2030
BY THE NUMBERS

The 2019 summary of
the AIA 2030 Commitment

ABOUT THE AMERICAN INSTITUTE OF ARCHITECTS

Founded in 1857, AIA consistently works to create more valuable, healthy, secure, and sustainable buildings, neighborhoods, and communities. Through more than 200 international, state, and local chapters, AIA advocates for public policies that promote economic vitality and public wellbeing.

AIA provides members with tools and resources to assist them in their careers and business as well as engaging civic and government leaders and the public to find solutions to pressing issues facing our communities, institutions, nation, and world. Members adhere to a code of ethics and conduct to ensure the highest professional standards.

ABOUT THIS REPORT

2030 By the Numbers: The 2019 Summary of the AIA 2030 Commitment measures annual performance of the architecture and design community toward its goal of carbon neutral buildings by 2030. It includes data from calendar year 2019 and suggestions for improving performance year to year.

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CONTENTS

Section 1. The 2030 Commitment 4
- Addressing climate change: A health, safety, and welfare crisis 5
- Companies reporting 2019 data 8
- What is the 2030 Commitment? 11

Section 2. A decade of progress 13
- Change in energy use and CO2 emissions 15
- Energy codes drive performance 17
- Energy modeling is essential 18
- We're in this together 20

Section 3. The next 10 years 23
- Constant evolution 24
- Advocacy in communities 25
- Off-site renewables 25
- Embodied carbon 25

Section 4. Conclusion 27

References 29
Acknowledgments 30
Image credits 31

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SECTION 1.

THE 2030 COMMITMENT

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ADDRESSING CLIMATE CHANGE: A HEALTH, SAFETY, AND WELFARE CRISIS

Each year design teams rally to report thousands of active projects to the AIA 2030 Commitment program. Established in 2009, the voluntary program asks architects, engineers, and the entire design profession to take robust action to address climate change and to report their progress toward achieving a carbon neutral built environment by the year 2030.

In a normal year, the effort to report this progress is a commendable undertaking. This year—in the middle of a global pandemic, economic recession, and some of the largest civil rights demonstrations in U.S. history[1]—the sustained support for collective climate action is even more remarkable. Between January and August 4, 2020, more than 300 companies reported energy savings data from calendar year 2019 for this report. AIA urges all members of the design community to join these committed companies in climate action.

Contributors to the program have shown how thousands of projects together can support the creation of a better, more sustainable built environment. The data demonstrates that climate action is achievable, and that the 2030 Commitment program is the pathway for progress.

In 2019 alone, 311 companies reported 3.3 billion square feet across 107 countries to the 2030 Commitment's Design Data Exchange (DDx). These projects accounted for an overall 49% predicted energy use intensity (pEUI) reduction, which is equivalent to avoiding 20.2 million metric tons of carbon dioxide emissions relative to 2030 baseline-equivalent buildings. That figure represents the same level of carbon that is sequestered by 26.4 million acres of forest in one year.

2019 AT A GLANCE

49%
overall pEUI reduction.

311
companies reported data.

27
companies met the 70% predicted EUI (pEUI) reduction target.

20,331
projects reported.

241
whole-building projects are predicted to be zero net energy.

15%
of 3.3 billion reported GSF meets the 70% pEUI reduction target for whole buildings.

25%
of 433 million reported GSF meets the 25% predicted lighting power density (pLPD) reduction target for interior-only projects.

107
countries represented.

55%
of reported whole-building GSF has been energy modeled.

20.2 million
metric tons of CO_2 emissions were avoided relative to 2030 baseline-equivalent buildings.

Photo by Aziz Ayad on Unsplash

Climate change is a health, safety, and welfare crisis. Ignoring it would undermine our most critical professional responsibility: to protect our clients, our communities, and our earth.

The improvement is significant, but with the climate crisis escalating, more needs to be done. This year's average weighted pEUI reduction—49%—is the best in 2030 Commitment history, but it is still less than 70% of the fossil fuel and energy reduction target set for active projects in 2019. With less than a decade left to meet our industry's 2030 deadline, it is time for every company—and every design professional—to act.

While there is no current scientific consensus suggesting a direct connection between climate change and the emergence of COVID-19, there is widespread recognition that climate change adversely impacts health and infectious disease occurrence.[2] Failure to address common root issues could make future pandemics more frequent and more severe.

The design industry must lead the way.

In addition to threatening public health, climate change—itself an existential threat—exacerbates systemic racial injustice and economic crises[3]. Within the next four generations (by the year 2100), the earth could warm by 3 degrees Celsius[4], and the costs of this crisis will be devastating—a loss to the global economy of $520 billion per year to start[5]. Climate change also will mean heightened competition for resources such as land, food, and water, and it will mean additional mass population displacement[6].

Rising sea levels, extreme weather events, and the degradation of natural resources are a direct result of increased carbon levels, which threaten national security in addition to the global economy[7]. Rising carbon levels also disrupt the balance of ecosystems, undermine public health, and threaten to transform our planet irreparably and compromise our future.

The multiplier effects of climate change are far-reaching. Communities of color are already disproportionately burdened by poor environmental quality and may have limited access to information, resources, and institutions to prepare for and avoid the effects of climate change[8]. In order to prevent further loss of life, the design community must work even harder to create a more resilient, equitable, and sustainable communities.

The consequences of climate change are alarming, but they are not inevitable. Globally, buildings account for 39% of total greenhouse gas (GHG) emissions. The design industry is largely responsible for eliminating that output.

Through their work, 2030 Commitment signatories make the message clear that addressing climate change starts with the 2030 Commitment, and it starts with just one project. Learn more about joining the 2030 Commitment on AIA's website.

The urban built environment is responsible for 75% of annual global GHG emissions: Buildings alone account for 39%.

Source: Architecture 2030

THESE COMPANIES REPORTED 2019 DATA

Companies in green met the 70% pEUI reduction for 2019.

Firm size: 1–9

Access Architecture
Arkin Tilt Architects
BLDGS
Bright Common Architecture & Design
Canopy Architecture + Design
Chaac Simulaciones Inc
Coldham & Hartman Architects
COULSON
DRAW Architecture + Urban Design
DSGN
FIFTEEN Architecture + Design
Frederick + Frederick Architects
gbA Architecture & Planning
High Plains Architects
HPZS
HUSarchitecture
In Balance Green Consulting
Jer Greene, AIA + CPHC
Ken Parel-Sewell Architects Inc.
Kipnis Architecture + Planning
Laura Garcia Design, Architecture | Consulting
Marlene Imirzian & Associates Architects
McLennan Design
PATH Architecture
Paul Poirier + Associates Archtiects
Precipitate, PLLC
Robbins Architecture, Inc.
Sam Rodell Architects AIA
Speranza Architecture
Studio Nigro
TBDA
Touloukian Touloukian Inc.
typ.
Urban Design Perspectives
WATERSHED LLC
ZeroEnergy Design

Firm size: 10–19

100 Fold Studio
Blair + Mui Dowd Architects, PC
Brooks + Scarpa Architects, Inc.
English + Associates Architects, Inc
Farr Associates
John Ronan Architects
Johnson Roberts Associates, Inc.
Jones Studio, Inc.
Jones Whitsett Architects
Kaplan Thompson Architects
KOO LLC
Kuhn Riddle Architects
Lehrer Architects LA, Inc.
Maclay Architects
Nano LLC
OPAL
Placetailor
Re:Vision Architecture
Richard + Bauer
Rodwin Architecture
Ross Barney Architects
Salazar Architect Inc.
siegel & strain architects
Smith-Miller + Hawkinson Architects
SMNG A Ltd.
Sol design + consulting
Studio Ma
The Green Engineer, Inc.
UrbanWorks, Ltd.
Vermont Integrated Architecture
Vinci-Hamp Architects, Inc.

