

Energy in Design: A Case Study Toward Performance-Based Recognition in Architectural Design Awards

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ABSTRACT

Architectural awards are a critical and longstanding part of design culture. They reveal the values of the design professions, confer legitimacy on projects and practitioners, and set future directions for industry. This paper provides six years of submission data and insights into incorporating required energy performance metrics as part of the annual Honor Awards program of a large metropolitan chapter of the American Institute of Architects (AIA). Using the 2030 Challenge as a framework, the “Energy in Design” award is selected by the overall awards jury to recognize a project that demonstrates innovation and exceptional design for energy performance. In addition, the energy-performance data for all built projects is shared with the audience in graphic form and commentary at the awards event. The goals of this are to transform the priorities of practitioners and building owners and are threefold: (1) to encourage and elevate the cultural stature of performance-based energy-efficient design, (2) to recognize innovative or exemplary projects, and (3) to provide a “report card” to the design community of where their self-selected best projects sit relative to the 2030 Challenge continuum. This paper shares a case study of the program, including strategies for implementation of the award, lessons learned, and anonymized data from five years of submissions with reflections from key participants. It also includes growing alignment with emergent national efforts such as the AIA Common App for Design Excellence, and guidance for those seeking more widespread adoption of performance-based metrics in mainstream building design awards.

Introduction

Architectural awards are a critical and longstanding part of design culture. They reveal the values of the design professions, appropriating legitimacy on projects and practitioners, and set future directions for industry. In a profession where much of the work is subjective in nature, architecture awards provide a hierarchical ranking of what is deemed as “success.” Owen and Lorrimar-Shanks argue that “architecture awards, conferred by the various professional institutes, are arguably the most public elucidations of the values and criteria of success that underpin the construction of ‘architecture’ (Owen and Lorrimar-Shanks 2015).” Honors and awards promote the model and ideals that the field’s elites hold in the highest regard (Larson 1993). Larson argues that there is a congruence between the values of a profession and those of society, and the public function of awards programs provide a “feedback link” between the public and profession. Desirable qualities are revealed and rewarded and priorities are continually negotiated and reconstructed (Larson 1993). They create a threshold for achievement, and a symbolic authority is invested in the judging panel who serve as gatekeepers of those that are being judged and awarded (Larson 1993). And, what is upheld and is judged as

“good work” changes and evolves with social standards and innovation in the eyes of the awards jury, or the “symbolic gatekeepers” differentiating between simply a building and architecture (Larson 1993). Architectural awards can be seen as a mechanism that can propagate change in the field of architecture (Larson 1993).

Beyond conveying value of buildings as architecture, awards also convey value on designers as revered architects. English points out that, “it is almost as though winning a prize is the only truly newsworthy thing a cultural worker can do, the one thing that really counts in a lifetime of more or less nonassessable, indescribably, or at least unreportable cultural accomplishment (English 2005).” Awards can offer ‘symbolic capital’ to the people and/or firms that win such accolades for their work. They distribute recognition for what is seen as success, distinguishing an architect among their peers and clients, which can thereby lead to greater advantage in acquiring new projects (Roudbari 2018).

As Roudbari has evaluated, the number and diversity of awards systems is vast (Roud. Awards and recognitions, as a reflection of social capital, are continually being re-evaluated, and re-invented, reflecting the complexity and dynamism of the profession of architecture, and architecture itself (Owen and Lorrimar-Shanks 2015). As new social and societal values emerge and solidify, so do awards that reflect “success” based on those merits.

The American Institute of Architects Values

The American Institute of Architects (AIA) was founded in 1857, and according to their mission statement the AIA, “consistently works to create more valuable, healthy, secure, and sustainable buildings, neighborhoods, and communities.” They are a national professional organization composed of more 200 international, state, and local chapters. The 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 (*2030 By the Numbers*, 2021)."

In a statement of their values, the AIA puts forth that, “in a time when the world is feeling the damaging effects of excessive carbon in our atmosphere, AIA will continue to advocate for policies that protect the environment by encouraging the design, preservation, and construction of high performing buildings (*Statement of Values*, 2022).”

In 2019 AIA introduced a resolution calling for the AIA to continue and strengthen its efforts to engage architects in addressing the impacts of climate change (O'Donnell, n.d.). William J. Bates, FAIA, and AIA 2019 president said of this resolution: “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 (Exley 2019).”

Architects Are Addressing Climate Change, Decarbonization, and Energy Efficiency

Recent IPCC reports and public and scientific discourse highlight a major shift in thinking about climate change, carbon emissions, and energy efficiency. A recent Deloitte survey highlighted that business leaders increasingly care about the environment, and express that the changing climate is currently directly impacting their businesses directly (Bechert 2021). The US

EPA estimated that in 2019, buildings accounted for 35.5% of total greenhouse gas emissions, a direct outcome of the energy that is consumed by building operations (*Inventory of U.S. Greenhouse Gas*, 2021), highlighting that the building industry has a major impact on total carbon emissions, presenting a great opportunity in the profession of architecture being able to positively impact climate.

