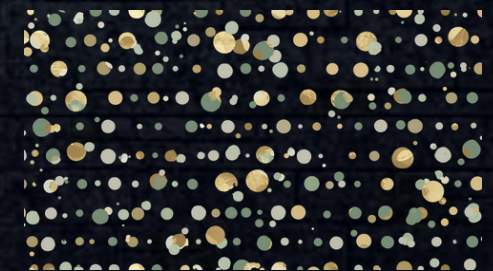


Masonry & the Future of Building in California

Performance. Resilience. Low Carbon.

Presented by

Ben Stapleton, CEO
USGBC California



Our vision for the future

**Transforming
California into a
more sustainable,
resilient, and
equitable place for
all.**

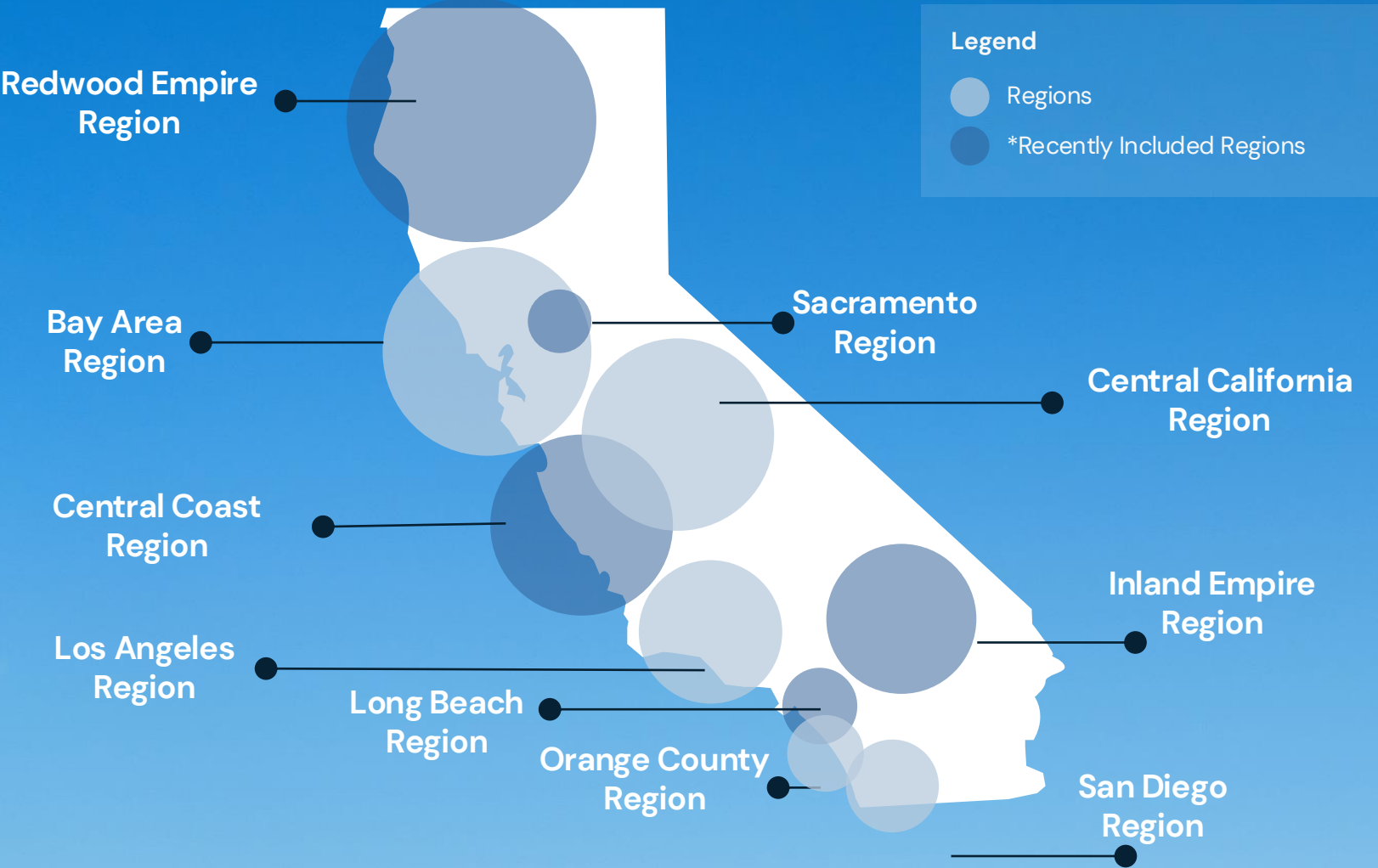


Rooted in Purpose

After uniting California’s green building communities in 2024, USGBC California brought together board members, advisors, and staff to shape a bold new vision to carry us through 2028. This plan is both aspirational and actionable, rooted in clear goals, programs, and milestones. As you read, we invite you to imagine your role in this journey, share it with others, and help us shape what comes next.

Our Mission Transforming California through the built environment into a more sustainable, resilient, and equitable place for all.

USGBC California Regions



How We Create Change

In a state facing urgent environmental and social challenges, we see an opportunity for transformation. Through bold leadership, education, connection, and advocacy, we work to drive lasting, systemic change across California.

We do this by:



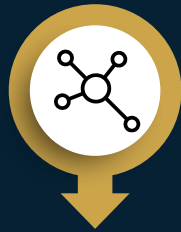
Leading

Inspiring leaders throughout our communities to take action on climate change, public health, and environmental justice.



Educating

Developing and empowering a diverse talent pipeline through training, mentorship, and direct engagement.



Connecting

Convening interdisciplinary perspectives and collaborating to create positive systemic change.



Advocating

Promoting innovative and impactful policy solutions to address the urgent environmental and social challenges of our time.

A Year Defined by Reach

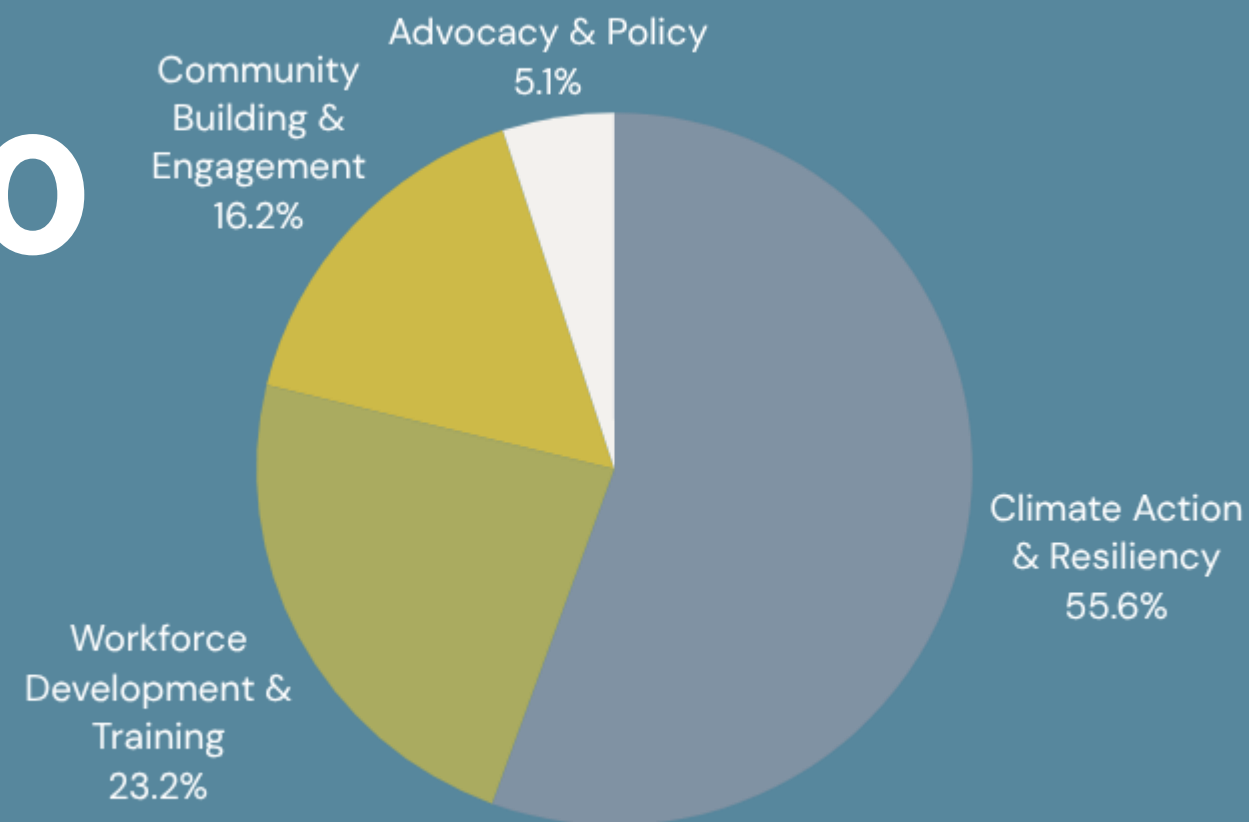
In 2025, our second year unified as USGBC California, we strengthened a statewide movement advancing climate action across the built environment. Across regions and sectors, Californians came together to rebuild after wildfire, expand climate career pathways, accelerate corporate sustainability, and shape policy that supports resilient, high-performance communities.