Firm size: 20–49

Amenta Emma Architects
Anderson Brulé Architects
Anderson Mason Dale Architects
Ann Beha Architects
archimania
Ashley McGraw Architects
Blackney Hayes Architects
BLT Architects
Braun and Steidl Architects
Brininstool + Lynch, Ltd.
Bruner/Cott & Associates
BVH Architecture
Caldwell Associates Architects
Carleton Hart Architecture
CAW Architects, Inc.
Curtis + Ginsberg Architects LLP
Dake Wells Architecture
David Baker Architects
DIGSAU
DS Architecture, LLC
DSK Architects + Planners
DWL Architects + Planners Inc
Ehrlich Yanai Rhee Chaney Architects
El Dorado
emersion DESIGN
Engberg Anderson Architects
Feldman Architecture
FF&P
FFA Architecture and Interiors, Inc.
Field Paoli Architects

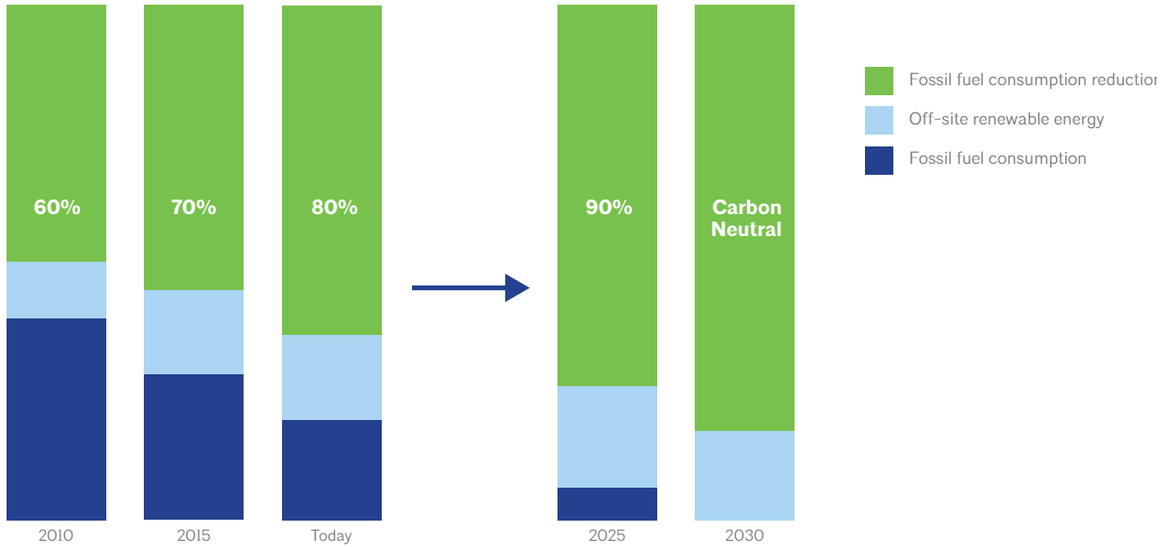
Finegold Alexander Architects
Flansburgh
GREC
Green Hammer
Guidon Design
Hahnfeld Hoffer Stanford
HarrisonKornberg Architects
Hartshorne Plunkard Architecture
Helix Architecture + Design
Holly and Smith Architects
Holst Architecture
Howeler + Yoon Architecture, LLP
ICON Architecture, inc.
IKM Incorporated
Jensen Architects
JSA, Inc
Kliment Halsband Architects
Koning Eizenberg Architecture, Inc.
Krueck + Sexton Architects
Landon Bone Baker Architects (LBBA)
Leddy Maytum Stacy Architects
Leers Weinzapfel Associates
Miller Dyer Spears, Inc.
Neumann Monson Architects
Noll & Tam Architects
Pappageorge Haymes Partners
Pei Cobb Freed & Partners Architects LLC
Pickard Chilton
Pyatok Architecture + Urban Design
RNT Architects
SHKS Architects
Snow Kreilich Architects
The Sheward Partnership
Trahan Architects
Trivers Associates
TruexCullins
Wheeler Kearns Architects
William Rawn Associates
Wright Heerema Architects
Yost Grube Hall

Firm size: 50–99

5G Studio Collaborative
AC Martin
Adrian Smith + Gordon Gill Architecture
Alliiance
ARC/Architectural Resources Cambridge, Inc
Architects Hawaii Limited
Arrowstreet
Atelier Ten
BAR Architects
Bassetti Architects
Bergmeyer Associates
bKL Architecture LLC
BNIM Architects
Bora Architects
Browning Day Mullins Dierdorf
CambridgeSeven
Centerbrook Architects and Planners
CO Architects
COOKFOX Architects
CS&P
Design Collective, Inc.
DiMella Shaffer
Duda Paine Architects
ehdd
ELS Architecture and Urban Design
Eskew+Dumez+Ripple
Fennick McCredie Architecture, Ltd.
GBD Architects Incorporated
Goody Clancy
GSBS Architects
GWWO, Inc. Architects
Hacker
Hastings Architecture Associates, LLC
Hennebery Eddy Architects, Inc
HMFH Architects, Inc.
INVISION
KFA, LLP
KSS Architects
Lake|Flato Architects
Lavallee Brensinger Architects
Legat Architects
LSW Architects
M+A Architects
Mahlum Architects
McGranahan Architects
Miller Dunwiddie
MJMA
Montalba Architects, Inc.
Morrissey Engineering
MSR
National Community Renaissance
Opsis Architecture
Orcutt | Winslow
Overland Partners Architects
PCA, Inc
Quattrocchi Kwok Architects
Ratcliff
RMW architecture & interiors
RVK Architects, Inc.
SHP Leading Design
SRG Partnership, Inc.
STG Design
The Miller Hull Partnership
Utile
Valerio Dewalt Train Associates
VMDO Architects
Weber Thompson
WRT

