

AIA 2030 COMMITMENT
YEAR 1 REPORT

2023 SUSTAINABILITY ACTION PLAN



NORR

On the cover

This page:

1. COMPANY COMMITMENT

BUILDING A POST-CARBON FUTURE

NORR is committed to supporting the transformation of the built environment from a major source of carbon emissions to an important contributor in the fight against the climate crisis. We accept the urgent challenge to make carbon neutral buildings a standard practice, rather than the exception. We share the vision of the United Nations Sustainable Development Goals to strengthen common objectives across the globe.



A CARBON CONSCIOUS COMMITMENT

We understand that we must advance the development of sustainable, resilient, equitable, and zero-carbon buildings, communities and cities. To that end, NORR has committed to three industry initiatives to be part of the global solution that is holistic, practice-wide, project-based and data-driven.

AIA 2030 Commitment

Architecture 2030 / 2030 Challenge is an initiative that partners with the global architecture and building community to target all new buildings, developments, major renovations, and interiors to be carbon-neutral by 2030. In 2021, NORR signed the AIA 2030 Commitment, the program that provides a framework to standardize reporting for measuring progress and helps to validate our sustainable design approach. It's a complex process but one that is critical to creating carbon literacy amongst our teams so that our design solutions are socially aware, environmentally responsible and financially viable.

SE 2050 Challenge

SE 2050 Challenge is a program launched by the Structural Engineering Institute that targets net zero embodied carbon for structural engineering components in a building by 2050.

Our 2022 Sustainability Action Plan, submitted to the AIA 2030 Commitment, embraces a people, practice and projects approach to sustainability and sustainable design. The Plan, in combination with our SE 2050 Challenge Embodied Carbon Action Plan, forms the base doctrine of our company commitment to the journey to carbon neutrality and serves to guide the actionable steps herein. This iteration of the plan includes the results of our first year's AIA 2030 Commitment reporting outcomes, as well as follow-up to Year-1 objectives to illustrate progress towards achievement of the Commitments.

Canada's Net-Zero Challenge

In July 2023, we joined Canada's Net-Zero Challenge, committing to net-zero by 2050. This aligns with our global emissions tracking, and we will look for opportunities to expand this across our global footprint.



DANIEL J. MACDONALD MODERNIZATION

A modernization of the Daniel J. MacDonald Government of Canada building, home of the national headquarters for Veterans Affairs Canada, will result in an investment that supports the effective delivery of programs and services while increasing environmental efficiency and sustainability. The project is seeking both Green Globes and Fitwel certifications.

49%

Projects Utilizing Energy Modeling

100%

Interiors Projects that Meet/Exceed the 25% LPD Reduction Target

30%

Projects Utilizing Onsite Renewables and/or Procuring Renewably Sourced Energy

70%

Whole Buildings that Meet/Exceed the 25% LPD Reduction Target

MESSAGE FROM OUR DIRECTOR OF SUSTAINABILITY

2023 has been yet another year of visible change, where the spectre of a changing climate has become even more of a global physical reality. Canadian wildfires reduced air quality across major cities on both sides of the border. Intense heat waves and water scarcity made international headlines while other regions experienced severe flooding; and Europe’s reliance on fossil fuels, across its aged buildings, resulted in an energy affordability crisis, exacerbated by the global pandemic and ongoing conflicts. Essentially, 2030 is now.

More than ever, now is the time to act with an even greater sense of urgency around the Climate Catastrophe. With buildings representing the majority of global GHG emissions, we must double-down on all available opportunities to reverse this trend. Since 2006, no better resource exists to support this in an architectural practice than the AIA 2030 Commitment. It builds “carbon literacy” into practice, requiring Signatories to track, report, learn and share lessons from annual progress on both their portfolio and their own footprints.