From hands-on outreach and workforce training to digital innovation and cross-sector convenings, we moved from alignment to implementation, equipping people with the tools, partnerships, and leadership needed to turn climate ambition into measurable progress.

576,000

People reached in 2025

Across outreach, education, training, events, and industry engagement, spanning residents, students, professionals, and business leaders.





AFFORDABLE HOUSING, HIGH ENERGY COSTS, AND RESILIENCE ARE OUR COMMUNITY TOP CONCERNS

Sustainable, high-efficiency buildings reduce energy and maintenance costs, helping lower long term costs for housing and health while improving comfort, resilience, and quality of life for residents.

SUSTAINABILITY = AFFORDABILITY



California is a global leader in the fight against climate change

Standing as the 4th largest economy in the world, our state is still heavily experiencing the increasing impacts of Climate Change.

This comes with unique challenges that require a **unified, collaborative approach** in order for us all to **adapt, grow, and thrive**.



Extreme Heat



Erosion



Coastal Flooding



Drought

Biodiversity Risk



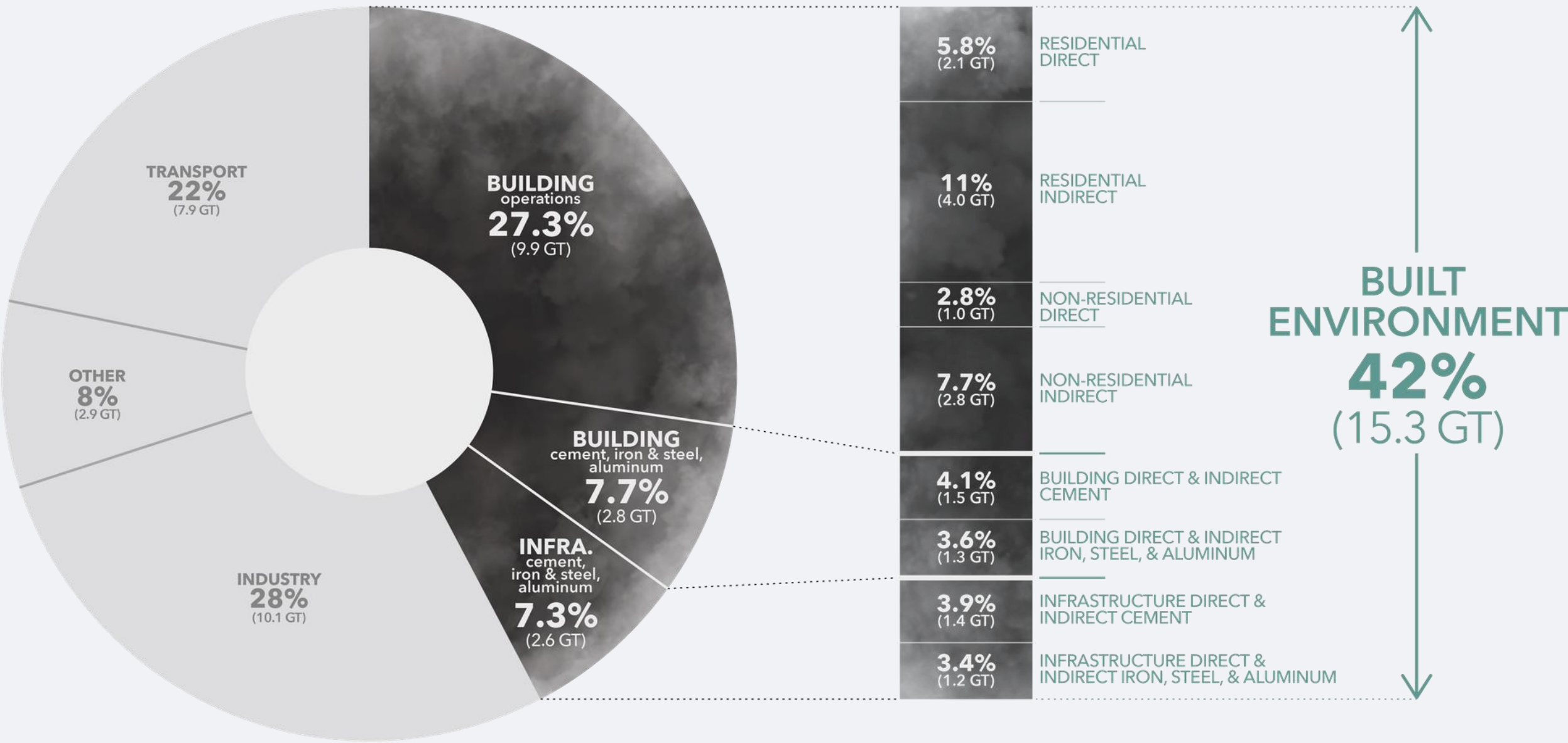
Air Quality



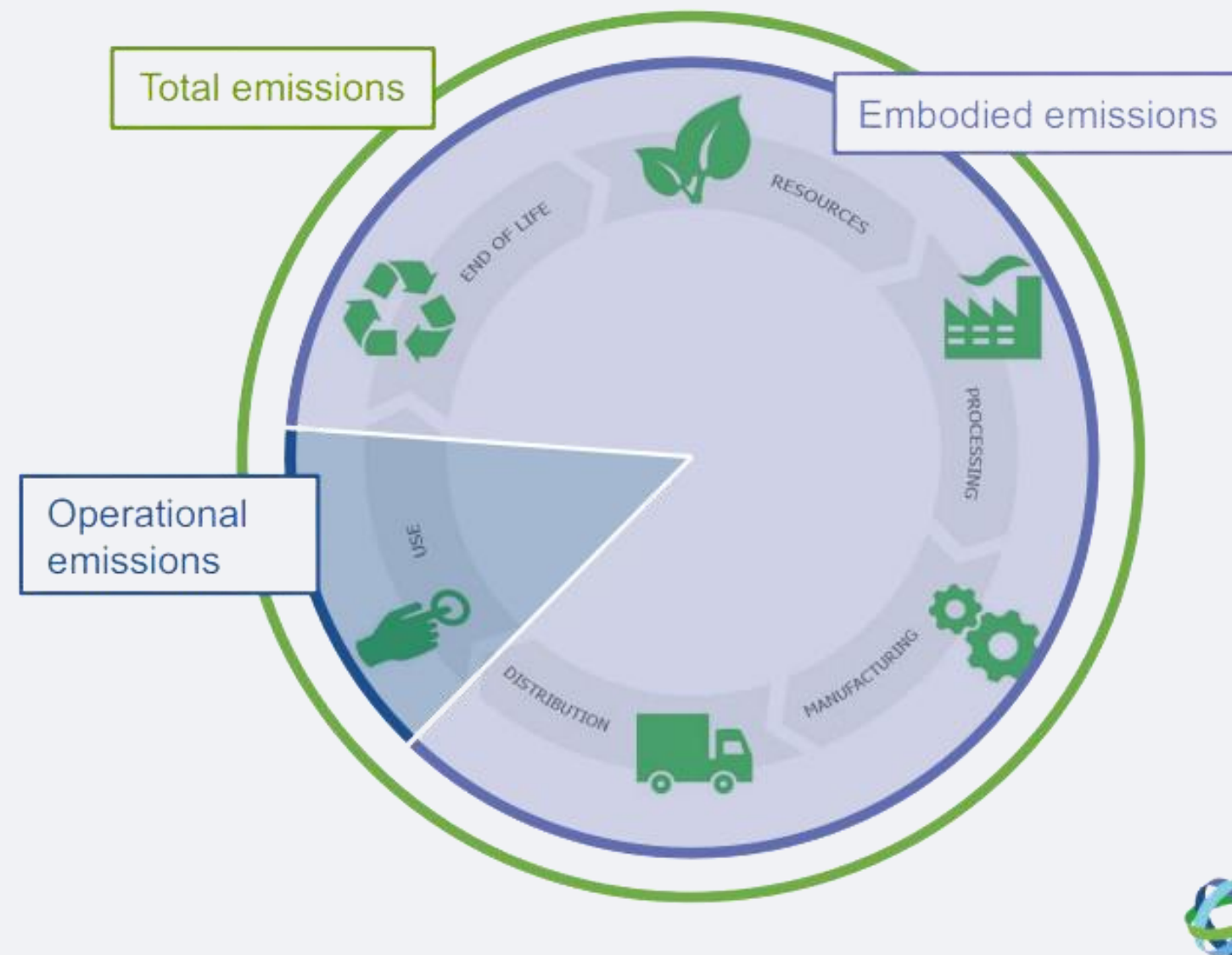
Wildfire

Why the Built Environment Matters

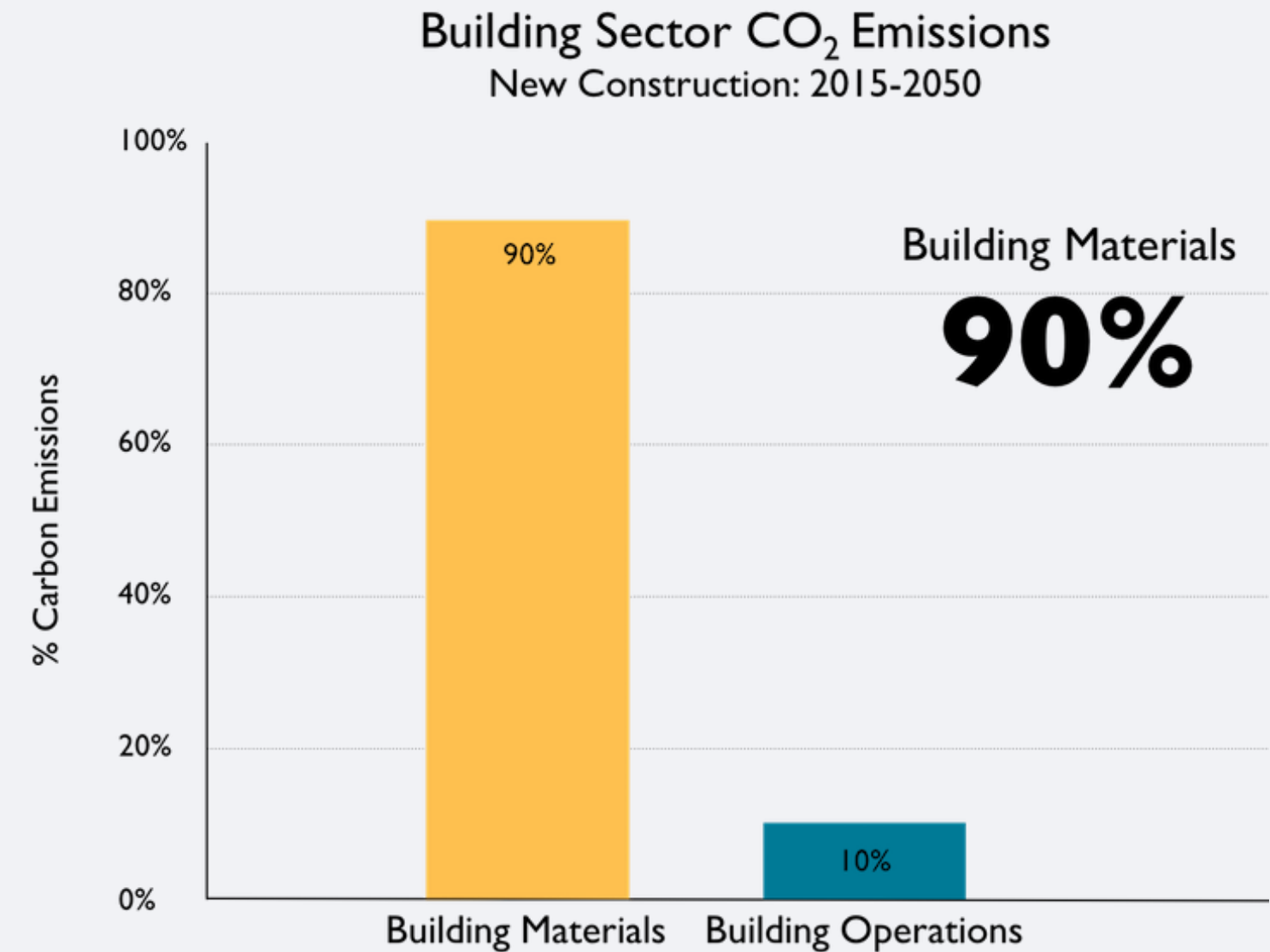
TOTAL ANNUAL GLOBAL CO₂ EMISSIONS
Direct & Indirect Energy & Process Emissions (36.3 GT)



Why materials?



Embodied & Operational Carbon.
Image © World Green Building Council



Source: © 2018 2030, Inc. / Architecture 2030. All Rights Reserved.
Data Source: EIA (2011), Richard Stein, CBECS (2003), McKinsey Global Institute

If things don't change with how we treat embodied carbon, impacts will total 90% of the carbon released from newly constructed buildings between 2015 and 2050.

We're in a moment of massive change in the built environment

The question isn't just how we build—

It's what we build with

The Future will be:

- Embodied carbon
- Performance-based
- Lifecycle value
- Resilience

The Opportunity is:

- Longevity
- Thermal mass
- Reuse potential
- Masonry delivers lasting value through durability and performance.

Embodied Carbon Mandatory Measures

Embodied Carbon Policies			