Firm size: 100+

Albert Kahn Associates, Inc.
Ankrom Moisan Architects, Inc.
Architectural Nexus, Inc.
Ayers Saint Gross
Ballinger
Beyer Blinder Belle Architects & Planners, LLP
Bohlin Cywinski Jackson
Boulder Associates, Inc.
BuroHappold Engineering
BWBR
CallisonRTKL
Cannon Design
CBT Architecture
Clark Nexsen
Cooper Carry
Corgan
CTA Architects Engineers
Cuningham Group Architecture, Inc.
Dattner Architects
Davis Partnership Architects
Dekker/Perich/Sabatini
DES Architects + Engineers
Dewberry
DIALOG
DLR Group
Elness Swenson Graham Architects, Inc
Ennead Architects
EUA
EwingCole
EXP
EYP
Flad Architects
FXCollaborative
Gensler
GFF
GGLO
Gould Evans
Gresham Smith
Grimm and Parker
Handel Architects, LLP
Hargis Engineers, Inc.
Harley Ellis Devereaux
HDR
HGA Architects and Engineers
HKS
HLW International, LLP
HMC Architects
HOK Inc.
Hord Coplan Macht
Huntsman Architectural Group
Jacobs
JLG Architects
KieranTimberlake
Kirksey
Kohn Pedersen Fox Associates PC
Lemay
LHB, Inc.
Little Diversified Architectural Consulting
LMN Architects
Looney Ricks Kiss (LRK Inc)
Lord Aeck Sargent
LPA, Inc.
LS3P
Mazzetti
Mithun
Moody Nolan
Moseley Architects
NAC Architecture
NBBJ
Olson Kundig
OPN Architects
Otak, Inc
Payette
Pelli Clarke Pelli Architects
Perkins + Will
Perkins Eastman
Quinn Evans Architects
RATIO Architects
RDG Planning & Design
Retail Design Collaborative & Studio One Eleven
Robert A. M. Stern Architects
RSP Architects
Sasaki Associates
SERA Architects
Shepley Bulfinch
Smith Seckman Reid, Inc.
SmithGroup
SMRT
Solomon Cordwell Buenz
SOM (Skidmore Owings & Merrill)
Stantec Architecture
Steinberg Hart
Studio Gang Architects
STUDIOS architecture
The Beck Group
The SLAM Collaborative
Thornton Tomasetti
tk1sc
TLC Engineering Solutions
TreanorHL
tvsdesign
Vanderweil Engineers
WDG Architecture
Wight & Company
WRNS Studio
ZGF Architects LLP



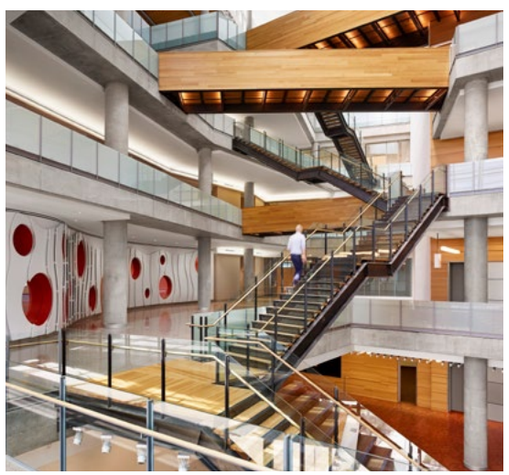
WHAT IS THE 2030 COMMITMENT?

The 2030 Commitment aims to transform the practice of architecture to respond to the climate crisis in a way that is holistic, firm-wide, project-based, and data-driven. In short, to build a better world for future generations, signatories have committed to transform their practices to deliver carbon neutral buildings by 2030. They demonstrate their progress by reporting the design performance of their entire portfolio to AIA each year.

AIA uses two easy-to-calculate metrics to gauge progress:

- Predicted energy use intensity (pEUI) for whole-building projects; and
- Predicted lighting power density (pLPD) for interior-only projects.

AIA's metrics, targets, and goals mirror those established by Ed Mazria's nonprofit Architecture 2030. In 2006, Mazria delivered a bold challenge to the design community: All new buildings, developments, and major renovations should be carbon neutral by 2030. Mazria's challenge outlined progressively more challenging fossil fuel and energy reduction targets, including a 70% reduction in 2019 and 80% reduction in 2020. Within six months of Mazria's challenge, AIA adopted the challenge, paving the way to the 2030 Commitment.



LAKE|FLATO

How to get started on a 2030 Commitment

Lake|Flato was one of the first design companies to sign onto the 2030 Commitment. Because the firm already had a reputation for incorporating sustainability into design, the initiative was a natural fit for its architects. During that inception period, the company's leaders met regularly with other firms to create action plans and to discuss how to best track and report data. "That work was foundational," said Lake|Flato Sustainability Director Heather Gayle Holdridge, Assoc. AIA.

Today Lake|Flato routinely advises design companies that want to make sustainability part of their normal practice. Holdridge said, "The program I always point these firms to is the 2030 Commitment. I tell them if they want to make this issue part of their culture, AIA's program is the tool to make that happen."

Another piece of advice Holdridge gives industry colleagues is that addressing climate change "is about each project, and it is about the whole portfolio." Not every client will ask about sustainability, but if a firm makes it part of its consistent practice, those projects can also have a positive impact on efforts to reduce emissions and energy use.

In 2019, Lake|Flato was named *Architecture* magazine's top firm in the United States, in part for its significant commitment to sustainability. The same year, Lake|Flato won its 12th AIA COTE® Top Ten Award for its work on Confluence Park, which transformed a former construction storage yard into a unique outdoor education center. In 2020, Lake|Flato received two more COTE® Top Ten Awards, for collaborations on the Austin Central Library and the Marine Education Center at the Gulf Coast Research Laboratory in Mississippi.

Check out The Habits of High-Performance Firms to learn more about Lake|Flato's sustainability efforts.

Photos by Casey Dunn

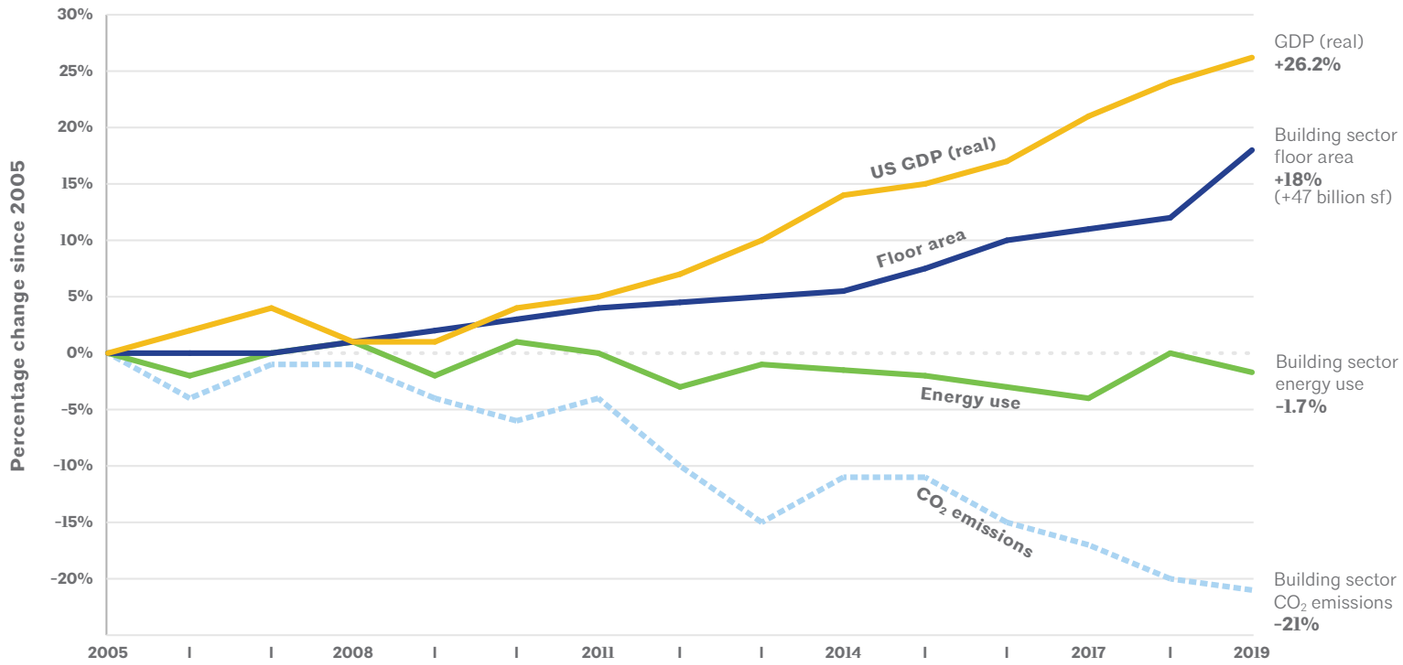
SECTION 2.