Seeing the need to further this imperative, NORR signed the Commitment in 2021, reporting in 2023 across a grouping of projects from all market sectors and locations where we operate globally. We present these projects and our overall findings publicly, to further engage our stakeholders and to support decarbonization of the built environment. Our mission is simple: we want to drawdown emissions, increase our carbon literacy and ambassadorship, inspire others to join us through leading by example, and to transform our company – and its partners – into tangible Climate Action.

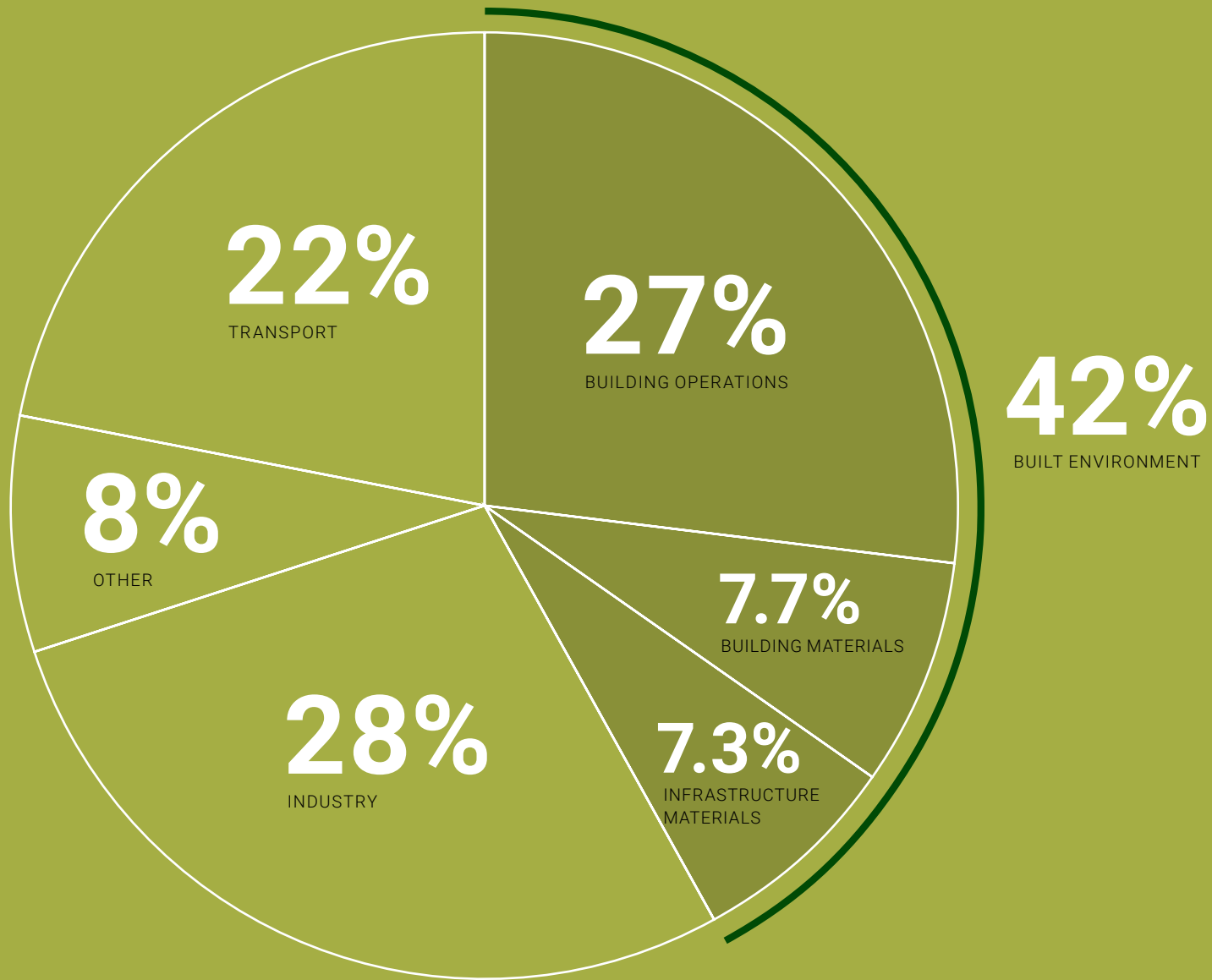
Join us in celebrating our first year’s outcomes. We look forward to continuing to engage our global audience around our continued progress with the AIA 2030 Commitment.



