



MINUTES
BOARD OF DIRECTORS MEETING

LAS VEGAS, NV
Sunday, January 30, 2022

Approved by the Board of Directors June 26, 2022.

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 Sunday, January 30, 2022

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PRINCIPAL APPROVED MOTIONS

Board of Directors Meeting

Sunday, January 30, 2022

No. - Pg.	Motion
1 - 3	That the Finance Committee recommends to the Board of Directors (BOD) that they approve the new ASHRAE, Inc. General and Research Reserves Investment Policy (ATTACHMENT B).
2 - 4	That the Executive Committee recommends to the Board of Directors that Society enter into an MOU with IEA-EBC.
3 - 5	That the BOD DEI Subcommittee recommends to the ASHRAE Board of Directors that the BOD DEI Advisory Subcommittee become a permanent subcommittee of the Board of Directors.
6 - 7	That MOTION 4: The agenda templates (Item A of ATTACHMENT D) be used as the starting document for BOD agendas. be tabled until the Wednesday, February 2, 2022 meeting.
7 - 8	That the application of AIIR the Romanian Association of Building Services Engineers to the AASA be approved.
8 - 8	That MOTION 4 be moved from executive session to open session.
9 - 8	That ASHRAE, as a matter of policy with BOD oversight, address decarbonization of the global built environment with the same level of importance and urgency as ASHRAE tackled energy efficiency during the energy crisis.



MINUTES
BOARD OF DIRECTORS MEETING

Sunday, January 30, 2022

MEMBERS PRESENT:

Mick Schwedler, President
Farooq Mehboob, President-Elect*
Ginger Scoggins, Treasurer
Don Brandt, Vice President
Dunstan Macauley, Vice President
Sarah Maston, Vice President
Tim McGinn, Vice President*
Jeff Littleton, Secretary
Steven Sill, Region I DRC*
Ronald Gagnon, Region II DRC
Mark Tome, Region III DRC*
Steve Marek, Region IV DRC*
Doug Zentz, Region V DRC*
Rick Hermans, Region VI DRC
Chris Gray, Region VII DRC

Tyler Glesne, Region IX DRC
Devin Abellon, Region X DRC
Eileen Jensen, Region XI DRC
Robin Bryant, Region XII DRC
Apichit Lumlertpongpana, Region XIII DRC*
Andres Sepulveda, Region XIV DRC
Richie Mittal, RAL DRC*
Kelley Cramm, DAL
Wade Conlan, DAL
Dru Crawley, DAL
Ken Fulk, DAL
Art Giesler, DAL
Jaap Hogeling, DAL*
Kishor Khankari, DAL*
Adrienne Thomle, DAL
Ashish Rakheja, DAL*

*Indicates Virtual Attendee

GUESTS PRESENT:

David Underwood*
Craig Wray*
Bjarne Olesen*
Darryl Boyce*
Van Baxter*
Ahmed Alaa Eldin*
Chandra Sekhar*
Jim Wolf
Jim Arnold
Bryan Holcomb
Richard Bowman
Joel Long

Dennis Knight
Shirl Knight
Michelle Hull
Heitor Tremea
Bruno Martinez
Sara Gawfalo
Austin Hochstetler
Buzz Wright
Chuck Gullledge
Harrison Kesling
Chelsesa Moussouni
MJ Ayyampudur
Trent Hunt

Tom Watson
Chad Smith
Paul McCown
Sherry Abbott-Adkins
Dimitris Charalambopoulos
Chris Phelan
Randy Jones
John Constantinide
Julia Timberman
Ignacio Gomez-Cornejo
Susanna Hanson
Mark Ingrao
Bill McQuade

*Indicates Virtual Attendee

STAFF PRESENT:

Candace DeVaughn, Manager - Board Services
Chandrias Jolly, Assistant Manager - Board Services
Joyce Abrams, Director - Member Services
Vanita Gupta, Director - Marketing
Kim Mitchell, Chief Development Officer
Mark Owen, Director - Publications & Education
Stephanie Reiniche, Director - Technology
Alice Yates, Director - Government Affairs
Craig Wright, Director of Finance

Isla Kennedy*, Govt. Affairs Coord/Project Mgr.
Lizzy Seymour, Manager - Conference Services
Lilas Pratt, Manager - Special Projects
Margaret Smith, Development Mgr. - Foundation
Joslyn Ratcliff, Sr. Mgr. - Marketing & Communications
Emily Porcari, Mgr. - State & Local Govt. Affairs

*Indicates Virtual Attendee

CALL TO ORDER

Mr. Schwedler called the meeting to order at 1:30 pm.

CODE OF ETHICS

Mr. Schwedler read the code of ethics commitment and reminded all in attendance that the full code of ethics statement and core values is available online.

COMMITMENT TO CARE

Mr. Schwedler read the commitment to care.

ROLL CALL/ INTRODUCTIONS

Roll call was conducted. Members, guests, and staff in attendance as noted above.

REVIEW OF MEETING AGENDA

Mr. Schwedler reviewed the meeting agenda. There were no changes or additions.

APPROVAL OF MINUTES

The minutes from the November 10 and 17, 2021 Board of Directors meetings were approved, with no objection, via exclamation.

REVIEW OF ACTION ITEMS**NOVEMBER 10, 2021**

Action items 1, 4 and 5 were reported as complete. The other two were reported as ongoing.

OPEN SESSION

Open addresses to the BOD were read by Mr. Mehboob and Ms. Scoggins. The full comments are included in ATTACHMENT A.

The following people addressed the BOD:

Jonathan Smith, MP Chair - Thank you for the support from the BOD during the pandemic. It has been a challenge. Membership numbers are up from July 1 of last year. Very proud of the MP Committee.

Cindy Davis, President of ICC - Thank you to President Schwedler and the BOD for the hard work in the building safety arena and strong collaboration with ICC. Appreciate the opportunity to be here.

TRASURER'S REPORT

2021-22 FINANCIAL UPDATE

Ms. Scoggins reported that the update includes numbers from December 2021. She reviewed the fund structure.

She reported that Society is operating in a deficit but that because of the PPP loan forgiveness and income from the new HQ building, the Society will end the year with a projected profit of \$1.8 million.

Ms. Scoggins reported on major variations. She reported that salaries are slightly up, but meetings and conferences as well as public relations are down.

Reserve funds are coming back quicker than anticipated.

FINANCE COMMITTEE REPORT

Ms. Scoggins reported that the Finance Committee spent time looking at the Society's investment policy. The Finance Committee Investment Subcommittee prepared a motion for the BOD's consideration.

Ms. Scoggins moved that

1. The Finance Committee recommends to the Board of Directors (BOD) that they approve the new ASHRAE, Inc. General and Research Reserves Investment Policy (ATTACHMENT B).

Ms. Cramm stated that the BOD has not had enough time to review these documents.

Mr. Mehboob spoke in favor of the motion. He stated that the investment policy is in the purview of the Finance Committee and if this BOD defeats the motion what does it mean for the ROB?

Mr. Schwedler responded that he did not see a conflict to the ROB. If the Finance Committee decides to bring a motion to the BOD it is their right, even if the ROB gives them purview.

Ms. Thomle spoke in favor of the motion. She asked if the motion proposes a new policy.

Ms. Scoggins responded that, if approved, the motion would replace the current investment policy.

Mr. Khankari spoke in favor of the motion. He stated that it would be nice for the financial advisor to show the level of risk so that the BOD can know what level of risk is being taken.

MOTION 1 PASSED (Unanimous Voice Vote, CNV).