A DECADE OF PROGRESS

Photo by Garrett Rowland

A DECADE OF PROGRESS

CHANGES IN US GDP AND BUILDING SECTOR FLOOR AREA, ENERGY USE, AND CO_2 EMISSIONS (2005–2019)



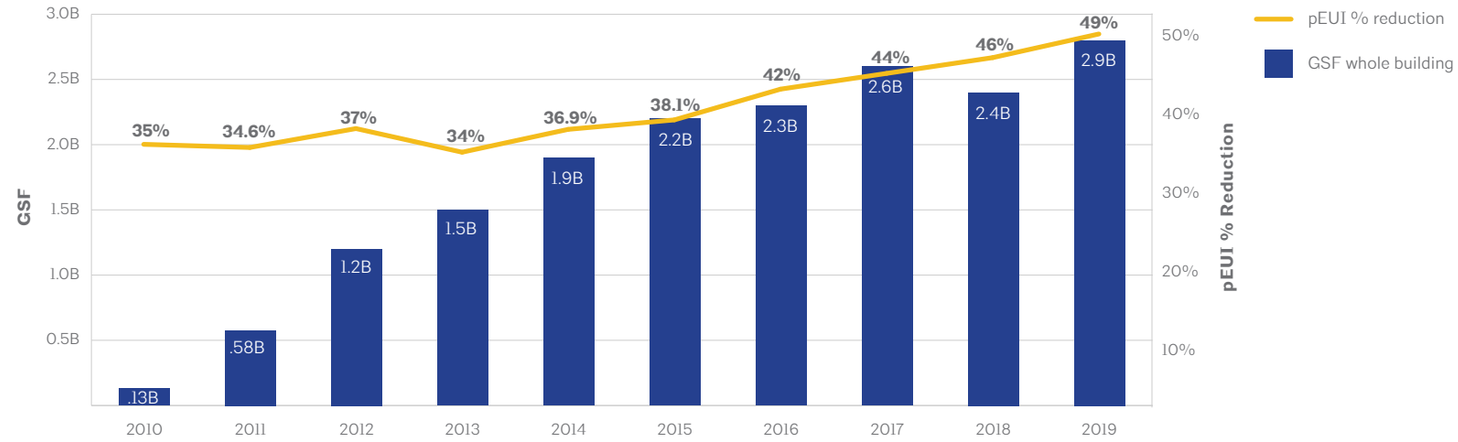
Source: Architecture 2030, US Energy Information Administration, Annual Energy Outlooks, Multpl.com (US GDP)

CHANGE IN ENERGY USE AND CO_2 EMISSIONS

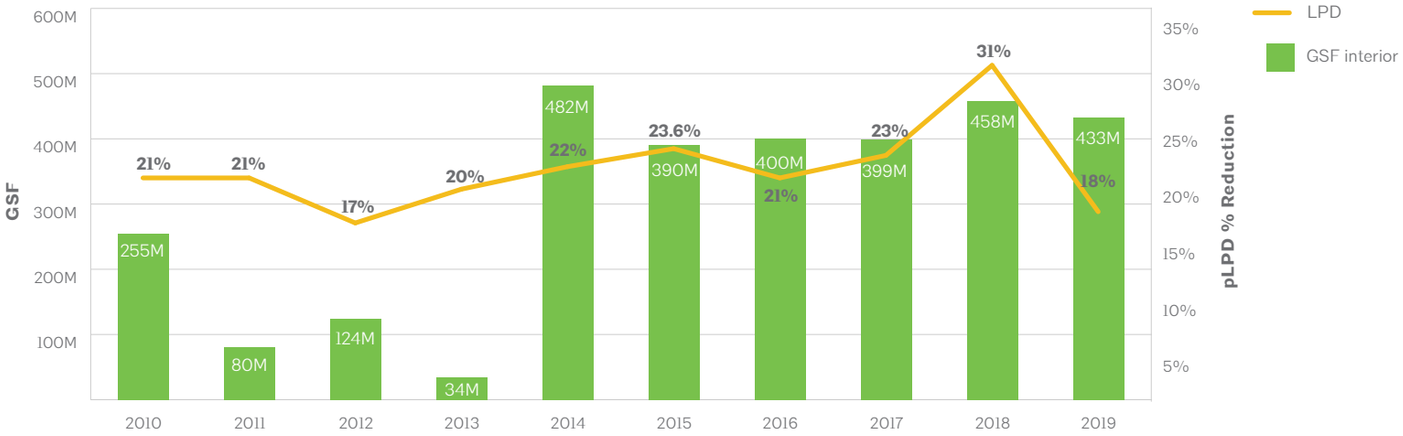
Ten years strong, the 2030 Commitment offers a clear, measurable way to reduce a building's share of greenhouse gas emissions. According to an Architecture 2030 analysis, building sector carbon dioxide emissions are down 21% since 2005 even though more than 47 billion square feet of built space have been added in the United States since then[9]. The majority of this improvement happened after AIA started collecting 2030 Commitment project data in 2010.

A DECADE OF PROGRESS / Change in energy use and CO_2 emissions

WHOLE BUILDING GSF/pEUI % REDUCTION YEAR OVER YEAR



INTERIOR ONLY GSF/pLPD % REDUCTION YEAR OVER YEAR

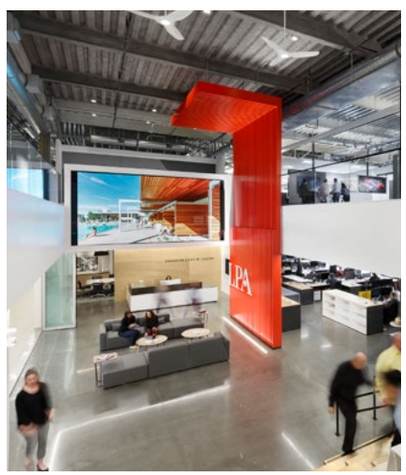


As the 2030 Commitment continues to grow, signatories are making demonstrable progress toward the program goals. Although the pLPD percent reduction for interiors projects slipped to 18% this year, the average pEUI percent reduction for whole-building projects is the highest ever—49%.