BLAKE JACKSON AIA, LEED Fellow, WELL Faculty, Fitwel Amb., CPHC
 Director, Sustainability
 NORR



BUILDINGS ARE THE LARGEST EMITTERS OF GHG EMISSIONS GLOBALLY



692

The 37 projects we have monitored (2.4% of our active projects) have led to a decrease in greenhouse gas emissions equivalent to the annual removal of 692 cars from the road. As we continue to monitor additional projects, this number will grow and the carbon literacy we are creating through the Commitment will have an even wider impact.

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Analysis & Aggregation by Architecture 2030 using data sources from IEA & Statista

2. DESIGN & APPROACH

BUILDING CARBON LITERACY



Our approach involves fostering a sustainable design culture company wide. It embraces tools for predicting carbon emissions, integrates sustainability into our Quality Management System and improves project documentation with checklists and collaborative workflows to align with our sustainability objectives.

OBJECTIVES

PEOPLE

Develop a culture of sustainable design through clearly defined business imperatives:

- Endorse SAP with a Board level mandate and executive sponsor.
- Embed SAP goals and programs into annual business plans.
- Incentivize and recognize employees for approach and effort to advance SAP goals.

PRACTICE

Leverage new and existing tools and enterprise platforms to advance sustainable design:

- Adopt tools that can predict and monitor operational carbon emissions throughout the lifecycle of a building.
- Build sustainability measures into our Quality Management System.

PROJECTS

Enhance project delivery documentation to support SAP goals:

- Create checklists and data sheets for all disciplines to integrate sustainability measures into projects delivery phases.
- Develop integrated workflows for multi-disciplinary teams to achieve best outcomes.

PROGRESS AND ACTIONS IN 2022-2023

The following actions were taken to meet the objectives.

- Our Board identified 3 projects/sector (36 total) for inclusion into our initial AIA 2030 grouping.
- Collection of project data was assigned to each sector leader.
- An "AIA 2030 Year-1" presentation was created, recorded, and presented to all employees.
- Within the above presentation, our top performing projects were recognized by project type.
- Follow-up meetings will be conducted with sector leaders in preparation for Year-2 reporting.
- NORR licensed COVE.TOOL and One-Click-LCA to help monitor carbon, portfolio-wide.

BABRAHAM RESEARCH CAMPUS

We provided master planning services and delivered 13 laboratory buildings on this 430-acre life sciences campus. Set within natural surroundings, the campus offers multiple indoor and outdoor amenities to facilitate occupant wellbeing and collaboration, strengthening connections between academia and commercial realms. This project exceeded the AIA2030 Commitment performance threshold for 2022 (84%) and was our best performing project within this year's reporting projects.

89%
Energy Use Reduction
Over Baseline

3. GOAL SETTING & EVALUATION

CONTINUOUS IMPROVEMENT

We appointed a Sustainability Director and are running training sessions to work toward a carbon-free future. Using a data-driven approach, our plan emphasizes continual improvement. Carbon and energy reduction are pursued via benchmark analysis, energy targets, usage, and design optimization tools in projects.

OBJECTIVES

PEOPLE

Lead a transition to a carbon free future by engaging and empowering employees:

- Appoint a Sustainability Director to lead our mandate across our business regions.
- Train employees on sustainability design technology software tools and systems.
- Educate employees about best practices, research and data to build knowledge and capacity.

PRACTICE

Take a holistic and data-driven approach to design:

- Collect and use data to measure impact to continually improve results.
- Participate in industry research to inform sustainability best practices.
- Align practice with the goals established by the United Nations framework for Sustainable Development.