COMMITTEE REPORTS**EXECUTIVE COMMITTEE****NOVEMBER 18, 2021**

Mr. Schwedler moved that

2. The Executive Committee recommends to the Board of Directors that Society enter into an MOU with IEA-EBC.

Mr. Schwedler reported that the motion was not approved unanimously by ExCom; the primary reason was that when ExCom met in October, there was agreement that Society should reduce the number of MOUs. The member that voted against the motion felt it was too soon to move forward with a new MOU.

MOTION 2 PASSED (Unanimous Voice Vote, CNV).

DECEMBER 14, 2021

Mr. Schwedler reported that ExCom discussed the MEP 2040 Challenge and defeated a motion for Society to participate.

Mr. Schwedler was asked to provide a summary as to why the motion to participate in the MEP 2040 Challenge was defeated. He responded that there was concern among some members of ExCom that approving the motion would be committing engineering firms to bring decarbonization designs forward.

Ms. Scoggins added that the perception was that by signing onto the challenge, Society would be saying that achieving the stated goals were a requirement for ASHRAE members.

Mr. Macauley added that there was also a sense that the full BOD should review and consider the matter, not just ExCom.

He reported on his efforts to visit to visit manufacturers and engineers. In addition to the manufacturers listed, Mr. Schwedler also had the privilege to visit AAON's Innovation Lab in the Oklahoma City area. The Innovation Lab was very impressive. He stated that he will continue to reach out to manufacturers and associations.

JANUARY 11, 2022

Mr. Schwedler reported that there were no recommendations for the BOD's approval and that information items were included for the BOD's review.

PLANNING COMMITTEE

Mr. Klock reported that the Committee completed two significant tasks so far this Society Year - the midterm update to the Strategic Plan and completion of the member satisfaction survey.

He reported that the best news from the survey is that Society is on the correct path. A disappointing discovery from the survey was that more than half of those that responded did not know that Society had a Strategic Plan.

The member satisfaction survey will be conducted annually. This year's survey provided a log of good information that the Committee is working to figure out what to do with. This year's survey had a response rate of 4%.

Mr. Klock reported that the Committee is scheduled to come back to the BOD with proposed changes to governing documents to reflect implementation of 2030. Early outreach to committees and councils is planned so there is more time next year to make plans related to the Strategic Plan.

Mr. Mehboob thanked Mr. Klock and the Planning Committee and stated that he is looking forward to hearing back on survey takeaways and real action.

NOMINATING COMMITTEE

Mr. Boyce reported that the Committee finished its work this morning with a few minutes to spare. He thanked the Nominating Committee for their thoughtful consideration of all the candidates.

Mr. Boyce presented the 2022-23 slate of nominees for officers and directors (ATTACHMENT C).

PRESIDENTIAL AD HOC COMMITTEE AND BOD TASK GROUP REPORTS

BOD DEI ADVISORY SUBCOMMITTEE

Mr. Sepulveda moved that

3. The BOD DEI Subcommittee recommends to the ASHRAE Board of Directors that the BOD DEI Advisory Subcommittee become a permanent subcommittee of the Board of Directors.

Mr. Sepulveda reported that in January 2020, the Proactive Diversity Task Group recommended to the Board of Directors, the formation of a BOD DEI Advisory Subcommittee. The BOD DEI Advisory Subcommittee would advise, engage and inform Board members on matters relating to diversity, equity, and inclusion in ASHRAE. The proposed makeup and terms of references can be found in the Report of the Task Group, "Diversity, Equity and Inclusion in ASHRAE." At the time the Proactive Diversity Task Group thought this recommendation would be considered a permanent structure and avoid yearly appointments/evaluation. The report notes a three-year plan and the subcommittee makeup includes up to 6 Board members appointed for a term of up to three years. It is the BOD DEI Subcommittee's intent to formally request that this subcommittee be made a permanent structure within the Board of Directors and added to the Board of Directors Manual of Procedures.

Mr. Glesne spoke in favor of the motion. He asked if there was any discussion of having the subcommittee report to Members Council instead of the BOD.