This year, 311 2030 Commitment signatories reported 3.3 billion gross square feet (GSF) for their 2030 Commitment projects. That area is nearly the size of New Mexico.

While this progress is remarkable, it is not enough. We remain below the 70% reduction target, which increased to 80% in 2020, and are still short of the immediate 50% reduction target called for by Architecture 2030 in 2006. The good news: The design industry can still meet the targets—if it acts now.

Ten years into the 2030 Commitment, it is evident that zero net carbon design is possible. Progressive energy codes and policies can work. Energy modeling can lead to better decision-making. And we know that 2030 Commitment signatories can meet the challenges of our times.



LPA, INC.

Implementing the 2030 Commitment at scale

LPA, Inc., an integrated design firm with six offices in California and Texas, is the largest firm to exceed the 70% pEUI reduction target in 2019. In 2019 alone, LPA reported more than 6 million GSF, demonstrating that the 2030 Commitment can be met at scale. LPA also surpassed the target in 2018, reporting more than 5 million GSF across education, civic, and commercial projects.

"The 2030 AIA Commitment has helped us clearly define our goals across the firm," says LPA President Dan Heinfeld, FAIA. "Every designer understands the need to collaborate and work with the other disciplines from an early stage to hit the goals."

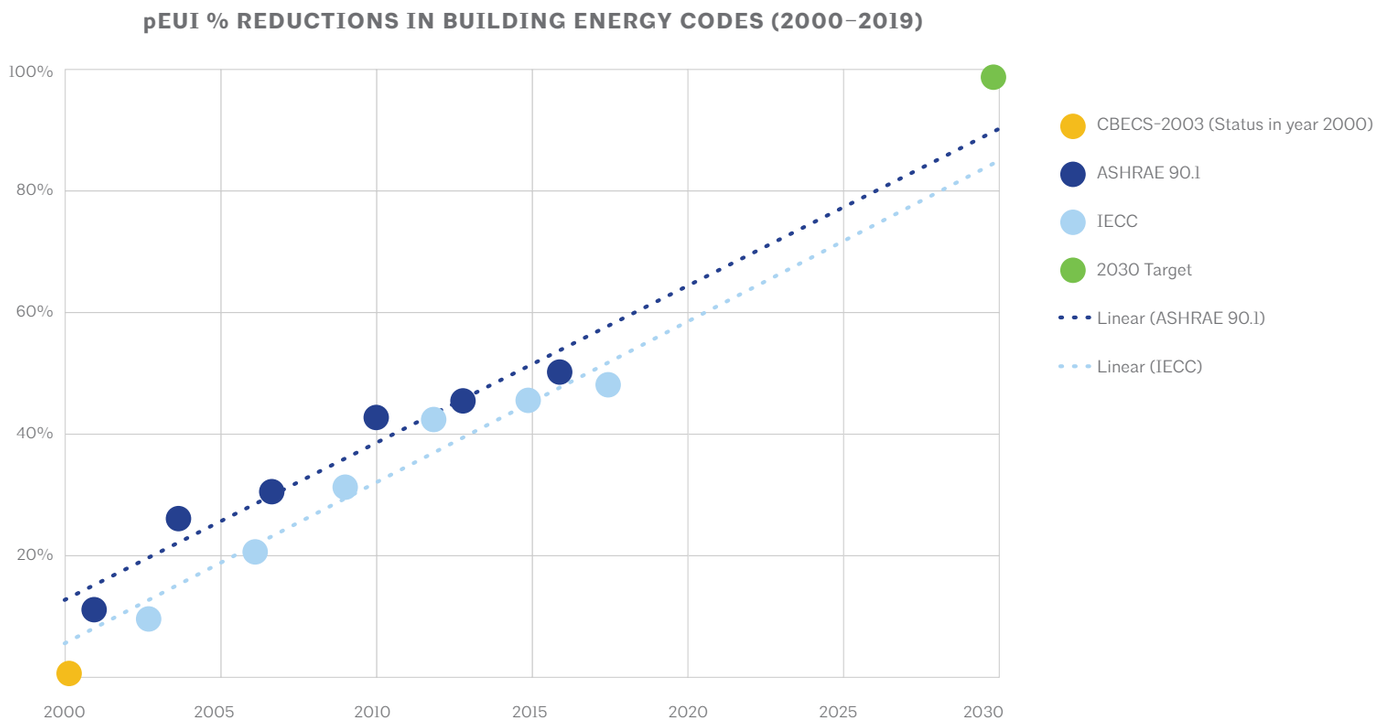
The nature and location of their practice offers distinct advantages. As an integrated firm, LPA is able to easily engage all disciplines in project goal-setting and iteratively prototype and evaluate options through design. California's rigorous Building Energy Efficiency Standards (Title 24, Parts 6 and 11) require energy modeling; in 2004 LPA implemented a firm-wide goal of surpassing Title 24 standards by 25% in all projects.

Since joining the 2030 Commitment in 2011, LPA has optimized these inherent advantages by investing in staff education and infrastructure. "We understood early in the process that added rigor and structure would be needed to ensure that every project team understood their baselines, set targets and measured progress," observed Heinfeld. "That required additional education and training to help project teams be successful."

Teams are encouraged to repeatedly revisit targets through the design process to track progress, study and compare design concepts using a variety of tools, and learn from 2030 Commitment data across the firm. "The reporting data gives us a better understanding of our strengths and weaknesses by creating a feedback loop," shared Heinfeld. "It can also be shared with clients to support performance innovation."

Check out Five tips for meeting the 2030 Commitment for more insights from the LPA team.

Photos by Cris Costea

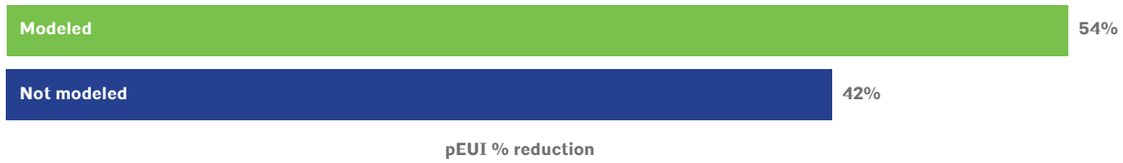


ENERGY CODES DRIVE PERFORMANCE

Two key factors driving performance improvement are energy code adoption and energy modeling. According to analysis by Pacific Northwest National Laboratory and the New Buildings Institute, more recent energy codes are nearly 50% more efficient than they were in 2000[10].

The design industry must advocate for adoption of a modern set of rules. AIA and our allies successfully advocated for the International Energy Conservation Code (IECC) to pass the ZERO Code Renewable Energy Appendix in the IECC-2021, which will accelerate progress in jurisdictions where it is adopted. The ZERO Code integrates cost-effective energy efficiency measures with on-site and/or off-site renewable energy resulting in zero net carbon buildings.