The prevalence of systems to track and disclose energy performance have emerged over the last two decades including building rating systems such as LEED, building energy disclosures in an increasing number of cities (Palmer and Walls 2016), and even energy performance requirements in some cities and states.

In 2005, Architecture 2030 created and launched the 2030 Challenge, calling for an immediate 50% fossil-fuel and energy consumption reduction in new buildings and major renovations, increasing incrementally to carbon neutral by 2030 (*Unprecedented*, 2020). The 2030 Challenge was immediately adopted by the U.S. Conference of Mayors, the American Institute of Architects (AIA), the U.S. government for federal buildings, and subsequently by many other sectors of the built environment, both nationally and internationally (*Unprecedented*, 2020).

In 2009, the AIA created the “2030 Commitment,” a voluntary program that induces 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 (*AIA 2030*, n.d.). Signing architects publicly track their annual progress toward meeting the metrics of the Commitment. In 2020 there were over 900 firms (*2030 Commitment*, n.d.) who were signatories of the 2030 Commitment, with over 378 firms publicly disclosing their project portfolio’s energy efficiency (*2030 By the Numbers*, 2021).

In this paper, we explore a case study that documents the shift from a traditional architecture awards program to one that incorporates energy performance data as both a required submission process and success criteria, and the influence of such an award on the culture of local and national awards programs and the projects that are judged and most highly revered.

The AIA Seattle Energy in Design Award: A Case Study in Mainstreaming Performance-Based Recognition for Design

The Energy in Design Award was established in 2016 in Seattle, WA by the local AIA chapter as part of their annual Honor Awards for Washington Architecture (*Honor Awards*, n.d.) under a sponsorship from the Northwest Energy Efficiency Alliance (NEEA) (*NEEA*, n.d.), a Pacific Northwest-based utility-funded regional energy-efficiency non-profit which provided a grant to AIA Seattle and to a university-based lab housed in a school of architecture, the University of Washington Integrated Design Lab (UW IDL) (*UW IDL*, n.d.) to provide technical support to the chapter and to submitters. AIA Seattle and NEEA aimed to mainstream the issue of building performance and innovation in energy-efficient design in particular and to make these issues inherent to all Award considerations. Unlike many previous awards of this type such as the national AIA Committee on the Environment (COTE) Top-Ten Green Building Awards (*2021 COTE*, n.d.) where only “green buildings” are submitted for consideration, the submission requirements of energy data were required of all projects submitting for any Honor Award, regardless of whether they were seeking recognition in energy performance. A notable departure from previous green building recognitions, the Energy in Design Award recipient(s) would be decided by the same jury that evaluated projects for all other awards, rather than a separate jury

with specialized energy expertise. The market transformation goal with this approach was to elevate the issue of energy performance in a venue that captures the attention of the broadest constituency of building designs in a venue that confers cultural currency and social capital on projects and practitioners.

The vast majority of practitioners working in AIA Seattle member firms are signatories of the 2030 Commitment (*2030 Commitment*, n.d.), a framework that establishes progressively increasing reductions building energy use intensities (EUI) as compared with a 2003 Commercial Buildings Energy Consumption Survey (*2030 Challenge*, n.d.) culminating in a 100% reduction in 2030 achieved with a combination of energy-efficiency and renewables. This framework includes a well-defined process for benchmarking buildings using comparators of similar usage profiles, scales, and climate contexts. Given the widespread adoption by building professionals, the 2030 Challenge was selected as the best empirical tool for measuring progress toward energy long term performance goals.

However, the intent of the Energy in Design award is not to be a strict accounting of kilowatts or therms saved or of carbon emissions reductions percentages. It is intended to holistically recognize the innovation of the design team in the context of the energy challenge that they faced with a particular project. In that sense, the performance of a project relative to the 2030 Challenge is only one dimension of the jury's decision. For example, an existing building that reduces 50% of its energy use may be deemed more innovative than a small project with rooftop photovoltaics that is net energy positive.

Ultimately, the award seeks to create visibility around the energy performance of the region's most aspirational work and to share the region's progress toward meeting the Architecture 2030 Challenge, while building the capacity in all submitting design firms to benchmark and assess the actual or estimated energy consumption of their designs. Finally, the intent was to accomplish these goals without reducing the number of submissions to the Honor Awards (which is, in part, supported by submission fees) due to any real or perceived barriers to completing the energy performance submission documentation. The method for delivering this program to the market details the approach for meeting these goals.

Methods

A technical development plan for the Energy in Design Award was first established in 2016 in partnership with AIA Seattle's Honor Awards Committee, AIA Seattle staff, NEEA, and the UW IDL. This included identifying award submission requirements and evaluation criteria, public outreach, training and technical assistance for submitters, data analysis and quality control evaluation, creation of event graphics, and the production of a dossier for the Awards jury.