Private commercial and large residential development in North America · August 2023			
Location	Policy Type		Effective date
California	EPD Requirements, WBLCA Building Reuse	  	2024
Berkeley	Demolition / Deconstruction, Cement Reduction in Concrete	 	2022
San Francisco	Demolition / Deconstruction		2022
Palo Alto	Demolition / Deconstruction		2020
Marin County	Material Intensity Policies		2023
Denver	Material Intensity Policies		2023
New Jersey	Tax Incentives		2022
Vancouver	Building Intensity Policies WBLCA	 	2023
Toronto	WBLCA		2021

2022 CA Green Building Standards Code

- California Building Standards Commission:
- Went into effect July 1, 2024, statewide
- Mandatory requirements, along with Tier 1 and Tier 2 options for local adoption
- Limits the embodied carbon emissions in the construction, remodel, or adaptive reuse of
 - commercial buildings larger than 100,000 SF and
 - school projects over 50,000 SF

Three alternative compliance paths (Mandatory):

- **Reuse of at least 45% of an existing** structure and enclosure
- Prescriptive Path for the specification of materials that meet specified emission limits of 175% of **Industry-Wide Environmental Product Declarations (IW-EDP)** Global Warming Potential (GWP) limits
- Performance-based path that allows use of **Whole Building Life Cycle Assessment (WBLCA)** and a reduction of 10% from the baseline

Sources: CA Energy Codes & Standards& Embodied Carbon Policies Graphic

Embodied Carbon Bills

AB 2446 (Embodied Carbon Emissions: Construction Materials) HOLDEN

Requires CARB, by July 1, 2025, to develop a framework for measuring and then reducing the carbon intensity of the building materials used in the construction of new buildings, including those for residential uses. This bill requires CARB to develop a comprehensive strategy for the State's building sector to achieve a 40 percent net reduction in greenhouse gases of building materials no later than December 31, 2035. The **framework developed by CARB may include a tracking and reporting mechanism to initiate a market-based crediting program.** This bill requires CARB to take certain specified actions to facilitate the achievement of these goals.

Status: Landmark bill passed as part of the 2021–2022 Legislative Session.