PROJECTS

Reduce carbon and energy usage to net zero through:

- Benchmark analysis
- Energy intensity targets
- Overall energy usage
- Design optimization tools

PROGRESS AND ACTIONS IN 2022-2023

The following actions were taken to meet the objectives.

- Hired our first Director, Sustainability in October 2022.
- Rolling out training for widespread adoption of COVE.TOOL and One-Click-LCA.
- Exploring adoption of the MEP 2040 Commitment, by 2025.
- Piloting the use of Mindful Materials within our Chicago Interiors Library.
- First grouping of 37 projects was collected and reported via the AIA 2030 DDX tool.
- SE 2050 Commitment Year-2 report/case study was updated/submitted to SE 2050.

CARBON NEUTRAL BUILDING DESIGN PROCESS

This process engages the entire team throughout the design process to cost-effectively reduce emissions, enhance resilience, improve comfort, reduce noise and ensure long-term operational savings – all aligned with the Commitment.



**STEP 1
DETERMINE THE PROJECT'S BASELINE LOAD AND DESIGN PARAMETERS**

Defining the building area, functions and applicable codes, works to establish legal performance levels, minimum project cost and allowable utility cost/ GHG emissions. This collaborative effort involves the client, architect, engineer and consultants.

**STEP 2
REDUCE LOAD THROUGH PASSIVE DESIGN**

Leverage passive design based on location and climate to lower energy use. These strategies, such as daylighting and natural ventilation, influence architectural choices. Involving all the stakeholders is essential, as architecture significantly affects building performance, embodied carbon and it will have the longest lasting impact.

**STEP 3
REDUCE LOAD THROUGH ACTIVE SYSTEMS**

Efficient HVAC&R systems can be added to reduce the building load beyond the baseline. This phase is primarily led by the mechanical engineer but impacts other disciplines, underscoring the value of an integrated design approach.

**STEP 4
REDUCE LOAD THROUGH RENEWABLES**

When finalizing project designs, prioritize maximizing onsite renewables like solar and wind for resilience, cost parity, and achieving or surpassing net-zero status. Additionally, it's important to factor in the cost difference between utility energy and the more stable cost of renewable energy in business models.

**STEP 5
PURCHASE CARBON OFFSETS TO ACHIEVE NET-ZERO**

Consider carbon offsets only if design adjustments are not able to meet project goals for net-zero or net-positive energy/emissions. This helps control costs and reduces long-term operational expenses.

CARBON-NEUTRAL BUILDINGS ARE A REALITY.

The World Green Building Council reports 500+ net-zero commercial buildings and 2,000+ net-zero homes globally. This shows potential for growth with rising energy costs, stricter codes and advancing technology. Built environment professionals, especially AIA 2030 Signatories, must utilize available tools and resources to expand this movement.

4. GOVERNANCE & REPORTING

ENHANCING DATA STRATEGIES

We are actively helping each of our Sector Leaders to become Decarbonization Ambassadors. Sector-specific trainings, utilizing the metrics required for AIA 2030 Commitment reporting, are helping to build carbon literacy into our key decision makers repertoire, while addressing challenges and opportunities to make continual improvements portfolio-wide.

OBJECTIVES

PEOPLE

Develop experience and build knowledge of data collection, input and quality control:

- Identify employees to collect and input data into master database required by DDx.
- Identify leads in each discipline to perform quality control of data collection and input.
- Identify designers in each market sector to help develop a framework for data output using industry software.

PRACTICE

Integrate a process for meeting the Commitment across the whole life of a project, pursuit through post-occupancy:

- Create a system for tracking sustainable projects starting from the project business plans for seamless database collection.
- Engage Accounting and Marketing to generate reports on qualified projects.
- Partner with clients to access energy usage data to track operational carbon, allowing NORR to document predicted energy use intensity (pEUI) and actual operating Energy Use Intensity (EUI).