Developing Submission Requirements and Evaluation Criteria

Submissions requirements for the Award were developed around the minimum information needed to evaluate a building's progress relative to the Architecture 2030 Challenge. The 2030 Challenge was selected because, as described above, it is currently the most broadly accepted framework for architects and engineers to evaluate their progress toward zero net carbon emissions. To standardize the submission process, an EID Calculator (AIA Seattle, 2018) was created. It provided fields for basic information about the building, the creation of a baseline using the EPA Targetfinder tool (*Targetfinder*, n.d.) or the 2030 Zero Tool (*Zero Tool*, n.d.). It

offered three pathways for entering energy performance information: (1) actual measured energy consumption (kWh, therms, lbs of steam, etc.) minus any qualifying renewables, (2) modeled energy data (from a LEED accepted or code submitted model), or (3) to simply select the energy code and year (e.g. Washington State Energy Code, 2012) from a pull-down menu and to receive deemed savings for national, regional, and local codes based on a variety of sources (Kennedy, 2014; Murray and Rock, G. 2012; Thornton et.al., 2011). An example flow chart for selecting which energy performance method results to report is shown in Figure 1.

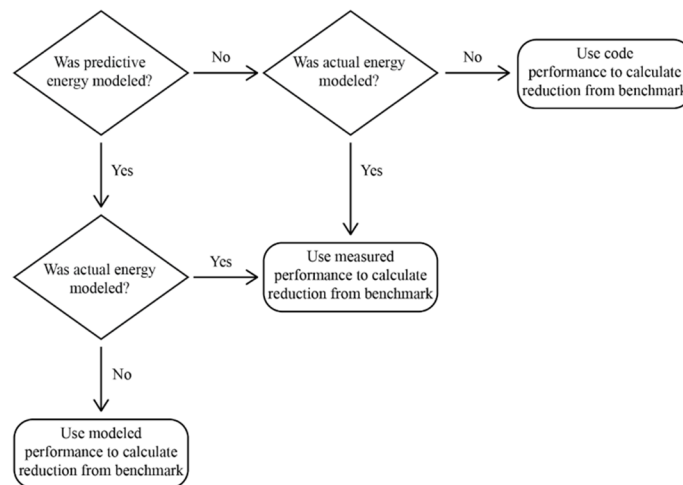


Figure 1. Flowchart for selecting which energy performance method results to report

The purpose of the “select code” option was to provide for those with no access or resources (or interest) to document energy performance, though they were still required to create a Commercial Building Energy Consumption Survey (CBECS) 2003 (EIA, 2008) baseline for their project. The committee felt that providing this option would be a way to engrain submitting performance data in all applicants, without being sufficiently onerous that it would depress the submission count. Since none of the codes available for selection are sufficiently stringent to meet the 2030 Challenge for the years in which they are in force, none of the project submissions where the “met energy code” option was selected are eligible for the Energy in Design Award. Ultimately, the calculator compared the project's benchmark EUI with the actual or projected EUI based on models or deemed by code to identify where the building's performance in terms of reduced energy use fell relative to the 2030 Challenge carbon emissions reduction targets based on project design year. The required inputs for the calculator are described in Table 1.

Market Engagement and Outreach

An early decision was to make the submission of the Energy in Design Award energy performance data a requirement of all Honor Award submissions. To reasonably achieve this it needed to be reasonably easy to fill out, even for projects where there is no interest in pursuing the EID Award. Therefore, a significant education and engagement program was developed to assist submitters with limited experience in building benchmarking and energy data compilation. As part of its communications strategy calling for submissions, was an introduction of the award highlighting the new submission requirement, a link to the Energy in Design Calculator and a

scheduled live recorded webinar offering training in the use of the Calculator, along with key submission dates and opportunities for no-cost technical assistance.

Table 1: Required building information inputs for the AIA Seattle Common Application

Category	Inputs (type)
Project location	- Address (text box) - City (text box) - State (text box) - Country (text box)
Climate zone	- ASHRAE climate zone (predefined dropdown)
Primary building use	- Primary building use (predefined dropdown) ¹ - Percentage of floor area for primary use to nearest 5% (predefined dropdown) ²
Additional building use (Required only if applicable)	- Secondary building use (predefined dropdown) ¹ - Percentage of floor area for secondary use to nearest 5% (predefined dropdown) ²
Additional building use (Required only if applicable)	- Tertiary building use (predefined dropdown) ¹ - Percentage of floor area for tertiary use to nearest 5% (predefined dropdown) ²
Floor area	- Gross square footage of conditioned floor area (number input)
Permit year	- Year that building construction permit was granted (year input)
Project summary statement	- 500 word max narrative about project and designing for reduced energy (text box)
Energy code that project was built to	- Energy code (predefined dropdown or user input) ³
Method of energy code compliance	- Prescriptive or modeled (dropdown)
Modeled Performance (Required only if applicable)	- Modeled EUI for electricity - Modeled EUI for gas/propane - Modeled EUI of on-site renewables
Measured Performance (Required only if measured)	- Measured EUI for electricity - Measured EUI for gas/propane - Measured EUI of on-site renewables

¹ Building use options are same building type categories from the Commercial Buildings Energy Consumption Survey (CBECS) and the Residential Energy Consumption Survey (RECS).