Embodied Carbon Bills

AB 43 (Embodied Carbon Emissions: Building Materials – Embodied Carbon Trading System) HOLDEN

Aims to reduce the carbon intensity of building materials by 40% by 2035, establishes an embodied carbon trading system, and replaces criminal penalties with civil penalties for non-compliance, while eliminating the interim target of a 20% reduction by 2030.

Status: Passed and chaptered in October 2023.



Why Masonry, Why Now



Proven Heritage

Proven over centuries. Built for durability. Naturally resilient to fire, seismic activity, and extreme weather.



Designed to Last

If we're serious about sustainability, we have to value materials that don't need to be rebuilt every 30 years.



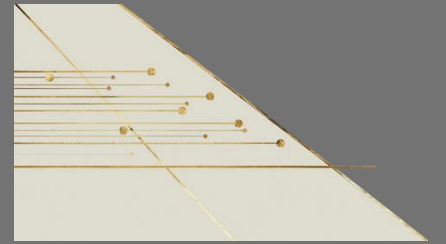
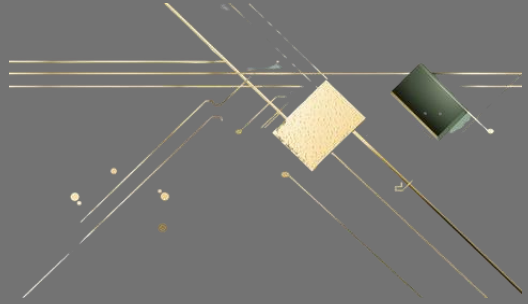
Carbon is locked in the moment we build

Materials now matter as much as systems. The carbon footprint of our buildings is determined not just by how they operate, but by the very materials we choose to construct them with.

Every material decision carries embodied carbon—from extraction to manufacturing to transportation.

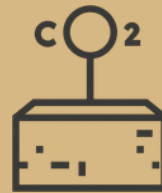


Lower-Carbon Pathways



SCMs

Slag, fly ash, and natural pozzolans reduce cement content while maintaining strength and durability.



Carbon-Cured Concrete

Injecting CO_2 during curing permanently sequesters carbon while improving concrete performance.



Regional Sourcing

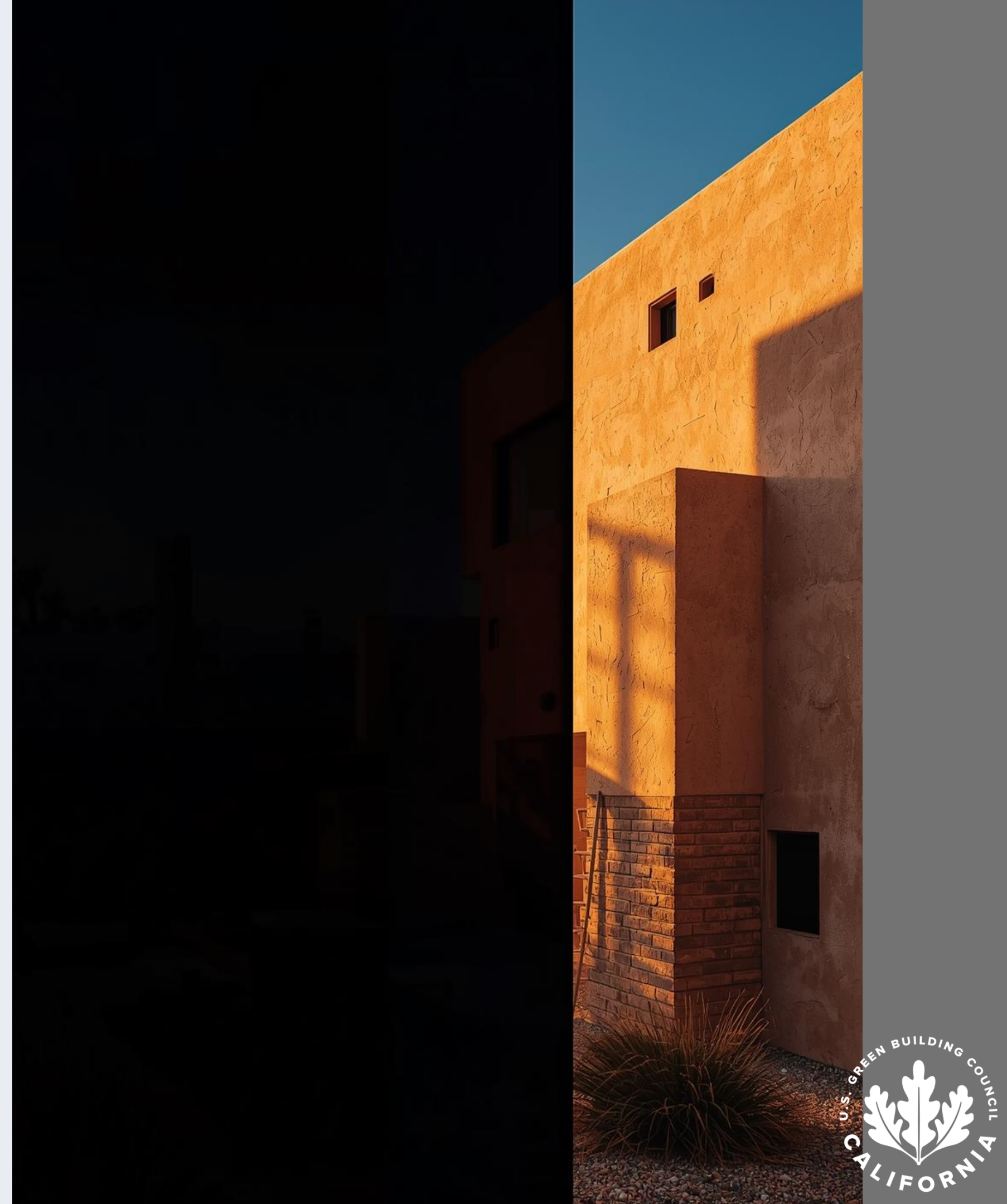
Local materials reduce transport emissions and support regional economies.



Thermal Mass

Thermal mass isn't just about efficiency—it's about timing

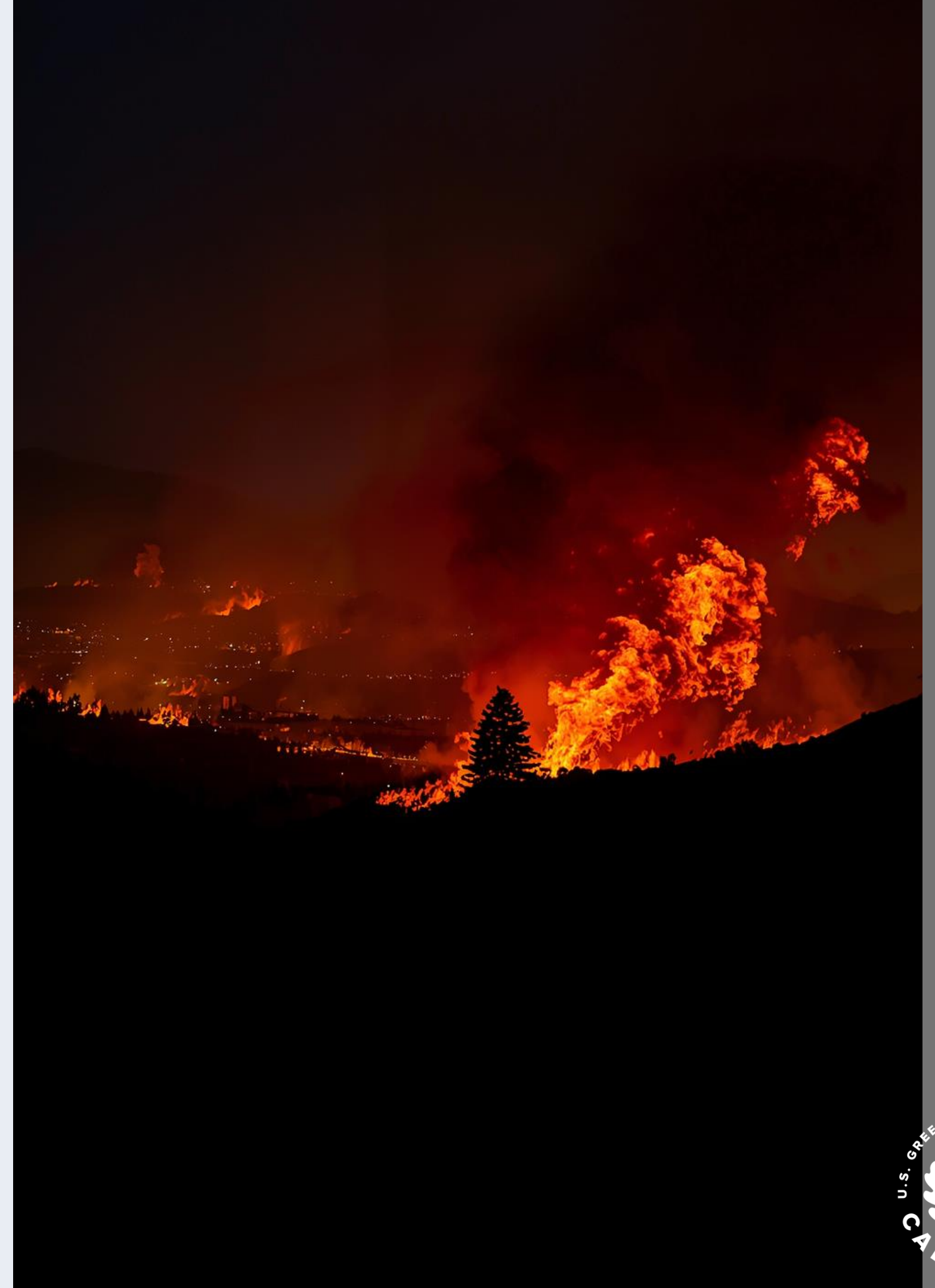
- Reduces peak demand
- Stabilizes interiors
- Supports electrification