PROJECTS

Qualify projects to be reported in the initial year that are in an active design phase including conceptual, schematic, design development or construction document phases:

- Projects being reported will follow the recommended targets laid out by Architecture 2030 and its goal of meeting the climate mitigation strategy put forth in the Paris Agreement.

PROGRESS AND ACTIONS IN 2022-2023

The following actions were taken to meet the objectives.

- Our Global Sustainability Team was expanded to build capacity to collect data for DDx submission.
- Our Global Sustainability Team is currently active in 9 of our 12 key market sectors and 7 of our 12 locations.



CANADIAN COAST GUARD ATLANTIC REGIONAL HEADQUARTERS

This project is one of the most energy efficient within this year's reporting group. Having achieved LEED Gold certification, by aligning with the Canadian Federal Sustainability Development Strategy (FSDS) guidelines, this project promotes energy efficiency and wellbeing through optimized envelope and fenestration, low lighting power density, healthy ventilation, and via procurement of green power.

5. NORR OPERATIONAL CARBON REDUCTION PLAN

CARBON REDUCTION STRATEGY

We are decreasing our global operational carbon across Scope 1, 2 and 3 emissions. Our strategy involves annual data collection to identify improvement opportunities, transitioning to a 100% hybrid workplace, working with landlords to right-size our footprints and creating our own design standards to emphasize carbon reduction and wellbeing.

OBJECTIVES

PEOPLE

Develop a Carbon Reduction Plan (CRP) based on a carbon footprint analysis of annual operations in the three regions where NORR primarily operates:

- Complete operating carbon footprint analysis in business regions to assess global results.
- Develop a global CRP based on results.
- Update CRP with a goal to be a carbon neutral company.

PRACTICE

Explore ways to continually reduce Scope 1, 2 and 3 emissions:

- Eliminate combustion, specify efficient electric equipment, and specify low-impact refrigerants.
- Explore renewable energy procurement options by market/location.
- Engage procurement, landlord, and policies to encourage low-carbon operations.

PROJECTS

Identify carbon reduction initiatives (from baseline measurements) to define a roadmap to net zero:

- Calculate reductions based on a work-from-home and hybrid workplace strategy.
- Engage with property management at local offices to explore building-wide reductions into projects delivery phases.

PROGRESS AND ACTIONS IN 2022-2023

The following actions were taken to meet the objectives.

- In 2022, NORR expanded its Carbon Footprint Analysis to include Canadian and US locations to inform a company wide Carbon Reduction Plan.
- NORR recently created a performance-based design, construction, and operations standard to support the reduction of GHG emissions as we relocate, refurbish, expand, and/or refresh our offices.
- These guidelines are currently being used in the Philadelphia office refresh and the design of our new Toronto Headquarters.
- In 2023, NORR joined Canada's Net-Zero Challenge targetting net zero emissions for its Canadian locations by 2045.

WHAT WE'RE DOING IN OUR OFFICES

NORR is actively tracking our Scope 1, 2 and 3 Greenhouse Gas Emissions, on an annual basis, with the explicit goal of achieving net-zero emissions across our global footprint. We separate this work into regional components – US, UK and Canada – in order to distinguish regional variability, challenges, and opportunities, for each, to further employee engagement and capital improvements in support of ongoing decarbonization efforts, transforming the data collection into Climate Action.

6. INTERNAL TRAINING & EDUCATION PLAN

ELEVATING EMPLOYEE ENGAGEMENT

Our approach focuses on engagement by evaluating employee credentials, offering sustainability training and hiring experienced individuals. The strategy targets net-zero carbon projects, leverages collaboration for added experience and assigns sector champions to mentor team members in achieving the 2030 Commitment goals.

OBJECTIVES

PEOPLE

Foster motivation and engagement through skills development:

- Evaluate credentialing and knowledge base of employees and complete gap analysis.
- Support training opportunities to increase knowledge of sustainability literacy, best practices, software platforms and program credentials.
- Hire key employees with sustainability experience.

