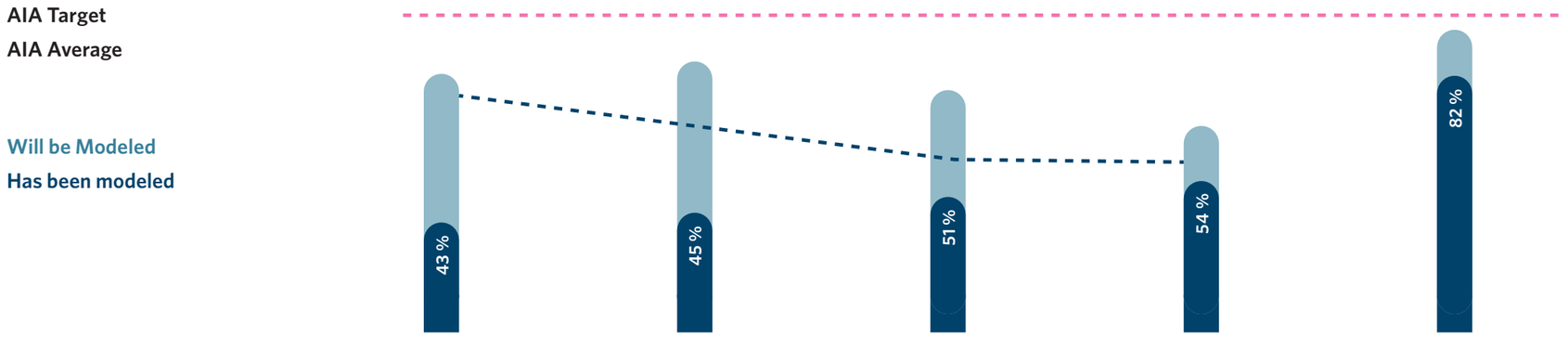
ENERGY MODELING

93.9%

Will be: **11.6%** Has been: **82.4%**

> Our impressive increase in energy modeling underscores the success of our modeling initiatives and our commitment to data-driven design.
>
> HDR well exceeded the AIA average of 54%.

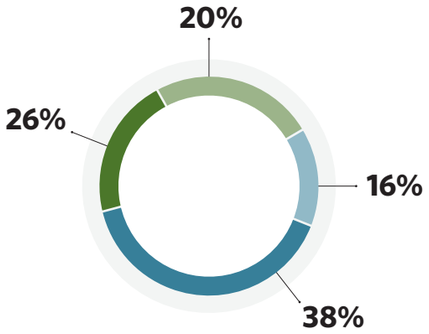
Firm Energy Modeling Metrics Over 5 Years



Reporting year	2020	2021	2022	2023	2024
Total Energy Modeling	**81.4%**	**83.6%**	**77.9%**	**68.6%**	**93.9%**
Difference to AIA Average	**4.4%**	**16.6%**	**15.9%**	**7.6%**	**N|A**

Responsible Party for Energy Modeling

- Modeling Consultant **38%** (53)
- Not Reported **26%** (36)
- Design Engineer **20%** (29)
- Architecture Team **16%** (22)



Energy Modeling Requirements

In line with HDR's AIA 2030 Commitment and sustainability goals, all design projects must perform energy modeling as part of their scope, whether required or not. Following is guidance on scaling the energy model tools and effort to the project scale.