AVERAGE pEUI % REDUCTION FOR OFFICE IN BOULDER, COLORADO WITH & WITHOUT ENERGY MODELING



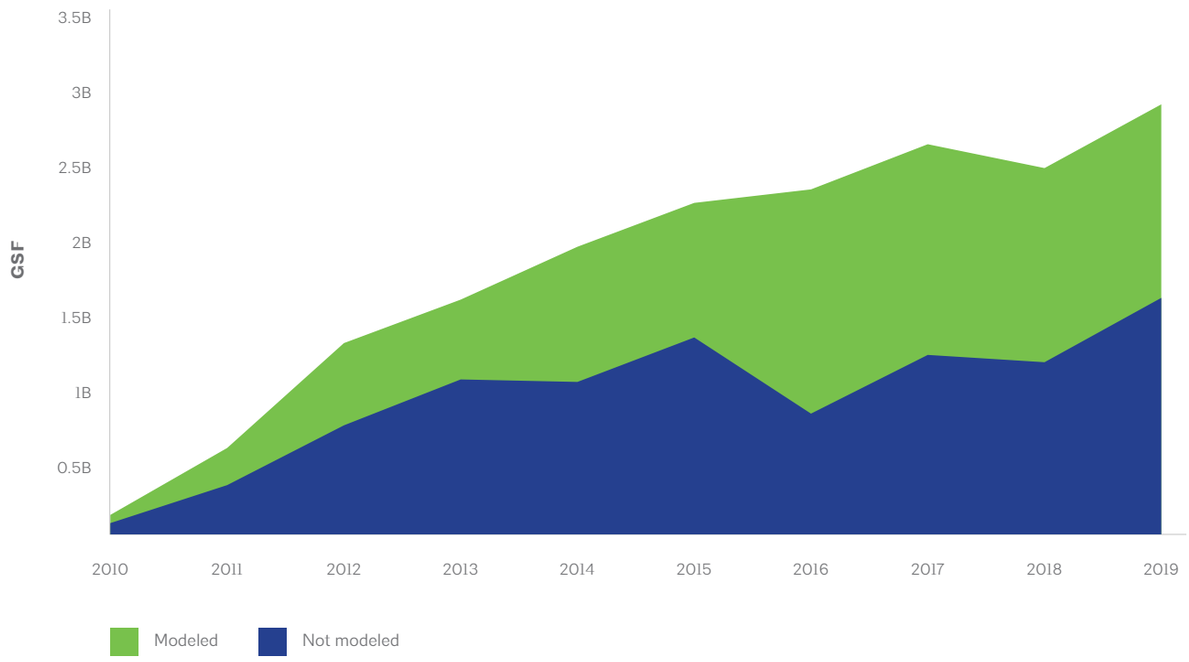
The average medium-sized office building in Boulder, Colorado, might not hit the 2030 targets, but energy modeling helps bridge the gap. When modeled, 40,000–60,000 sq. ft. office projects are, on average, 29% more energy efficient than their non-modeled counterparts. That improvement saves 133,400 kWh of electricity and nearly $14,200 each year.

ENERGY MODELING IS ESSENTIAL

In addition to codes, energy modeling is one of the best ways for the design industry to iteratively quantify the impact its design decisions have on energy use, compare design options, and determine potential savings. In 2019 alone, projects that used energy modeling were 29% more energy efficient than non-modeled projects. That means if a company is not modeling, it is leaving real energy and costs savings for its clients on the table.

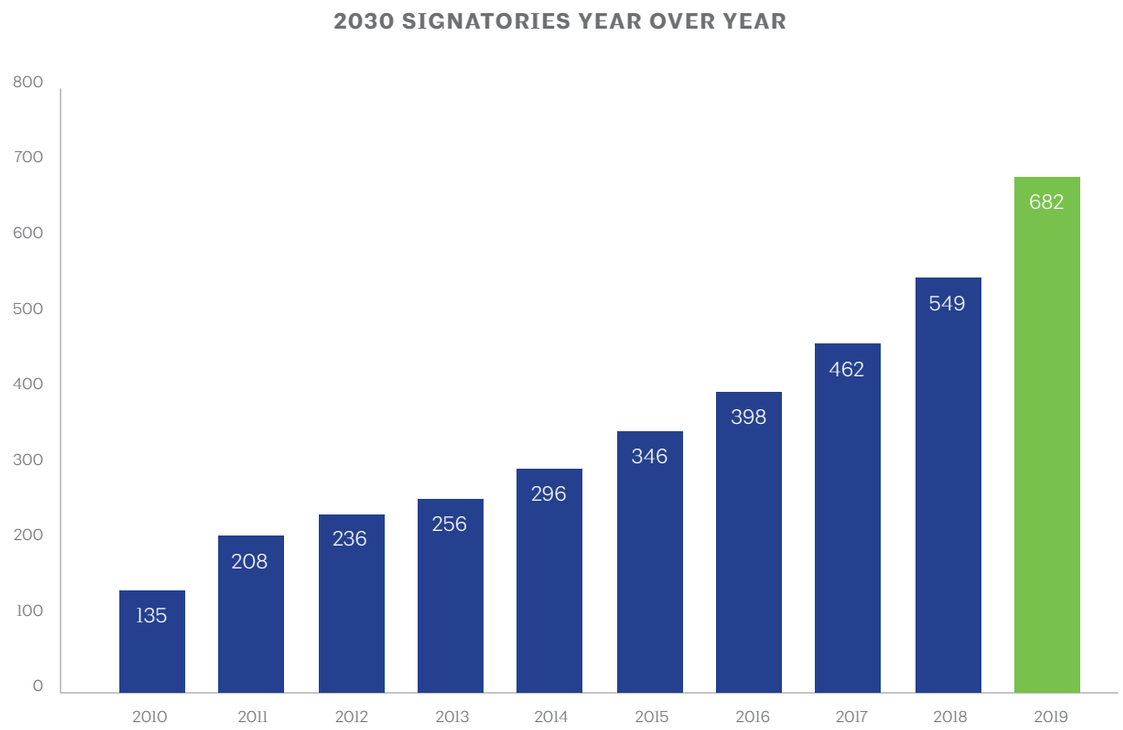
When conducted early and often in the design process, energy modeling helps designers test design solutions to cost-effectively optimize performance beyond energy in order to improve occupant comfort and resilience. *AIA's Architect's Guide to Building Performance* helps architects better integrate building performance simulation into their design process.

MODELED VS. NON-MODELED GSF BY YEAR (WHOLE BUILDING PROJECTS)



Although the design industry is not utilizing energy modeling consistently, 10 years of learning suggests 2030 Commitment signatories prioritize it on larger projects where energy and cost savings are most impactful. Energy modeling the largest projects is an effective strategy for improving overall portfolio performance and for maximizing staff time.

This dynamic is also particularly important for U.S. cities. According to Architecture 2030, fewer than 5% of the overall number of buildings in a city can produce as much as 50% of a city's greenhouse gas emissions[11].