PRACTICE

Embed continuing education in the fabric of the company:

- Establish continuing education (CE) requirements for sustainable design.
- Provide financial support for CE programs.
- Develop case studies on initial projects to share across sectors.

PROJECTS

Leverage knowledge and experience of current and new sustainable design projects:

- Target net zero carbon projects amongst existing client base.
- Team with key partners to win net zero carbon projects to gain further hands-on experience.
- Identify sector champion to mentor team members specific to the objectives, actions and tools to achieve the requirements and goals of the 2030 Commitment.

PROGRESS AND ACTIONS IN 2022-2023

The following actions were taken to meet the objectives.

- Employees were briefed on the Year-1 AIA 2030 and Year-2 SE 2050 outcomes.
- Each April, henceforth, we will update employees on quantified annual results of our Commitments.
- The sustainability FTE in 2023 was expanded to 1.6.
- CE requirements have been established within the UK offices.
- Our SE 2050 Year-2 Report provides a Canadian case study project.
- We are expanding our partnering to include working with firms with proven NZE experience.
- Local sustainability leaders were appointed in Toronto, Chicago, Philadelphia, and Ottawa. These include additional resources to Transportation, Hospitality, Interiors, Commercial, and our Public Buildings sectors.

**SHIP BUILDING-14**

Spring House Innovation Park (SHIP) is a phased masterplan development in suburban Philadelphia that will increase capacity for biotechnology and research & development tenants working on breakthrough discoveries. Within the 130-acre campus, an extensive repositioning of an existing 3-story, 100,000+ square-foot building will result in a flexible core and shell Class A office and laboratory facility targeting LEED® Silver certification.

7. OUTREACH, ADVOCACY & EXTERNAL KNOWLEDGE

FOSTERING STAKEHOLDER ENGAGEMENT

Our diverse stakeholders include the communities where we operate, occupants of buildings we design, partner companies, shareholders and all our employees. We aim to engage each party by sharing lessons learned through industry participation in conferences, authorship and advocacy, at a global scale via all available channels.

OBJECTIVES

PEOPLE

Engage with stakeholders in established programs to leverage existing frameworks including:

- Self regulating professional bodies
- Green building standards
- Government
- Local and global communities
- Clients, partners & vendors
- Employees & shareholders

PRACTICE

Advocate for net zero carbon buildings by sharing knowledge and content:

- Leverage corporate channels (social media, website, paid campaigns) to share NORR-generated content; amplify message through employee engagement.
- Participate in industry panels, partner programs, committees and think tanks.
- Provide responses to RFP submissions that showcase relevant content, goals, initiatives and results.

PROJECTS

Share information on combined efforts of 2030 Commitment and SE 2050 Challenge:

- Choose select projects to produce case studies to share key lessons learned.
- Write thought leadership articles that demonstrate positive impact of collective efforts over time.
- Develop a Corporate Social/ Sustainability Report that translates actions into results across the globe.

PROGRESS AND ACTIONS IN 2022-2023

The following actions were taken to meet the objectives.

- In 2023, NORR became an official sponsor of the UKGBC, USGBC, CaGBC, and GBI.
- NORR's content strategy advocates for NZE and Zero Carbon solutions through social media, our website, insight articles and conferences.
- NORR is seeing an increase in RFP's demonstrating NZE/C capacity and responding in kind, consistently earning all points for sustainability related qualifications by our clients.
- Top performing new construction, renovations, and interiors were highlighted within our Year-1 AIA 2030 presentation.



INSIGHT ARTICLE
**PLACE-BASED URBAN HEAT
 MITIGATION STRATEGIES**

The urban heat island effect is where cities are hotter due to heat-absorbing materials, worsened by global warming. With urbanization growing, about 70% will live in cities by 2050, causing harsher heatwaves, pollution, power outages and water scarcity. Architecture, green infrastructure, and eco-friendly practices can cool cities and boost resilience and sustainability. Cooperation between governments, planners, owners, architects and engineers is necessary to cool our cities for long-term climate resilience.



