
20
30 Commitment
Climate Action Plan



ELLENZWEIG

Introduction

Located in Boston, Massachusetts, Ellenzweig's national practice is centered on the design of academic, institutional, and corporate buildings for science research and teaching, medical and health science education, and energy infrastructure.



As architects, we understand the need to exercise leadership in our role in creating the built environment

2

Buildings today are the largest single contributor to greenhouse gas emissions (GHGs), responsible for almost one-half of the total annual production in the US. As architects, we understand the need to exercise leadership in mitigating GHGs, particularly because the building types we design are technically complex and highly energy intensive.

Our Climate Action Plan outlines how we will work towards carbon neutrality through Staff Engagement, Design Process and Innovation, Facility Operations, and Advocacy and Outreach.

Buildings ■
Other ■

GHGs

Facility Operations
Advocacy and Outreach.
Staff Engagement
Design Process and Innovation

Massachusetts Institute of Technology
Koch Institute for Integrative
Cancer Research, Cambridge, MA

LEED Gold







Staff Engagement

At Ellenzweig, staff engagement is one of the pillars of our collaborative and creative environment.

Leadership / Ellenzweig's Green Committee consists of 19 employees, including five Principals of the firm. The committee is the incubator for the firm's sustainable design initiative development and knowledge sharing. It advocates for the advancement of new tools, piloting of sustainable design initiatives, and hosting of green building workshops. It creates a vibrant forum for office-wide discussion on sustainability issues, and promotes successful green design integration across all our projects.

The 2030 Action Plan is shared with all new staff and they are invited to join the Green Committee.



Training / We have a strong history of staff training, and guidance on Sustainability is no exception. Industry experts are regularly invited to present on emerging technologies and topics. Green Committee members attend USGBC and I2SL conferences. Our training programs include:

Communication / The Green Committee sponsors an office-wide Sustainable Practices blog, posting information on new technologies and current developments in the field.

Our training programs include:

- yearly LEED Study Groups to enable staff to earn and maintain credentials;
- education on how to communicate the benefits of integrating sustainable design measures, including the advantage of using renewable resources, life cycle analysis, evaluation of long-term benefits, and occupant health;
- coaching on best use of available sustainable design tools;
- guidance on conducting sustainable design charrettes; and
- regular seminars and webinars on a wide range of sustainable design topics.

EMD Serono
Project Bridgeway, Billerica, MA

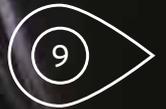
LEED-CI Platinum







Design Process and Innovation



We increasingly seek to implement innovative sustainable design strategies as form givers, challenging traditional boundaries of the buildings we design, transforming their visual character, as well as the experiences of those who use them. By integrating emerging green technologies in our projects, our process supports our clients as advocates of energy efficiency and environmental action within their organizations.

Team / With 50% of our professional staff holding a LEED credential, each project team includes a sustainability “Champion”. Our consultants are selected not only on their proficiency in the design of technically complex buildings, but on their expertise in effectively designing infrastructure systems to reduce our buildings’ carbon footprint.

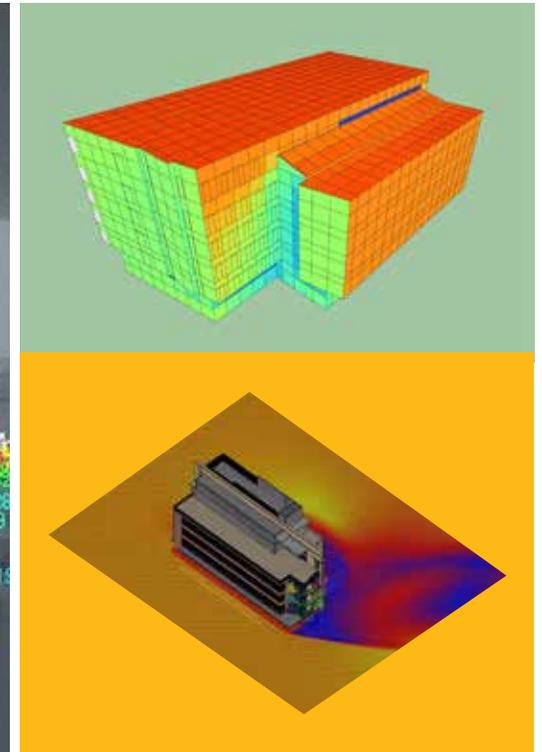
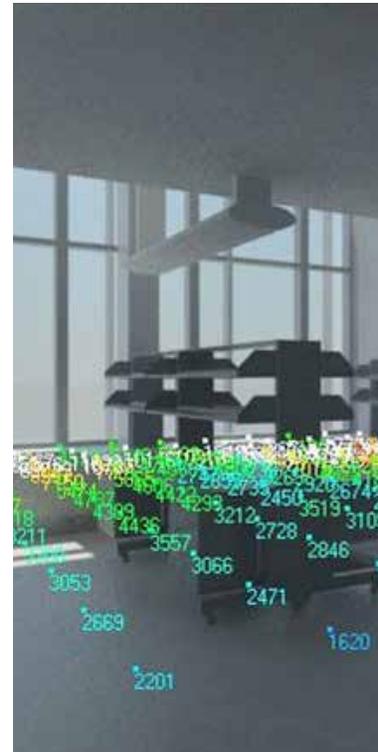
Tools / A checklist of sustainable design practices to be investigated at all phases of the design process is provided to each project team. Additionally, the office database of projects tracking sustainable design strategies, energy use, and certifications is a resource for all the staff. The designated Project Champion is responsible for accurately completing the database.