WE'RE IN THIS TOGETHER

By the end of calendar year 2010, 135 architecture, engineering, and planning companies had joined the 2030 Commitment. The number of signatories has grown every year since, and by the end of calendar year 2019, 682 companies, including four engineering companies, were a part of the movement.

Additionally, the program's first building owner—a nonprofit affordable housing developer—joined in 2019.

Notably, there is a gap between the total number of signatories and those who are submitting data annually. New signatories, who are not expected to report data for their join year, account for part—but not all—of the gap. Tackling climate change will require continued commitment and leadership from current and future signatories. AIA's 2030 Commitment offers a simple, measurable framework for the next 10 years.

NEW SIGNATORIES IN 2019

Firm size: 1–9

Access Architecture
AJA Architecture and Planning
atelierRISTING
Azizi Architects, Inc.
BLDGS
BluPath Design
Bright Common Architecture & Design
Canopy Architecture + Design
Chatham Hill Design and Build, LLC
Civistruct Integrated Systems Limited
CLUAA
DE Architects
DERN Architecture + Development
DesignBridge, Ltd.
Designs for Life LLC
dSPACE Studio
Dynerman Architects pc
École d'Architecture d'Abidjan
Ewers Architecture
Francois de Menil Architect, PC
greengrids
Griffy Creek Studio LLC
GRN VISION LLC
Guy Burnett Architects
Harboe Architects, PC
HUSarchitecture
Ken Parel-Sewell Architects Inc.
Kennard Architects
Lassel Architects PA
Lightvox Studio
Linda Daniel, Architect, LLc
Loci Architecture and Design llc
Macht Architecture
mahmoud
Mark A. Cuellar Design + Build
MARPILLERO POLLAK ARCHITECTS
MIR Collective, LLC
MJB Architects, llc
OLSHESKY DESIGN GROUP LLC
ORCHESTRA Design Studio
Peter Spellman Architecture
Rivetna Architects Inc.
Robbins Architecture, Inc.
Saltans Architects_International, Ltd.
Sam Rodell Architects AIA
Speranza Architecture
Stemach Design & Architecture
Symbiotic Living Architecture + Design
through design LLC
Todd Jersey Architecture
Tonic Design Professional Corp
typ.
unabridged Architecture
UrbanLab
Valeria
Vladimir Radutny Architects
WATERSHED LLC
Wittman Estes Architecture + Landscape
Yoshihara McKee Architect
schacht aslani architects
Shelter Architecture
Skender
SMNG A Ltd.
SMP Architects
Sol design + consulting
Studio Completiva
Thomas Roszak Architecture
Turowski2 Architecture, Inc.
Vinci/Hamp Architects Inc.
von Weise Associates
Woodhouse Tinucci Architects

Firm size: 10–19

Blitch Knevel Archs., LLC
CABE ARQUITETOS
Dyron Murphy Architects P.C.
Jones Whitsett Architects
Kennedy & Violich Architecture
Kevin Daly Architects
Lothan Van Hook DeStefano Architecture
Re:Vision Architecture
Salazar Architect Inc.

Firm size: 20–49

Anderson Brulé Architects
Anderson Mason Dale Architects
architecture +
AXIS Architecture + Interiors
Bailey Edward
Brininstool + Lynch, Ltd.
CAW Architects, Inc.
DREAM Collaborative
DSK Architects + Planners

FF&P
Field Paoli Architects
Flansburgh Architects
Gary Lee Partners
Holabird & Root
Hufft Projects
Jensen Architects
Kliment Halsband Architects
Kobi Karp
Koning Eizenberg Architecture, Inc.
Morgante Wilson Architects
Newman Architects
Noll & Tam Architects
PBDW Architects
SoL Harris/Day Architecture
Spacesmith LLP
Trahan Architects
TruexCullins
Waggonner & Ball
WSA Studio

Firm size: 50–99
ALLEY POYNER MACCHIETTO ARCHITECTURE
Architects Hawaii Limited
Cordogan Clark & Associates Architects Engineers
GastingerWalker&
Hasenstab Architects, Inc.
Lavallee Brensinger Architects
LSW Architects
Miller Dunwiddie
Montalba Architects, Inc.
Morrissey Engineering
National Community Renaissance
rlf
Sheehan Nagle Hartray Architects
STG Design
Studio 8 Architects
Taylor Design

Firm size: 100+
DES Architects + Engineers
EUA
GBBN
Ghafari Associates, LLC
Hargis Engineers, Inc.
Hoefer Wysocki Architects LLC
Huntsman Architectural Group
Integrated Environmental Solutions Ltd.
Integrus Architecture
JCJ Architecture
Kohn Pedersen Fox Associates PC
Lamar Johnson Collaborative
Lemay
LRK Inc.
NELSON Worldwide LLC
SMRT
tklsc

SECTION 3.

THE NEXT 10 YEARS

Photo by: BNIM

CONSTANT EVOLUTION

Ten years ago, the earliest 2030 Commitment signatories used an elaborate spreadsheet to calculate and report their performance against 2030 Commitment targets. Hours of work boiled down to a handful of data points.

Today, 2030 Commitment signatories are able to share more information in less time through the Design Data Exchange (DDx). Firms can quickly visualize their portfolio projects and compare their projects to those around the world that are similar in size and scale.

As we look ahead to the next 10 years, the 2030 Commitment program, tools, and resources will evolve to support industry-wide climate action. AIA will continue to advocate for effective polices, support contributions from off-site renewables in 2030 reporting, and increase literacy around embodied carbon.

ADVOCACY IN COMMUNITIES

Through AIA's 2030 Commitment, signatories have committed to making the moral and financial case to clients to help them better understand and support the need to integrate renewable energy sources into all buildings, making them more sustainable, resilient, and economical.

But we are not calling on only architects to act. The design community and its partners must work with civic and elected officials to change local, state, federal, and international public policy for existing commercial and residential buildings, and it must work to improve mandates for future construction.

From testifying before Congress to advocating adoption of the ZERO Code Renewable Energy Appendix locally, 2030 Commitment signatories are powerful partners as AIA advocates for policies that increase renewable energy use, decrease reliance on fossil fuels, and improve all buildings' ability to withstand extreme weather.

"Energy efficiency and energy sourcing are not a replacement for one another. We must address both. It is of paramount importance that buildings be built and renovated to consume less energy, and, wherever possible, buildings should produce clean energy to put back into the energy grid."

– Julie Hiromoto, AIA, AIA Committee on the Environment 2020 Chair

OFF-SITE RENEWABLES

Historically, the 2030 Commitment allowed signatories to account for only on-site renewables when calculating a project's pEUI. This decision was intended to encourage signatories to pursue energy-efficient design strategies before pursuing off-site renewable energy options.

As we move closer to the 2030 deadline for carbon neutral buildings, including on-site and off-site renewable energy sources becomes more important than ever. Indeed, for some project types in some cities, off-site renewable energy may be essential for hitting the targets.

As a result, AIA is currently exploring options to factor off-site renewables into DDx calculations and hopes to introduce it in the next year.