GROSS FEE	MODELING REQUIREMENTS
All Projects	Set EUI benchmark & reduction % *No exceptions*
$0-$500K	Cove Tool Energy Model *Project design team*
$500K-$1M	Cove Tool Energy Model *With quality control review by S+R*
$1M-$1.5M	Shoe Box Model *Collaborate with BES team*
> $1.5M	Full Energy Model *Collaborate with BES team*

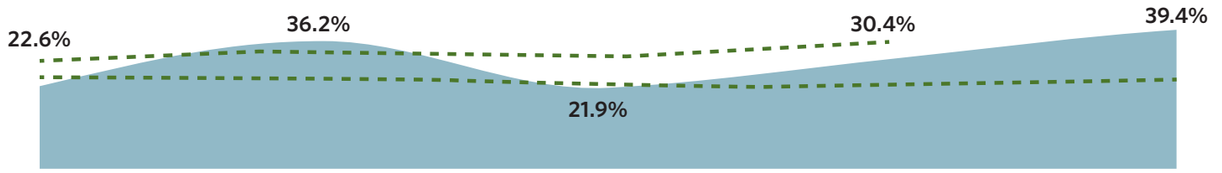
LIGHTING POWER DENSITY REDUCTION: FIRMWIDE

LPD REDUCTION

39.4%

> Lighting Power Density (LPD) reductions have been inconsistent throughout the years. However, we are trending in the positive direction.
>
> HDR is well above the AIA average.

Firmwide LPD Metrics Over 5 Years



Reporting Year	2020	2021	2022	2023	2024
Difference to AIA Average	-7.4%	3.2%	-10.1%	-5.6%	N/A
Difference to AIA Target	-2.4%	11.2%	-3.1%	5.4%	14.4%