² Primary, secondary, and tertiary building use floor area percentages must equal 100%.

³ See Table 2.

Table 2. Energy code in Common App and corresponding deemed energy reduction from 2006 baseline from CBECs or RECs

Code	Energy reduction from baseline
IECC 2009, '12, '15, '18	20%, 25%, 40%, 45%
ASHRAE 90.1-2004, '07, '10	20%, 25%, 40%
Seattle Energy Code 2006 or Prev.	38%
Seattle Energy Code 2009, '12, '15	41%, 44%, 50%
California Title-24 2005 for high rise residential	35%
California Title-24 2005 for single family	30%
California Title-24 2008, '13	40%, 44%
Oregon Energy Code	25%
Washington State Energy Code (WSEC) 2006 or Prev	35%
WSEC 2009, '12, '15	37%, 40%, 45%
International/Other	Requires Narrative

Training, and Technical Assistance Helpdesk

To ensure that the program was accessible to firms of all scales and capabilities, the University of Washington Integrated Design Lab (UW IDL), with funding from NEEA, provided no-cost third-party education and technical training. These included a walk-through of the Energy In Design Calculator (more recently the modified AIA Common App) with a description of required user inputs and where applicable appropriate sources for information (utility bills, code submissions, etc.). Additionally, training was provided for benchmarking projects to establish a baseline with which to evaluate 2030 Challenge compliance. The benchmarking tool demonstration initially included the EPA's Targetfinder (which currently uses CBECS 2012 data), however in later years the Architecture 20303 Zero Tool was used since it maintains the CBECS 2003 dataset, which remains the static baseline for the 2030 Challenge. For residential building types, data from the AIA's Design Data Exchange (AIA DDx, 2022) was used in the auto-benchmarking tool.

In addition to the webinar and recorded tool demonstrations, the UW IDL provided a week-long "help-desk" to any submitters requesting assistance completing the Energy in Design Calculator in the week prior to the Honor Awards submission deadline.

Submission Data Quality Assurance Review and Data Compilation

Due to the technical nature of the calculations and that the data is self-reported, a third-party technical review of the calculator spreadsheets was provided each year by the UW IDL. This included a review of the benchmark data for each project to ensure it reasonably matches the project that was submitted. It also included a review of submitted energy data for mathematical or inadvertent formula errors. Lastly, the design date (nominally the permit year) was reviewed to confirm the carbon emissions reduction percentage level required to meet the 2030 Challenge. The required energy reduction, keyed to the permit year, is shown in Table 3.

Table 3. Required energy reduction from 2006 baseline based on permit year to meet 2030 challenge

Permit year	Energy reduction from baseline to meet 2030 challenge
2005-2009	50%
2010-2014	60%
2015-2019	70%
2020-2021	80%

Where errors were discovered, the submitter was contacted and provided guidance as to how to revise and resubmit. Once any outstanding questions about the submissions were resolved, all submissions were compiled into a single dataset which was used to identify projects that meet the 2030 Challenge, the overall percentage of submissions meeting the challenge, and the percentage distribution for each compliance method (actual performance, modeled performance, and met code). This data was used for communications at the formal Honor Awards Event and to inform the jurors (figs. 2 and 3).

Since the Energy in Design Award is not a considered from a separate pool of submissions, to assist deliberations, the jury was provided with a list of projects that met the 2030 Challenge along with summary sheet for each project that contained the high-level

information such as, actual or predicted EUI, percent improvement over baseline, and percent operational carbon emissions reduction as well as any narrative information regarding energy performance provided by the design team to the jurors.

Results

Honor Award submission data and Energy in Design Award compliance path, Architecture 2030 carbon emissions reductions, and general project submission statistics are indicated in the tables below. A clear trend is that the Honor Award submission count remained within historical variation despite the energy data submission requirement (Table. 1). The total submission count trended down particularly in 2020, when COVID clouded the status of the awards and the awards were moved to a virtual format for the first time but has subsequently rebounded. The submission count appears unaffected by the requirement of project energy data.

Of all submissions received from 2016 through 2021, 21% met the 2030 Challenge criteria for their design year. This figure remained relatively consistent with 22% in 2016, and 21%, 18%, 23%, 22%, through 2020. In 2021, the percentage of projects meeting the Challenge dropped to 17%. It remains to be seen if this is a downward trend due to the 2030 Challenge's increasing requirements for EUI reductions every five years to 100% in 2030 from the 2003 baseline (projects designed between 2021 and 2025 must meet an 80% reduction).