INSIGHT ARTICLE
URBAN REGENERATION STRATEGIES

Urban regeneration strategies are a long game – but can bring significant value over time as a transformative force for neighborhoods and cities. The value can be measured through economic growth, as well as sustainable benefits for cities, owners, developers and occupants. Holistic urban planning can attract capital to downtown cores through land and asset redevelopment to create 15-minute cities.

AIA 2030 COMMITMENT

YEAR-1 RESULTS

NORR analyzed a group of 37 projects across various sectors, representing 2.4% of our global portfolio. These projects spanned different typologies, including interiors and new construction. Of this group, upon the time of reporting, 28 projects were in progress, and 9 projects were completed.

37

30 New Construction or Major Renovation and 7 Interior projects

15M

Gross Square Feet

\$2B

Construction Value (USD)

79%

Datapoints Were Collected

41%

Overall Savings Over Baseline for the Reported Projects

18

Projects Were Modeled for Energy Performance

8%

Projects Utilizing Onsite Renewables and/or Procurement of Green Power

100%

Interior Projects Exceeded the 25% Lighting Power Density (LPD) Reduction Target

34%

Overall Window-to-Wall Ratio Average

0

Projects Utilized Embodied Carbon Modeling

CANADIAN BLOOD SERVICES

The second largest medical facility of its kind, the Canadian Blood Services Production, Distribution and Testing Facility was designed to be a multi-purpose hub of life-saving services for patients and hospitals across western Canada. As part of CBS' National Facilities Redevelopment Program (NFRP II), the purpose-built facility meets the high-demand for time-sensitive blood donations. The facility achieved a LEED® Gold Certification.



AIA 2030 COMMITMENT

YEAR-2 GOALS

We are energized by our Year-1 results, and we are already making progress on our Year-2 reporting, as of Q4-2023. We aim to increase the size of our initial reporting group, while continuing to engage with last year's in-progress projects, to represent the evolving state of our practice, in alignment with the Commitment.

Several areas of increased focus were highlighted by our Year-1 performance, which we will tackle in Year-2. These include a drive to increase the use of predictive energy and embodied carbon modeling across our projects, to increase the number of projects utilizing renewable energy strategies and/or the procurement of green power, and a push to meet/exceed the Lighting Power Density (LPD) reduction targets for all buildings within the reporting group. These are opportunities to enhance the standard of services offered to support our clients. Additionally, they allow us to take greater ownership of our carbon impacts, across all sectors, locations and disciplines.

To achieve these results, we are initiating Sector Leader trainings to review their Year-1 results, identifying opportunities and challenges, and selecting projects for reporting in 2024. This training is helping us to work more collaboratively,

as well as to build carbon literacy into the culture of our company. Additionally, in 2023, NORR subscribed to COVE.TOOL and Once-Click-LCA to increase our employees capacity with energy modeling, daylight analysis, and embodied carbon modeling, which is impacting our projects early in design by enabling employees to take greater ownership over their carbon impacts. Further sector-specific training will be offered to increase utilization of these tools, in conjunction with the continued growth of our Global Sustainability Team to meet the increased demands for these services everywhere we operate. We are aiming to build a reporting group of projects that exceeds 5% of our total active portfolio in 2024, with a collective, "stretch" goal of 50% total GHG reduction. We will share our results internally in April 2024, during Earth Week, and we will continue to keep this report up to date to reflect our ongoing progress.

NORR

NORR is an employee-owned, fully integrated A&E firm. Our professional team of 800 architects, engineers, planners and interior designers work collaboratively across 12 market sectors from offices located in Canada, the US and UK. Our mission is to create socially aware, environmentally responsible, and financially viable architecture and engineering design solutions to ensure our clients achieve their business goals while contributing to healthier and sustainable spaces and places across the globe.

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