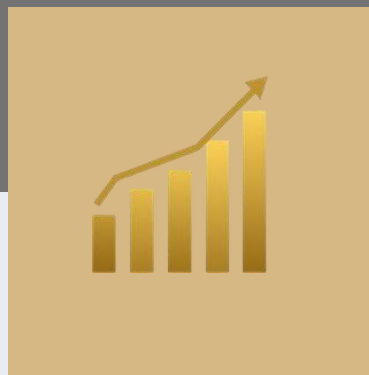
Resilience is the New Sustainability

Fire
Heat
Grid Stress
Seismic

Build to last.



Building Performance Standards



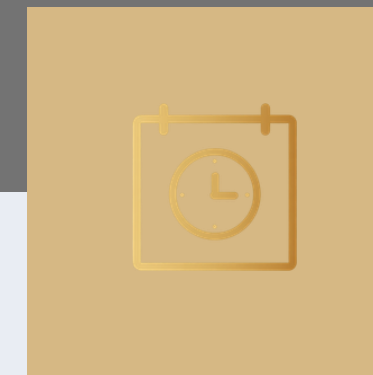
Measured

Standards measured over time, tracking actual building performance across seasons and years.



Real Outcomes

Focus on real outcomes rather than modeled predictions—verified energy use and emissions data.



Long-Term

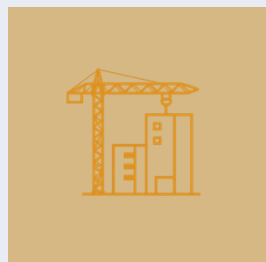
Long-term compliance requirements reward durable materials that maintain performance.

Whole Life Carbon



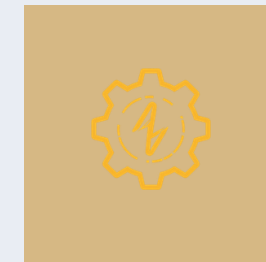
Materials

Raw material extraction, manufacturing, and transportation to site.



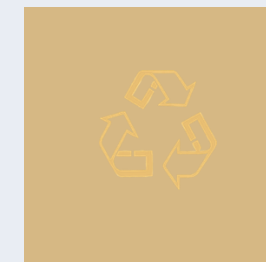
Operations

Energy consumption, maintenance, and repairs over building lifespan.



Construction

On-site assembly, energy use, and waste generated during building.



End of Life

Demolition, recycling potential, and material reuse opportunities.



CALGreen

Codes are evolving

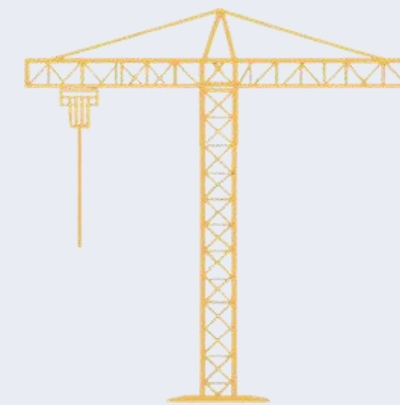
- Embodied carbon focus
- Material transparency
- Higher expectations

Low-carbon materials will win.





Prefabrication



The Jobsite is Changing

Labor constraints
Speed + efficiency
Less waste

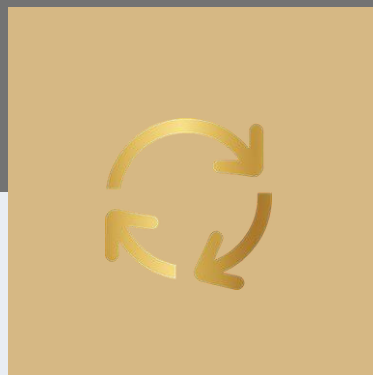


Opportunities

Modular masonry
Prefabrication
Automation

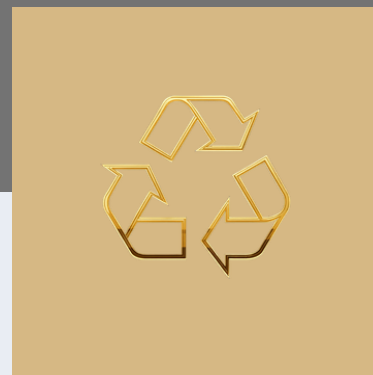


Circular Economy



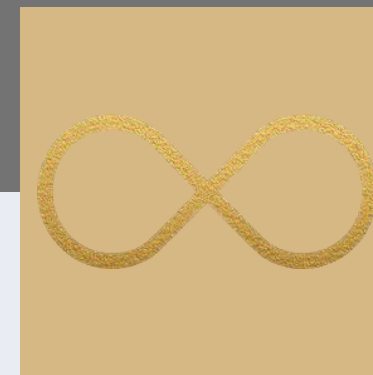
Reusable

Masonry units can be salvaged and reused in new construction projects.



Recyclable

Crusite materials become aggregate for new concrete and road base.