When looking at project scale by square footage, a clear trend in the submissions is the prevalence of modeled energy data for larger projects and “met code” for smaller projects (fig. 5). This may be because larger projects tend to have budgets that support energy modeling by specialty consultants, require modeling for HVAC system design, or require trade-off modeling for energy code compliance. In particular, buildings under 10,000 ft² (929 m²) rarely provided measured or modeled data. Conversely, submissions with actual measured energy data did not follow similar trends.

One clear trend is the prevalence of measured data in the winning submissions. Presumably owners and designers are more likely to monitor and disclose energy use in buildings where energy was a driving factor in the design. Another trend is a gradual decrease over time in projects submitting actual energy data that did not meet the 2030 Challenge. It may be that designers or owners with energy data that did not reflect positively on the project, chose the “met code” option rather than disclose that data.

All projects meeting the 2030 Challenge were recognized on a slide and verbally acknowledged by the Awards emcee. The jury selected the single award winner, with the exception of one year where two projects were recognized. The selected projects are available at the AIA Seattle web site (AIA Seattle, 2022).

Data Visualization

A core objective of the Energy in Design Award is to highlight energy design achievement beyond the individual project, and to use the submission data to provide a snapshot of the regional design community's progress in reducing building energy consumption, meeting the 2030 Challenge, and ultimately mitigating the effects of climate change. To this end, leading up the jury announcement of a single project selected for the Energy in Design Award, a series of slides present key statistics, such as the percentage of projects meeting the 2030 Challenge, their average emissions reductions, and whether buildings met them using simulation or real-word

measured energy consumption data. These data visualizations were created from the submission data set by the UW IDL and provided to AIA Seattle staff who formatted it into the graphic language of the Awards presentation visuals. This data provides a point-in-time reflection of the energy performance of projects that the region's leading designers have self-selected as their best work (Figs. 2 and 3).

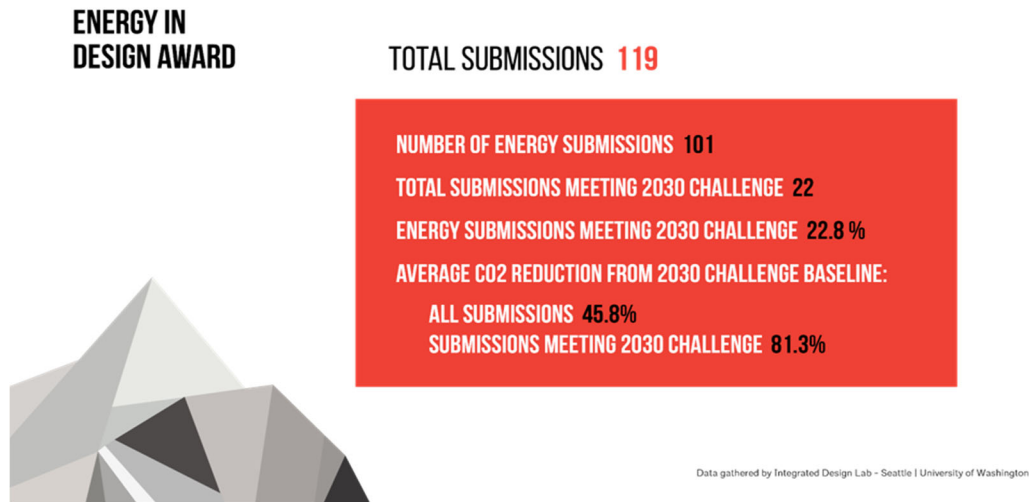


Figure 2: Example summary table given to Energy In Design Award jurors.