EMBODIED CARBON

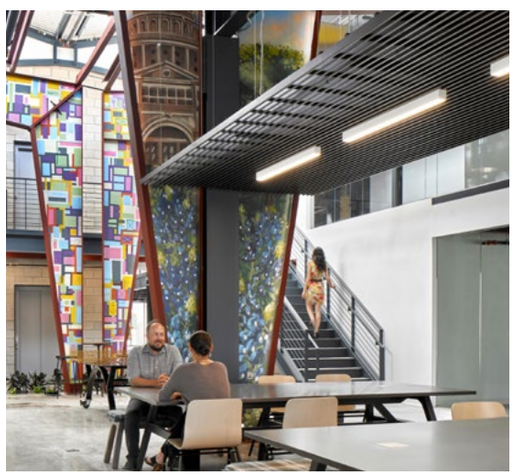
Operational carbon is only one piece of the climate action puzzle for the built environment. In order to meet international targets, the design community will need to embrace embodied carbon in their designs and decision-making.

Embodied carbon refers to all the carbon emitted during the manufacturing and transport of materials and during building construction. For architects, embodied carbon is a crucial metric to consider. Unlike operational carbon, which can be reduced during a building's lifetime, embodied carbon is locked in as soon as a building is completed. It can never be recaptured.

It is for this reason that in 2018 AIA began tracking major renovations. More than four in five (82%) U.S. commercial buildings were constructed before 2000, prior to the establishment of modern building energy codes[12]. Addressing the climate crisis will require retrofitting existing infrastructure to maximize embodied carbon already in place and increasing operational energy efficiency.

The importance of embodied carbon is also why AIA is working with industry leaders to build out lifecycle assessment tracking options in the DDx.

Enabling users to track embodied carbon will not impact calculations toward the 2030 fossil fuel and energy reduction targets, but it will allow architects to evaluate the environmental impacts of their designs more accurately. Going forward, 2030 Commitment signatories will be better equipped to know exactly how they can reduce or eliminate these emissions during the design process.



GENSLER

Bold design strategies offer embodied and operational carbon savings

A leader in design globally, Gensler's UPCycle project in East Austin, Texas, demonstrates how smart design strategies can do triple duty: save money, increase energy efficiency, and minimize embodied carbon.

UPCycle, which earned a 2020 COTE® Top Ten Award, transforms the former Balcones Recycling Center into a unique innovative office building. Rather than building from scratch, the client prioritized adaptive reuse to help preserve and improve neighborhood character and honor existing resources. By prioritizing low-cost, high-impact materials, including reclaimed wood and steel panels, Gensler delivered the project for $84 per square foot, a cost significantly less than the going rate for new commercial construction in the East Austin area.

The design team introduced new skylights and a clerestory to bring natural light into the center of the large existing floor plate. This approach will provide occupants with improved lighting conditions and reduce electricity use. Ultimately, the Gensler team achieved a 63% pEUI reduction.

Gensler also incorporated a decoupled ventilation system with an energy recovery wheel—a feature atypical for a building of this size that will allow energy to be transferred from the incoming hot and humid air stream to the exhaust air, reducing the need for annual cooling energy. Gensler also chose an air-cooled chiller system to eliminate the need for rooftop package equipment that would have increased the structural system. This decision will cut the carbon impact of the project by reducing the structure and improving the building's energy performance above the code minimum rooftop package units.

Check out other 2020 COTE® Top Ten Award recipients for more inspiring case studies.

Photos by Dror Baldinger

SECTION 4.

CONCLUSION

Photo by Robert Deitchler

CONCLUSION

The design sector is at an inflection point. Every action we do not take today compounds our challenges tomorrow.

We must acknowledge the accomplishments of our growing community of 682 companies while pushing ourselves—and our peers—to further move the needle. While commendable, it is necessary to move beyond 49% pEUI reductions and to embrace energy modeling on more than 55% of our projects.

As a profession, the design community has the responsibility to prioritize and support effective actions to exponentially decelerate the production of greenhouse gases contributing to climate change.

From 10 years of the 2030 Commitment, we know design changes can reduce climate impact significantly. We know progress is possible, and we have the technology, the knowledge, and the tools to make an immediate impact.

AIA remains committed to climate action. Will you join us?

"This is a defining moment for the Institute. We are making this our top priority in order to address the crisis our communities face. Moving the needle on this critical issue—that threatens the future of our planet and humanity—requires our firm commitment to achieving carbon neutral goals in the built environment and our immediate action. It's imperative that the industry acts today."

– William J. Bates, FAIA, AIA 2019 President

By joining the 2030 Commitment, your firm:

- Helps create more sustainable, resilient communities for all individuals and families, particularly those who will pay the greatest costs of environmental degradation;
- Saves clients' money by integrating energy analysis and metrics into your practice;
- Boosts its profile by developing new sustainability approaches and exemplifying sustainable design;
- Allows architects, engineers, designers, and builders to join a growing movement dedicated to addressing climate change; and
- Demonstrates a commitment to addressing climate change in concrete, verifiable ways.

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IMAGE CREDITS

Cover
Etsy Headquarters
Architect: Gensler
Photo credit: Emily Andrews
57% predicted reduction from national average EUI for building type.
This project received a 2020 COTE® Top Ten Award.

Page 4
LPA Irvine Studio
Architect: LPA, Inc.
Photo credit: Cris Costea

Page 12
(Top and bottom left) Marine Education Center at the Gulf Coast Research Laboratory
Architect: Lake|Flato in collaboration with Unabridged Architecture
Photo credit: Casey Dunn
47% predicted reduction from national average EUI for building type.
This project received a 2020 COTE® Top Ten Award.

(Bottom right) Austin Central Library
Architect: Lake|Flato + Shepley Bulfinch
Photo credit: Casey Dunn
55% predicted reduction from national average EUI for building type.
This project received a 2020 COTE® Top Ten Award.

Page 13
Etsy Headquarters
Architect: Gensler
Photo credit: Garrett Rowland
57% predicted reduction from national average EUI for building type.
This project received a 2020 COTE® Top Ten Award.

Page 16
(Top) Environmental Nature Center and Preschool
Architect: LPA, Inc.
Photo credit: Cris Costea
100% predicted reduction from national average EUI for building type.
This project received a 2020 COTE® Top Ten Award.

(Bottom left) Palomar College Learning Resource Center
Architect: LPA, Inc.
Photo credit: Cris Costea
70% predicted reduction from national average EUI for building type.

(Bottom right) LPA Irvine Studio
Architect: LPA, Inc.
Photo credit: Cris Costea

Page 23
Asilong Christian High School
Architect: BNIM
Photo credit: BNIM
100% predicted reduction from national average EUI for building type.
This project received a 2019 COTE® Top Ten Award.

Page 26
(All photos) UPCycle
Architect: Gensler
Photo credit: Dror Baldinger
63% predicted reduction from national average EUI for building type.
This project received a 2020 COTE® Top Ten Award.

Page 27
Ford Foundation Center for Social Justice
Architect: Gensler
Photo credit: Robert Deitchler
37% predicted reduction from national average EUI for building type.
This project received a 2020 COTE® Top Ten Award.

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