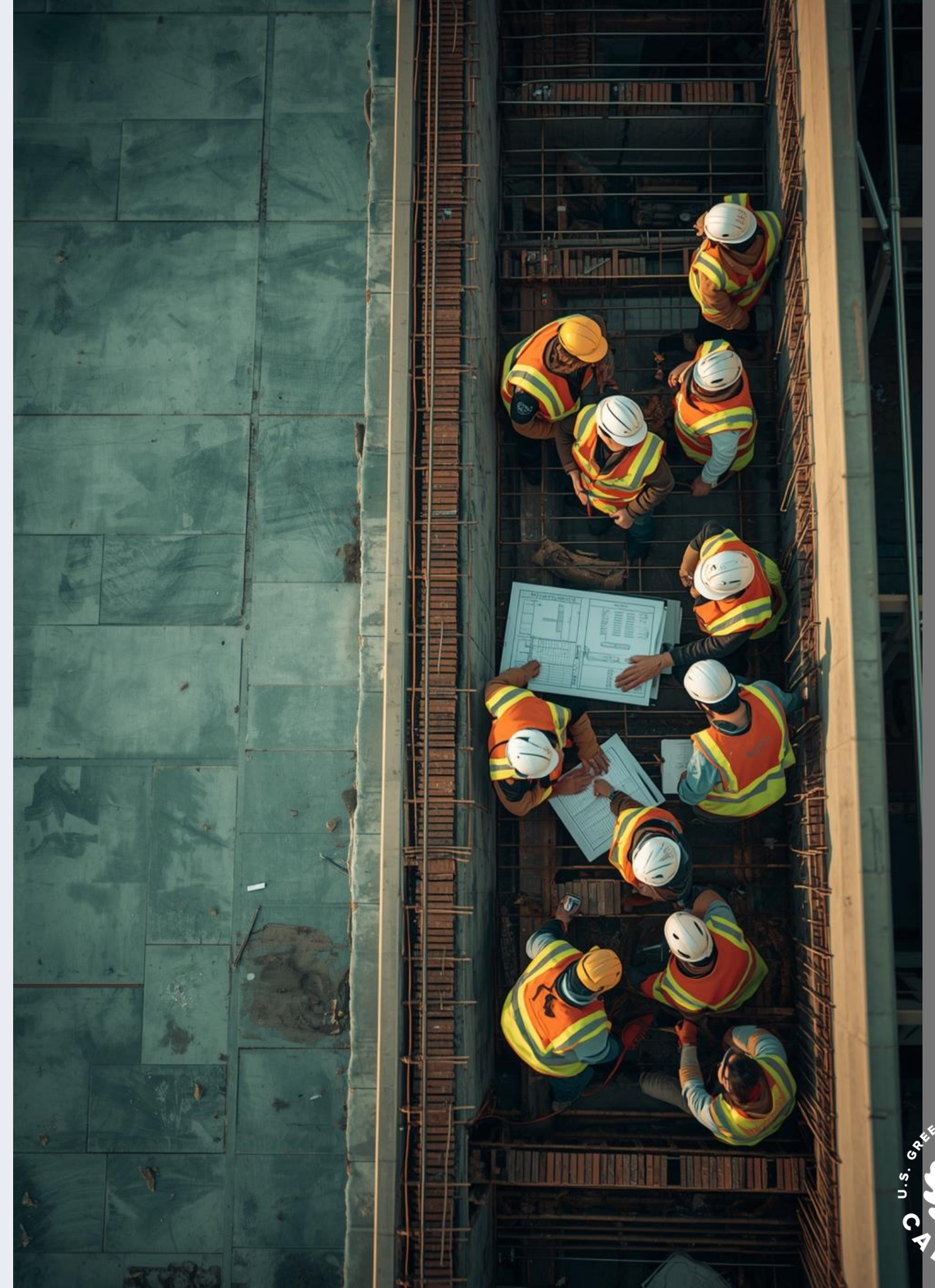
Long Lifecycle

Structures built to last 100+ years reduce replacement cycles.

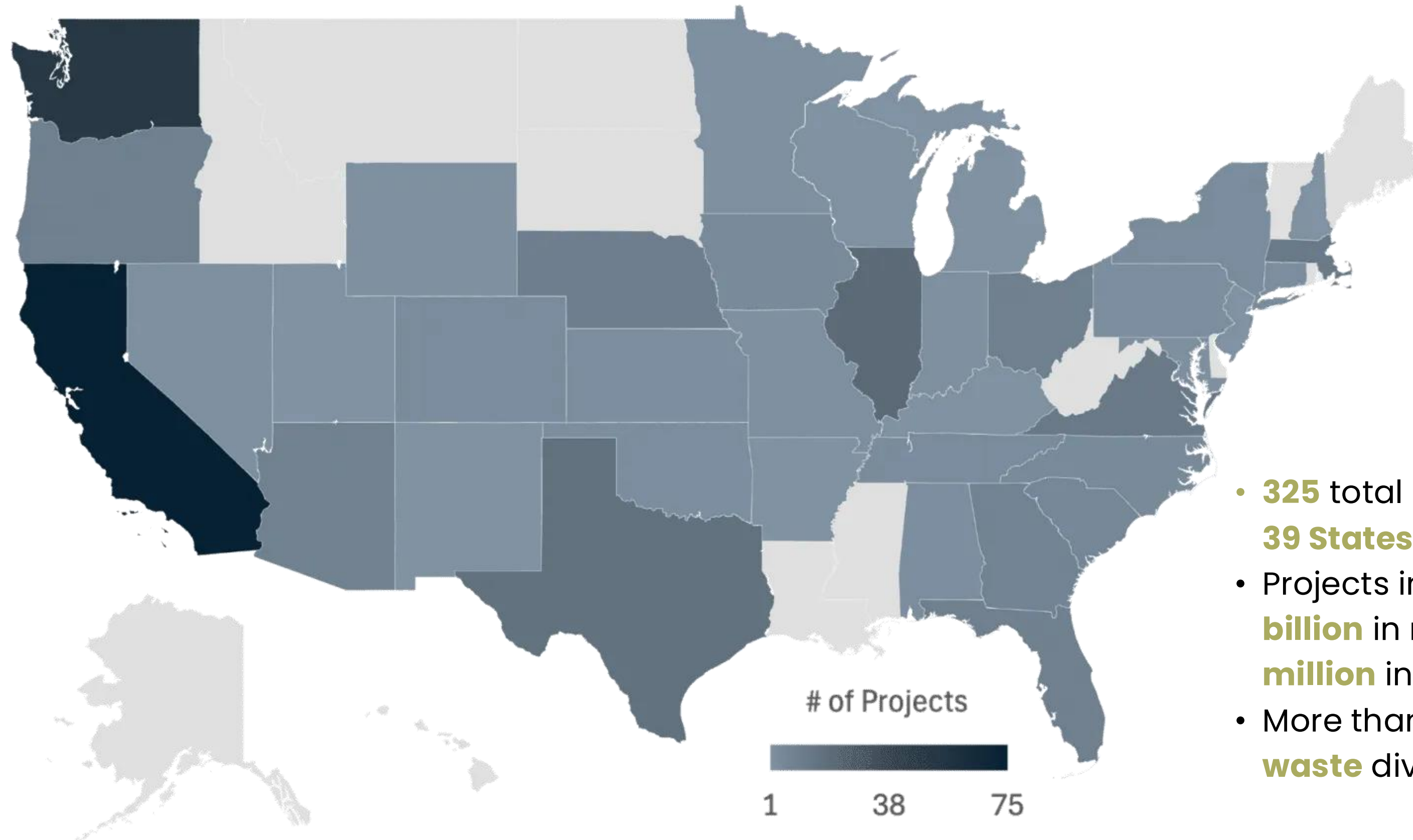
This is About More Than Buildings

Skilled trades
Career pathways
Community impact

This is about building
careers and communities.