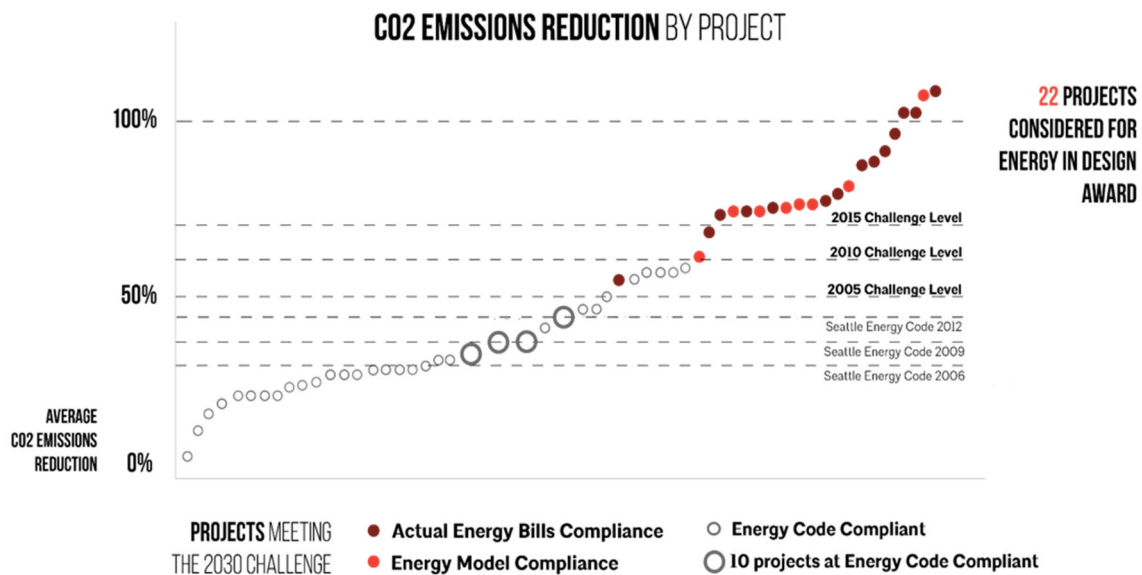


Figure 3: Example graphic highlighting all submitted projects as shared with the Awards jury. The graph shows all projects with their predicted or actual energy performance on the Y axis and their position relative to the 2030 Challenge benchmarks.

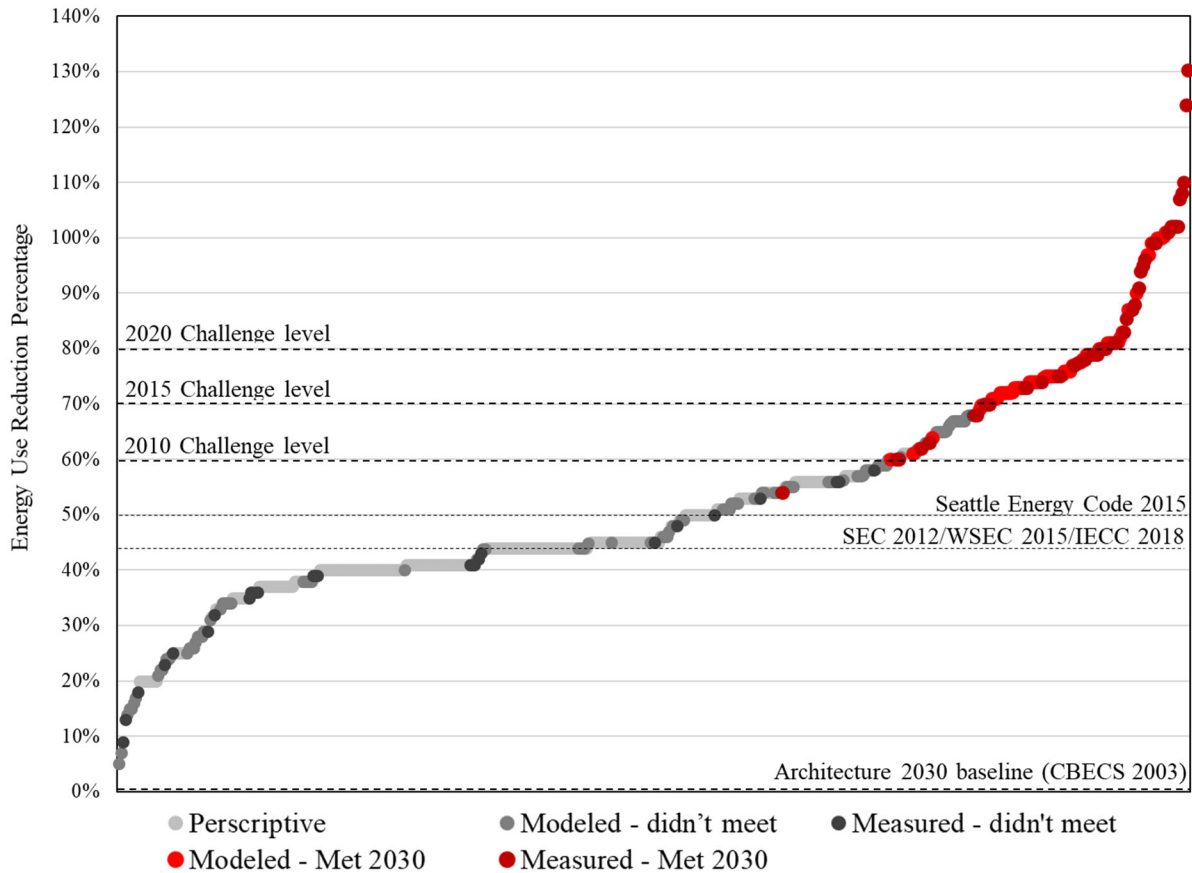


Figure 4. Energy use reduction percentage for all submissions to the Seattle Energy in Design award from 2016 to 2021. Colored by method of energy use calculation and whether the project met the 2030 challenge, based on permit year.