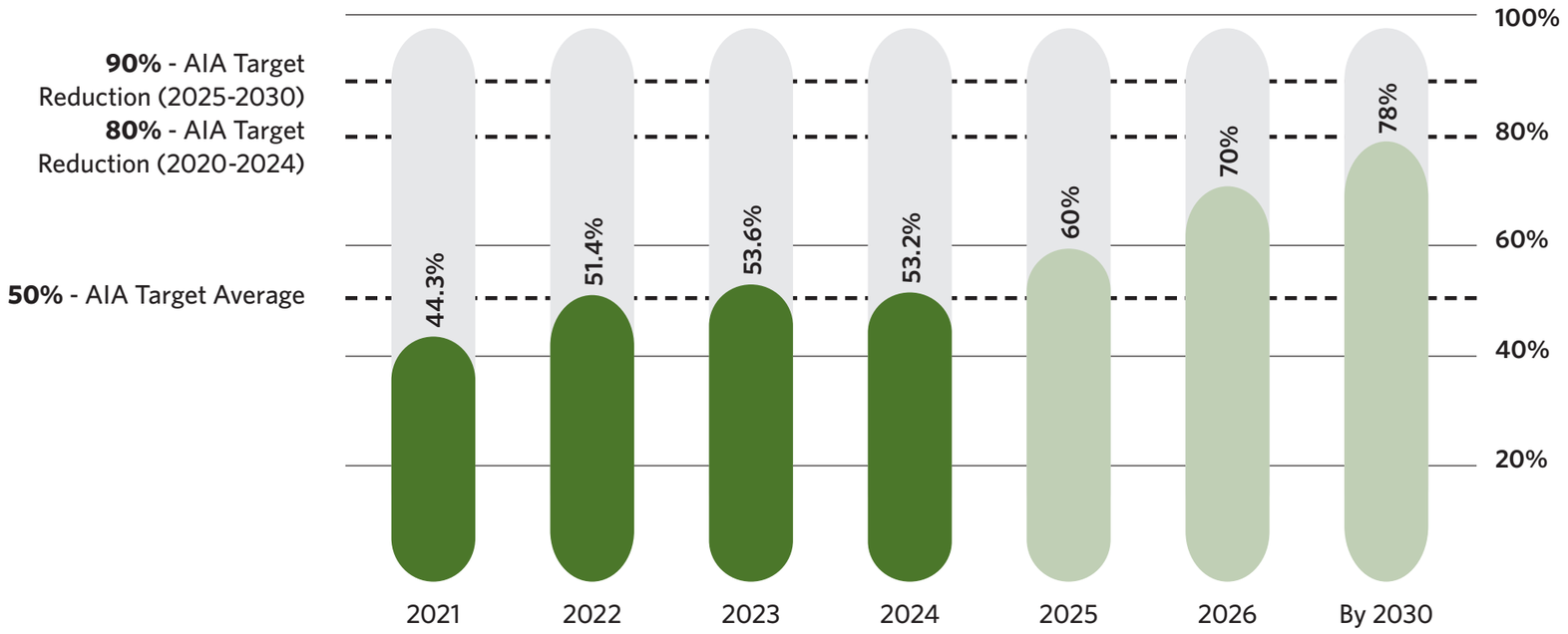
AIA 2030 ACTION PLAN

SET AMBITIOUS YET REALISTIC TARGETS.

1 As we enter the 2025 design year, we have identified strategic tactics to meet HDR leadership's stringent targets, including an accelerated push toward a **70% portfolio EUI reduction.**

SCENARIO PLANNING FOR THE FUTURE

We estimate that a **75% to 80% reduction** is likely the highest level of savings that we can achieve by fulfilling "our end of the design bargain." Additional reductions will require our clients to install new central utilities and explore larger scale on-site renewable energy systems which are beyond the scope of our design projects.



THE FACT IS: Energy use reduction potential is not created equal for all project typologies. Approximately 72% of HDR projects—labs, hospitals, data centers and industrial/maintenance facilities—have high internal process loads and high baseline EUIs. We also have design projects that are site-constrained and utilize an existing Central Utility Plant (CUP). These conditions require us to set unique EUI reduction targets for projects facing these realities. These future EUI reduction targets can be found below.

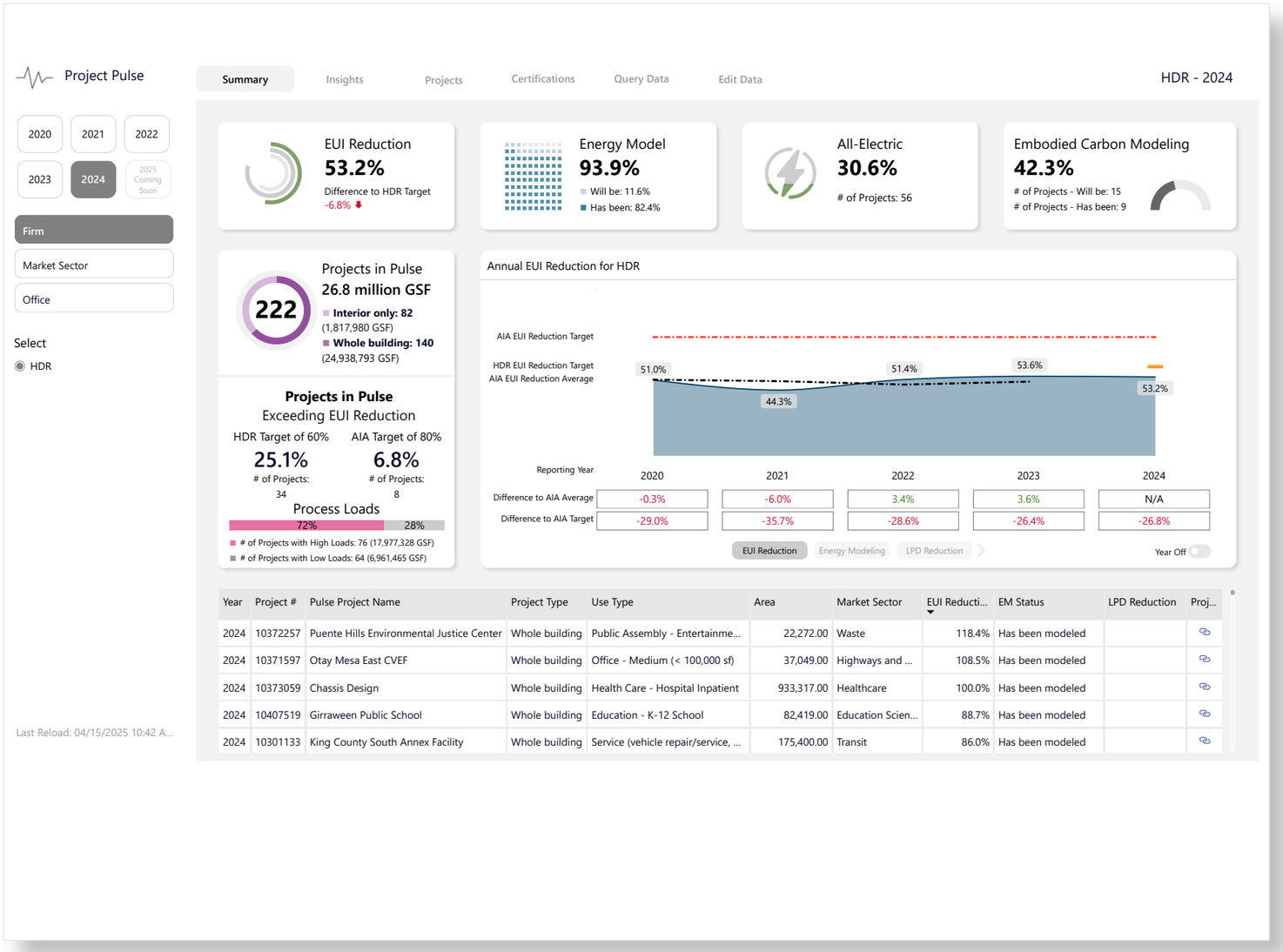
High Energy | Process Load Buildings:

Greenfield Site	80%
Existing Site | Constrained	70%
Existing CUP	65%
Existing CUP + Site Const.	60%

Low Energy | Process Load Buildings:

Greenfield Site	100%
Existing Site | Constrained	85%
Existing CUP	80%
Existing CUP + Site Const.	75%

AIA 2030 ACTION PLAN



IMPLEMENT A REAL-TIME TRACKING DASHBOARD.

2 HDR has created the Project Pulse dashboard that allows employees to check real-time metrics for projects filtered by cost center, market sector and firmwide. This dashboard is used for regular monthly check-ins with project teams and offices.

ESTABLISH OWNERSHIP AND TARGET SETTING AT ALL LEVELS.

3 The HDR Sustainability + Resiliency group works with HDR leaders at all levels to ensure that ownership of goals and metrics are the responsibility of managing principals, design principals and market sector leadership. Monthly meetings held with cost center leadership and local AIA 2030 champions review real-time performance metrics and make plans for improvements.

INTEGRATE WITH THE QUALITY MANAGEMENT SYSTEM (QMS).

4 Minimum requirements for energy modeling and sustainable tasks have been incorporated into the Architecture project fee template, the 0% Review, and Project Review checklists to help ensure that these minimum engagements become standard practice for all HDR design projects.

ENGAGE WITH OFFICE AND PROJECT TEAMS.

5 Throughout the year, members of the Sustainability + Resiliency team, along with our sustainable design advocates from Health and the Architecture practice's Design Council will visit design studios to collaborate with key project teams to improve project performance. We will offer numerous design work sessions and visioning workshops to help project teams and design studios take early steps that will lead to successful project results.

OFFICE CHAMPIONS

Each office's "AIA 2030 Champion" works with the studio's managing principal and design principal and is responsible for collecting data for each project and entering it into Project Pulse. They also field questions and provide resource information.

Without their efforts, our ability for real-time tracking of energy data—and subsequent performance improvements—wouldn't be possible.

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Architect

ATLANTA
Hetika Chhapia
Design Coordinator

BOSTON
Annie Whitsel
Design Coordinator II

CHARLOTTE + RALEIGH
Masoumeh Hosseinzadeh
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CHICAGO
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DALLAS
Tuyen Lemai
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DENVER
Sheridan Staats
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Sarah Giardina
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KANSAS CITY
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Transportation Architecture Business Class Director

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