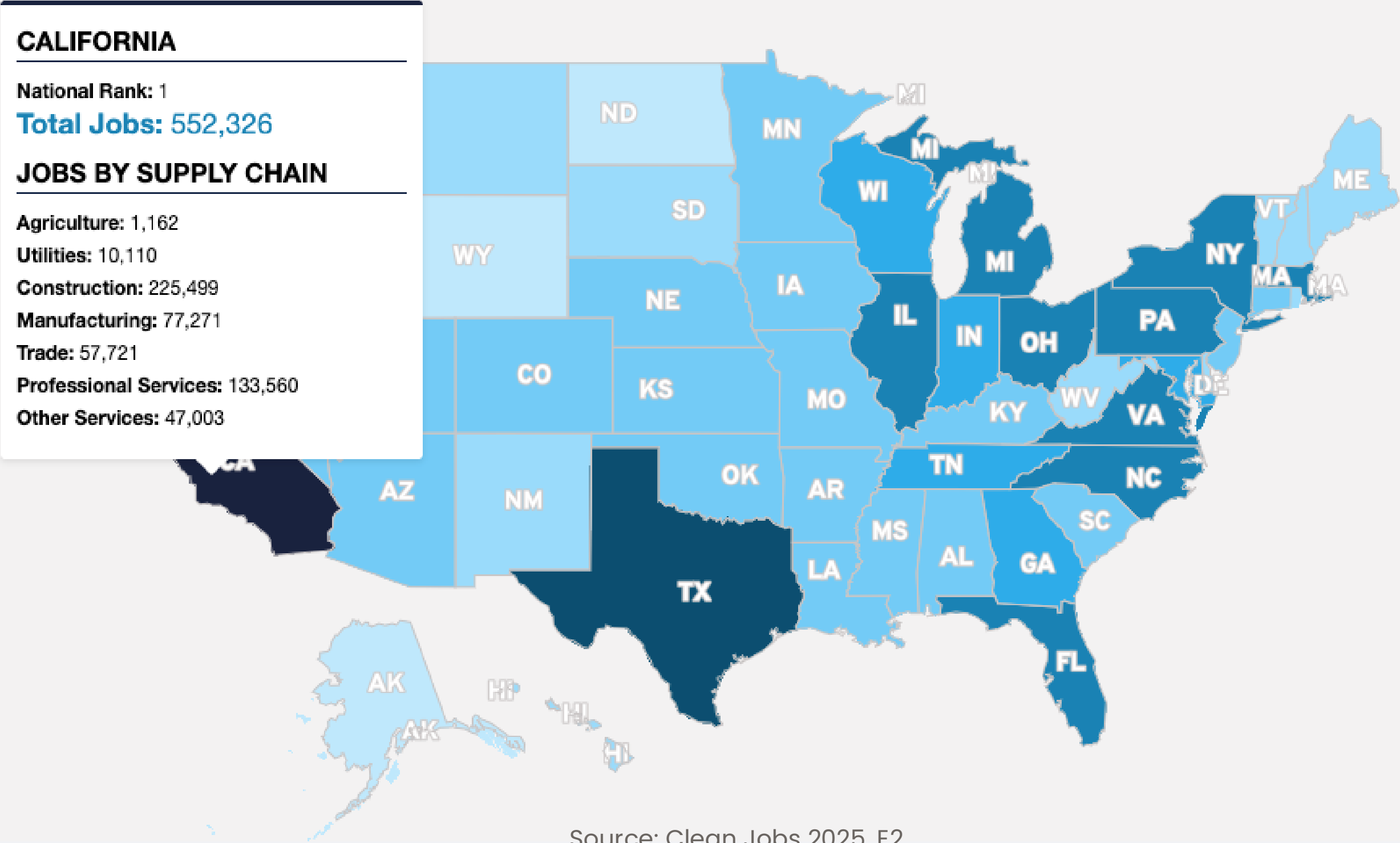


An Impact Felt Across the Nation



- **325** total projects across **39 States!**
- Projects include **\$55+ billion** in revenue & **123+ million** in square feet!
- More than **370,000 tons of waste** diverted in 2024!

Clean Energy Employment (2024)



Source: Clean Jobs 2025, E2

California Clean Energy Employment (2024)

BY SECTOR



**TOTAL CLEAN ENERGY:
3,559,050 JOBS**

- Energy Efficiency: **2,381,744**
- Renewable Generation: **569,309**
- Clean Vehicles: **398,033**
- Storage/Grid: **168,042**
- Biofuels: **41,920**

BY VALUE CHAIN

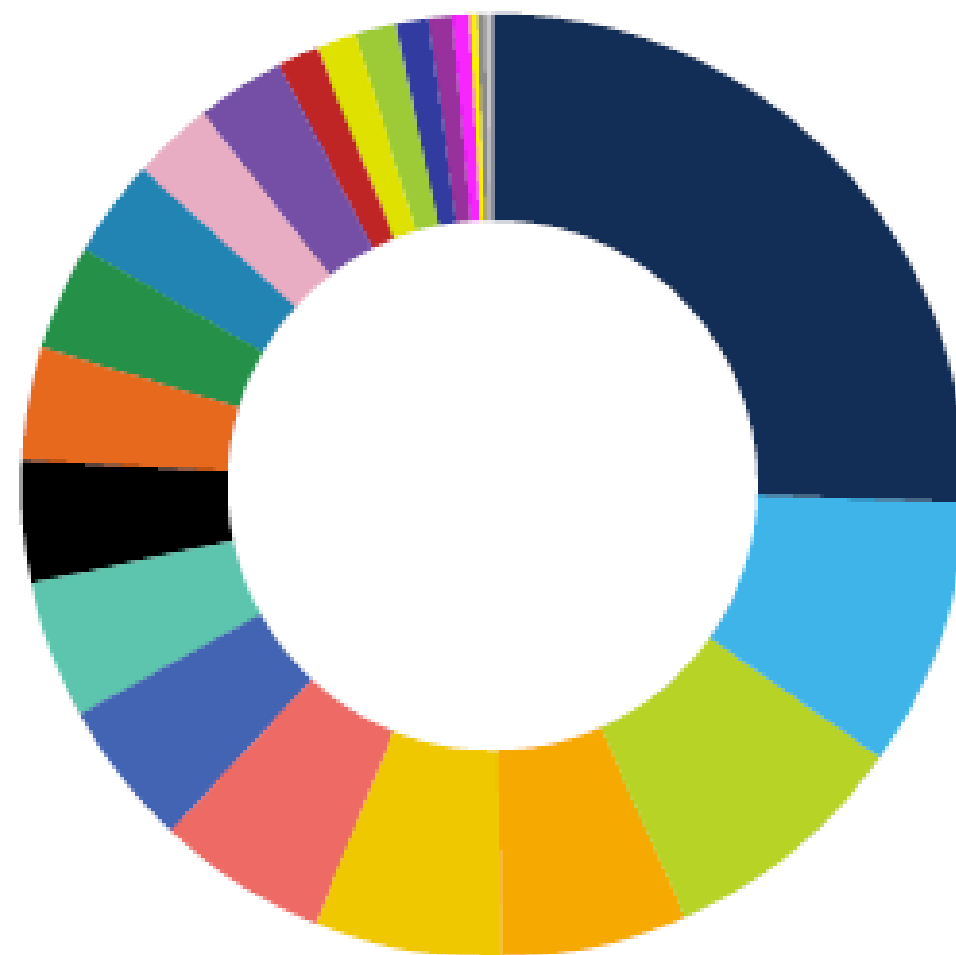


- Construction: **44.6% (~1.6 million)**
- Professional Services: **20.7% (~740,000)**
- Manufacturing: **16.2% (~580,000)**
- Wholesale Trade: **8.9% (~320,000)**
- Other Services: **7.0% (~250,000)**
- Utilities: **1.6% (~56,000)**
- Agriculture: **0.9% (~33,000)**

Source: [Clean Jobs California 2024, E2](#)



FIG. 13 // U.S. STORAGE AND GRID EMPLOYMENT by subsector



ENERGY EFFICIENCY: 2,381,744 JOBS

Traditional HVAC goods, control systems, and services: **609,316**

Other LED, CFL, and efficient lighting: **222,061**

Certified Heating, Ventilation, and Cooling (HVAC), except for air-source or ground-source heat pumps: **202,720**

Certified LED lighting: **152,377**

Other high efficiency HVAC that are out of scope for certification (e.g. indirect evaporative coolers, air to water heat pumps, energy recovery systems, etc.): **151,651**

Certified Appliances (not including HVAC): **142,211**

Advanced building materials/insulation: **115,471**

Certified Insulation: **115,459**

Other: **98,793**

Reduced water consumption products and appliances: **95,281**

Other renewable heating and cooling (geothermal, biomass, heat pumps, etc.): **80,005**