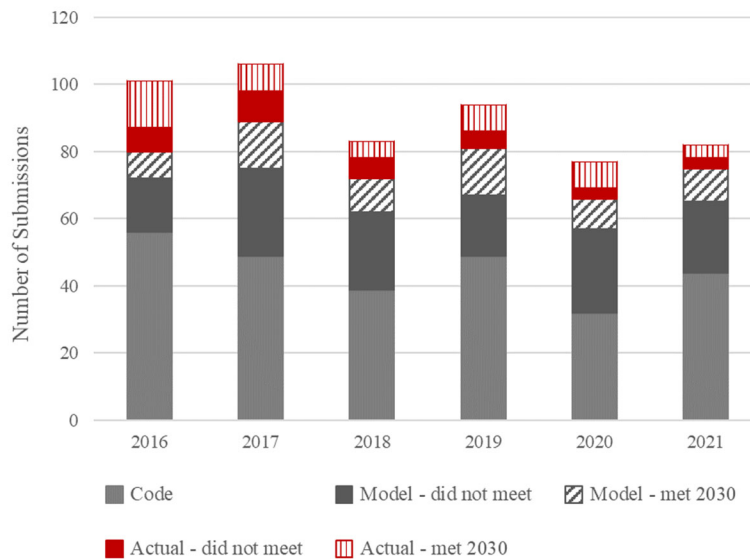


Figure 5. Total submissions to Seattle Energy in Design Awards from 2016 to 2021. Submissions colored by method of energy use calculation and whether the project met the 2030 challenge, based on permit year.

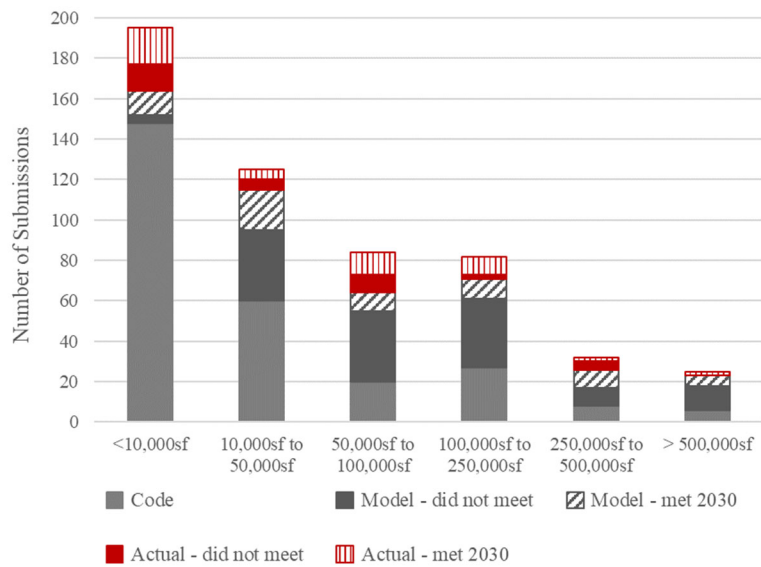


Figure 6. Total submissions to Seattle Energy in Design Awards from 2016 to 2021, categorized by project size. Submissions colored by method of energy use calculation and whether the project met the 2030 challenge, based on permit year.

Discussion

As described above, just over one in five (21%) of all submitted projects met the 2030 Challenge. Since the projects submitted for the honor awards can be presumed to represent examples of the submitting firms' best work, it is reasonable to assume that the vast majority of projects produced by them far less likely to have achieved the 2030 Challenge. This reinforces the idea that more effort is required to elevate the issue of building energy performance, decarbonization, and energy efficiency in order to mitigate the building sector's contribution to climate change.

Furthermore, since buildings under 10,000 ft² (929 m²) infrequently provided measured or modeled data, the data suggest that current tools and practices for energy simulation modeling have yet to achieve traction in this market segment. However, since these are often less complex buildings, this is an area where education and training in available software tools could rapidly increase industry capacity.

In terms of measured data there appears to be no correlation between the submission of actual energy consumption data with project type or size. Perhaps this is because the availability of actual energy data is less dependent on budget and more a function of an owner's willingness to disclose it or the design team to track it.

One clear trend is the prevalence of measured data with projects that met the challenge. Ultimately, the intent is to eventually require all actual or modeled data, but challenges remain with removing the stigma of sharing data when it does not meet the 2030 Challenge. Perhaps this will require a more nuanced energy evaluation and submission rubric including factors for unique energy consumption patterns, special equipment or conditions, or atypical occupancy patterns such as 24-hour use or very high density.

Technical Challenges with Submissions

A common challenge with projects that represent unique or rare use-types has been how to establish energy benchmarks for unique buildings typologies such as ferry terminals, outdoor pavilions, or unique cultural buildings. These were handled on a case-by-case basis by using engineering calculation, or good-faith estimates from reputable sources.