Additional initiatives include ongoing use of out-of-firm design tools, such as the Whole Building Design Guide, and web-based resources, such as Building-Green, to assess their usefulness to the firm.

Methodology / In addition to the investigation of emerging green technologies that could inform the building design, we employ computerized modeling for building performance analysis to inform building orientation, envelope design, and energy performance at the earliest phase of design. This allows us to test high performance building metrics against the energy goals of a given project, while collaborating with our engineers in the process.

We strive to implement on each project—regardless of whether it is pursuing certification—the following actions:

- Define the project sustainability and energy goals in Schematic Design (SD), and establish regular milestone checks throughout the project schedule, with energy modeling to begin at the onset of Design Development;
- Investigate available renewable resources for the given location of the project;
- Gather post-occupancy performance and energy use data from our clients for benchmarking purposes.



Massachusetts Division of Capital
Asset Management
New Psychiatric Hospital, Worcester, MA

LEED Gold







Facility Operations

We integrate sustainability not only in our architecture, but in the way we do business. Since signing the AIA 2030 Commitment we have:

- significantly reduced paper consumption with double-sided printing as the default on all printers, and converted to electronic marketing materials;
- reduced the number of project-related trips with use of online meetings, resulting in a 25% decrease in our GHG travel footprint; and;
- improved bicycle storage in our building.

We just moved into a new office and are seeking LEED-CI Platinum certification. The design includes:

- LED light fixtures throughout to reduce our Light Power Density;
- maximized day lighting and use of lighting systems sensors;
- downtown location with no parking and ease access to multiple modes of public transit;
- programmable mechanical and lighting systems to consume less energy.



Advocacy and Outreach

14

Ellenzweig members frequently participate in activities that promote green building design. We speak at conferences nationally—such as Tradeline, SCUP, and I2SL—promoting innovative and sustainable design strategies for laboratory buildings. We sponsor USGBC and I2SL in their continued mission to create a more sustainable built environment, and encourage our staff to volunteer in such organizations and in their communities to actively promote sustainable design. Four employees are Board members of the USGBC Massachusetts and I2SL respectively, and others serve on community agencies that include the City of Boston South End Landmarks District Commission and the Boston Groundwater Trust.

We wish to elevate the discourse on high performance buildings by incorporating demonstration technology for their occupants and the public where possible.

As we move forward we continue to look for more ways to learn and expand our reach by researching emerging green technologies and publishing promising applications as case studies in professional journals.

University of Vermont
Jeffords Hall Plant Sciences Building
Burlington, Vermont

LEED Gold







Conclusion

Since early 2014, Ellenzweig has reported to the AIA on the energy performance of our building projects in design. Through our commitment to sustainable design and fossil fuel consumption reduction, we successfully attained the goal average of 60% carbon neutrality targeted for 2013. Over 40% of our square footage currently in design meets the new 70% goal.

Our challenge is on-going. / We are in the process of reporting on the projected energy performance of building projects that were in design in 2017. We intend to meet the neutrality goal for this year, and ensuing years, through the innovative and creative use of ever-growing renewable energy technologies, and the design of net-zero-ready buildings.



Ellenzweig 2016 Design Work

Whole Building and Additions Projects

Energy Modeled Projects using Energy Use Intensity (pEUI)



Baseline Building

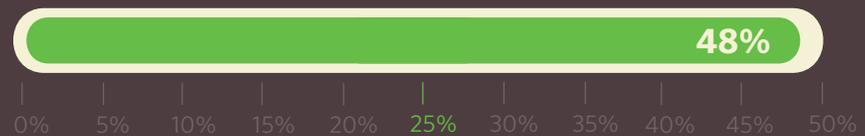
National Average (41%)*

Goal

Carbon Neutral

Interior-Only Projects

Minor renovations using Light Power Density (LPD).



Baseline Building

National Average (23%)*

Goal

*Preliminary results from AIA DDx



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