Recycled building materials: **79,509**

Air sealing: **71,171**

Certified air-source heat pumps: **70,554**

Certified Roofing: **34,329**

Solar thermal water heating and cooling: **31,499**

Certified Commercial Food Service Equipment: **31,493**

Certified Windows, Doors and Skylights: **26,152**

Certified water heaters: **22,090**

Certified Data Center Equipment: **12,586**

Certified Electronics (TVs, Telephones, Audio/Video, etc.): **7,253**

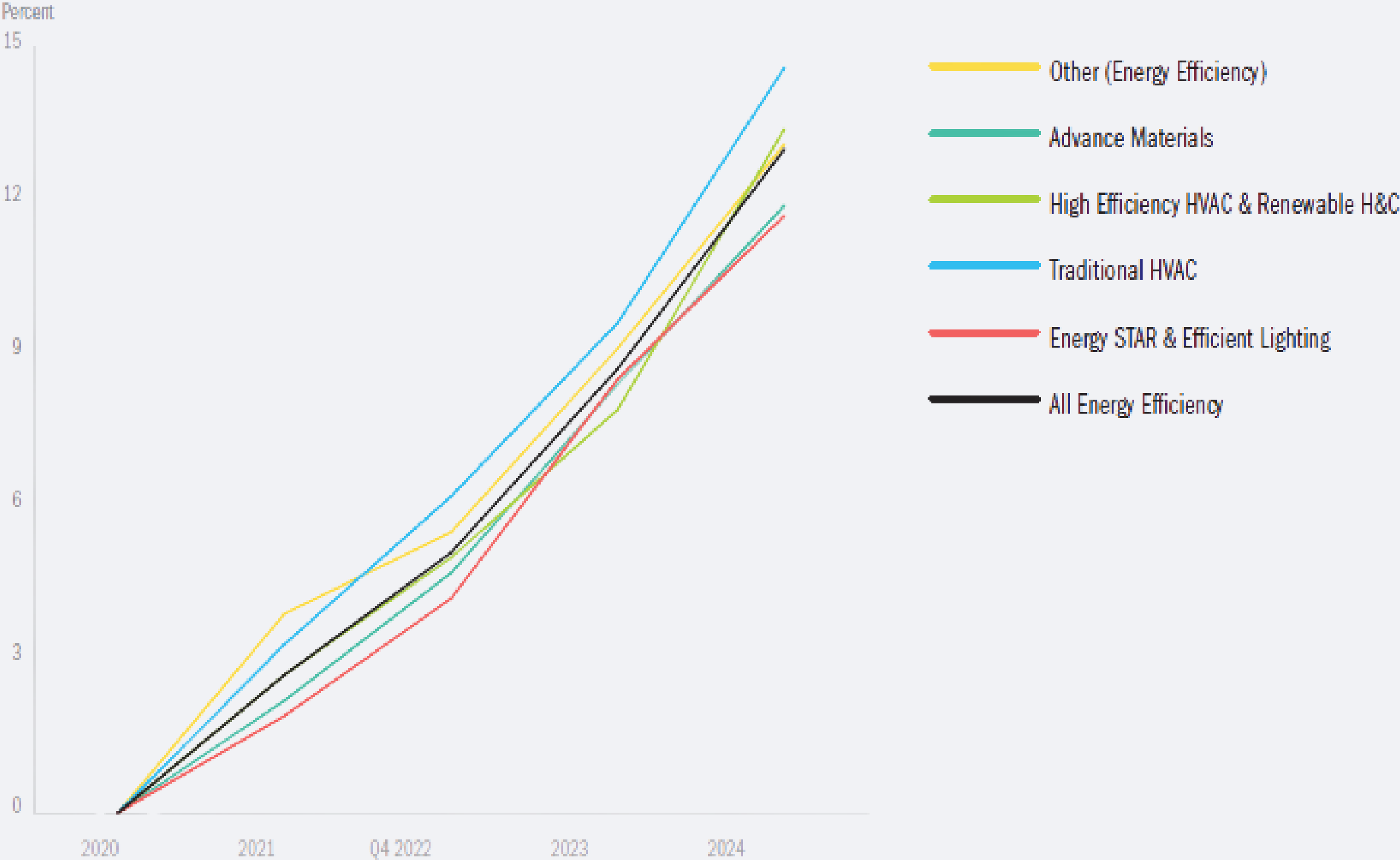
Certified ground-source or geothermal heat pumps: **7,078**

Energy auditing services: **2,686**

U.S. Energy Efficiency Employment

BY SECTOR GROWTH

Q4 2020-2024



Source: Clean Jobs 2025, E2

Career Center

Developing our regional talent into a globally leading green workforce.



Green Job Postings



Professional Development



Recorded Content



Virtual Career & Resource Fairs



Customized Workshops & Training



usgbc-ca.org/career-center/



Masonry isn't
just a legacy
material—It's a
climate solution



Call to Action



Innovate

Push boundaries with lower-carbon materials and modern construction methods.



Be Transparent

Share material data openly and engage with evolving policy standards.



Invest & Share

Build skilled trades, support communities, and share your sustainability story.

The future of building isn't
tradition vs innovation—It's both.

Let's Use It to Shape California's Future

Masonry has shaped our past.

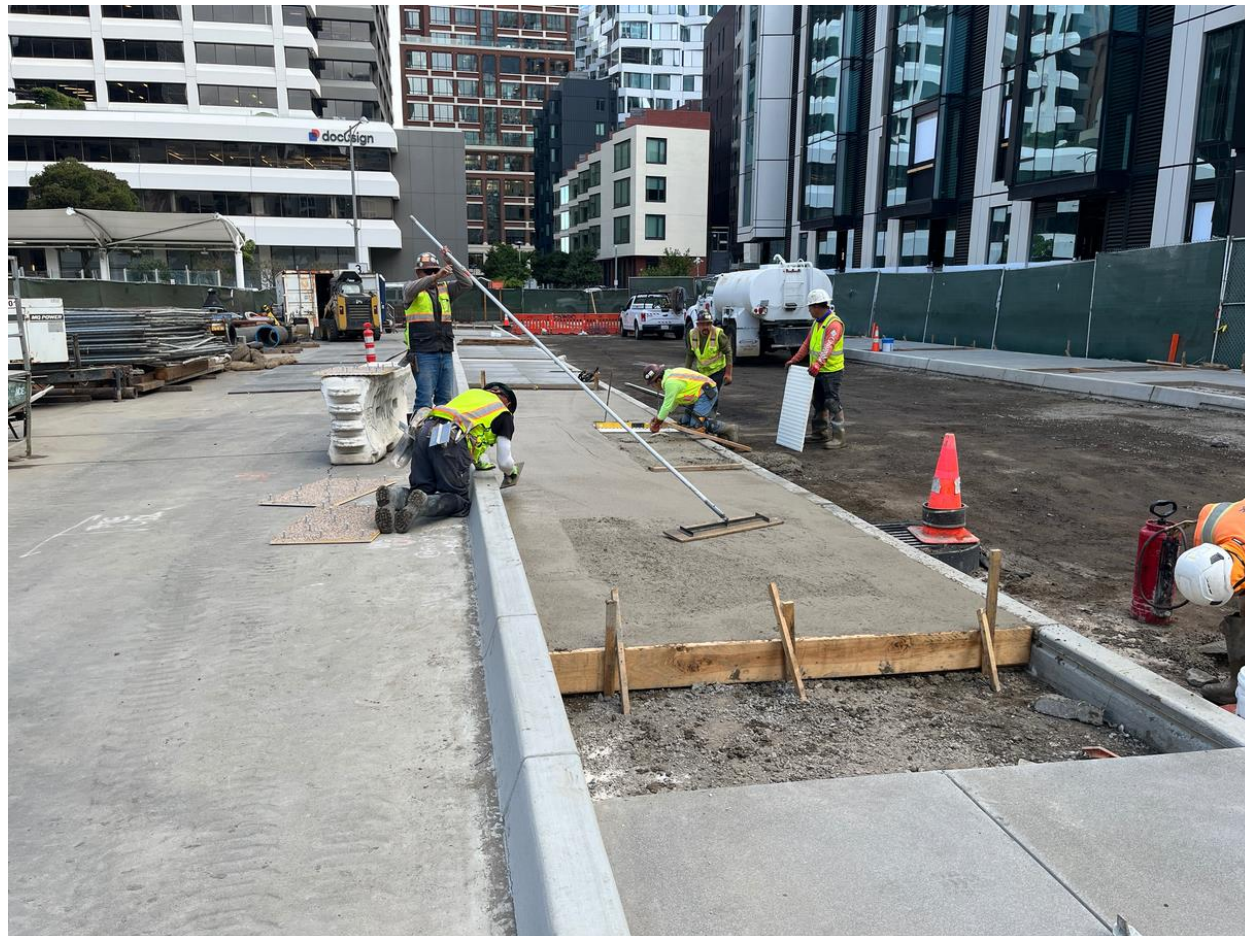
Performance. Resilience. Low Carbon.



Low Carbon Concrete RFI

Low Carbon Concrete for LA28 will include:

- A Request for Information (RFI) to manufacturers and suppliers (4/30)
- Market engagement on low-carbon concrete with local government, LA28 venues, architects, engineers, and contractors
- Carbon Forward Convening & Report Release on September 17th
- A Fall policy push for low carbon thresholds



Contractor's Commitment

- CC is a framework to provide a unified, benchmarked approach to sustainability for the construction industry **"Nationwide."**
- Formed by the Sustainable Construction Leaders (SCL) network.
- **"By Contractors, For Contractors."**
- Unlike project-specific distinctions, the CC is a company-specific distinction.
- USGBC-CA acquired CC in 2025.



Signatories

How is Contractors' Commitment Different?

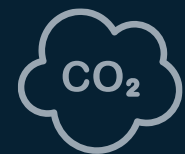
LEED = Project Specific

SBTi = Corporate Carbon Target Setting

EcoVadis = supplier ESG Evaluation

CC = Contractor-specific operational and project benchmarks

The Five Pillars



carbon



waste



wellness



water



materials

Achivement Staircase

BEST

BETTER

GOOD

REPORTED



usgbc.ca/californiaconference



25th Annual

CALIFORNIA **GREEN BUILDING** **CONFERENCE 2026**

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