A repeated question we received from submitters is how to establish a “design complete” date for design-build and other alternative project delivery projects where design decisions are made on a rolling basis throughout the project development. In a traditional design-bid-build project there is often a 2-3 year time window between the completion of design and the beginning of operation. In the 2030 Challenge the design date is important since the Challenge uses progressively ratcheting standards in five-year increments to determine compliance thresholds. This can disadvantage projects that do not use the conventional delivery process by pushing the “design completed” date into higher required performance thresholds.

Alignment with AIA COTE “Common App for Design Excellence”

Concurrent to the first three years of the Energy in Design Award, AIA’s national Committee on the Environment developed the AIA Common App for Design Excellence, a tool seeking to establish common metrics all designers, regardless of technical capacity, should track to ensure high quality and ethical design. The Common App is a tool that seeks to standardize and align performance metrics to ensure that design efforts are impactful and reporting is a simple, non-technical process. Introduced in 2018 and deployed by AIA chapters around the country of over the past few years, the Common App is an Excel-based calculator that integrates a holistic suite of building performance metrics including energy, equity, carbon, water, equity, and others in a way that is intended to be incorporated into a design awards program. The Common App displays results as a single graphic that shows the relative performance of the project in different areas. For the AIA Seattle Energy in Design Award, the national Common App was modified to allow for the three pathways for including a project’s energy data described above and provided an auto-benchmarking function with an option for overriding it with Zero Tool data or for unique building types. As part of the transition from the EID Calculator to the Common App, submitters were encouraged to complete the data input for all areas of the App (a planned future requirement for AIA Seattle), however energy-related fields were required for all submissions.

Grid Carbon Considerations

Some challenges arise from the use of the current 2030 Challenge framework as an evaluation metric. In the six years since its inception the Energy in Design Award has both evolved with the market and had success. However, several questions emerge when it comes to the inclusion of carbon-based metrics for building performance evaluation. As building energy performance is increasingly viewed through the lens of carbon emissions reductions, one of the challenges that emerges is how to appropriately attribute carbon emissions to the decisions that building designers make. Should building designs be evaluated based on the carbon intensity of the utility serving a specific site location? Should designers be rewarded simply for working on sites with access to clean power? For example, a highly efficient all-electric building in one

location may have significantly more carbon emissions than a conventional building using fossil fuels in another. The Architecture 2030 Challenge is based solely on EUI reductions over a 2003 baseline rather than on a measure of carbon attributable to that energy use. This brings up the questions of how one might tease out the elements of design decision-making that an architect can control rather than ones that are dictated by site location or other regulated or regulatory constraints that designers have limited control over. Granular data exists that would enable normalization of operational carbon intensity of electricity sources, but this potentially undermines decarbonization of the building stock as well as long-term electrification goals for areas where the power grid remains largely underpinned by fossil fuels.

Conclusion

The AIA Seattle Energy in Design Award was created in 2016 to elevate the issue of building performance, specifically energy use, in the evaluation of all projects submitted for AIA Honor Awards. In that sense it can be considered a success: a significant portion of the awards ceremony has been dedicated to discussing energy and building performance most notably sharing a “report card” that provides a snapshot of the carbon emissions reductions associated with each of the projects submitted for an award. This cohort of buildings and projects, by definition, represents the projects that the Seattle design community considers its best work. The market transformation benefits of this have been fourfold: (1) requiring energy performance data of all project submission, (2) elevating the issue of energy performance in a venue that captures the attention of the broadest constituency of building designers, (3) creating transparency around the energy performance of the region's most aspirational work, and (4) building capacity in all submitting design firms to benchmark and assess the energy the actual or estimated energy consumption of their designs.

A program like the AIA Seattle Energy in Design Award program is broadly replicable in AIA chapters nationally and regionally. In particular, the development of the AIA Common App at the national level provides a framework that is readily adaptable to regional or local conditions. At the Chapter-level the internal support and/or sponsorship funding required to establish an award around energy or building performance is critical. Not to be overlooked are the resources it takes to build submission forms, provide training to submitters, and to provide technical assistance to firms unfamiliar with energy benchmarking and/or documentation. Furthermore, the collection of data and the creation of communication graphics to tell the story of a design community's progress in improving energy performance or carbon emissions reduction requires significant effort. Local schools of architecture are particularly well-positioned to serve in this third-party technical capacity.

Architectural awards are a critical and longstanding part of design culture. They reveal the values of the design professions, appropriate legitimacy on projects and practitioners, and set future directions for industry. The AIA Seattle Honor Awards and the Energy in Design Award create a forum for dialogue highlighting and reflecting the broader social and environmental values of architecture, sustainability, and performance. These awards represent a shift toward greater adoption of sustainability, and are part of a positive feedback mechanism that can help propagate positive change, amplifying how architects can deliver both social and environmental values.

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