Ms. Bryant responded that this strategic item should be spread out to all councils and overseen by the BOD.

Mr. Mehboob spoke against the motion. He stated that he is 1,000% behind DEI. He stated that the motion puts the BOD in the business of appointments. If approved, the motion would create an operational body that would require a budget and an entire set of procedures; both of which would take away a significant portion of time of BOD members that could otherwise be spent on strategic work.

He stated that if the BOD desires to truly espouse DEI, a standing committee needs to be created. The motion speaks 180 degrees against streamlining, bringing more operational work to the BOD, rather than pushing it down.

Mr. Abellon spoke in favor of the motion. He stated that Mr. Mehboob brought up very good points. The motion essentially is trying to formalize the understanding that many BOD members had when the subcommittee was formed.

Mr. Khankari spoke in favor of the motion. He stated that DEI is a very important aspect of the Society. Making the subcommittee permanent demonstrates to members and the rest of the world that Society takes DEI very seriously. DEI takes a long-term commitment and continued awareness and would benefit Society.

Mr. Gray spoke in favor of the motion. Is DEI important enough to the BOD for the body to take strategic action? A standing committee would limit its impact. DEI is strategic and important enough for this group to be at the BOD level.

Ms. Cramm spoke in favor of the motion. She stated that she appreciates Mr. Mehboob's concerns but having the subcommittee report to a council does not give it teeth. The subcommittee can be strategic and deal with policy and send initiatives to other committees to be implemented and operational.

Ms. Thomle spoke in favor of the motion as Vice Chair of the DEI Subcommittee. She reported that the subcommittee did look at the ROB for information on standing committees versus subcommittees and felt that a subcommittee was the best path forward into the future.

Mr. Mehboob asked if a group is not operational and giving out policy, what body will actually implement that policy and follow up with the appropriate bodies? Will another body do this?

Ms. Bryant responded that the subcommittee would do the work to set the policy, define what it is, and recommend which strategic initiatives should be pursued. Once approved, the subcommittee would liaise with the councils on what they are asked to do. It would then be up to the individual councils to figure out implementation.

Mr. Giesler spoke in favor of the motion. He stated that once the subcommittee has been around for two to three years there can be another discussion on what happens next. Permanence is needed to know that the President-Elect will appoint members for the next two to five years.

MOTION 3 PASSED (Voice Vote, CNV). Mr. Mehboob voted negatively.

Mr. Sepulveda reported that a DEI forum was being held Monday morning.

BOD OPERATIONAL STREAMLINING SUBCOMMITTEE

Mr. Giesler reported. The full report is included in ATTACHMENT D.

Mr. Giesler moved that

4. The agenda templates (Item A of ATTACHMENT D) be used as the starting document for BOD agendas.

Mr. Conlan spoke against the motion. He stated that he had not had an opportunity to review the documentation.

Mr. Giesler moved that

5. Motion 4 be withdrawn.

Mr. Mehboob spoke against the motion.

MOTION 5 FAILED.

Mr. Giesler moved and Ms. Bryant seconded that

6. Motion 4 be tabled until the Wednesday, February 2, 2022 meeting.

MOTION 6 PASSED (Voice Vote, CNV). Mr. Mehboob voted negatively.

TASK FORCE FOR BUILDING DECARBONIZATION

Mr. Colliver reported. He expressed appreciation for being able to represent the task force.

He reported that the Task Force had nine working groups and 120 members associated with the working groups. The Task Force worked diligently since the last presentation to the BOD in June and this fall.

Mr. Peterson presented. The full presentation is included in ATTACHMENT E. He stated that it is a pleasure to present to the BOD.

He stated that ASHRAE is a phenomenal organization when it comes to the built environment. Decarbonization is one way to balance the score card; lets figure out how to make it balance and what Society should do moving forward.

Mr. Colliver stated that the task force is making great progress. A table of recommendations is provided as part of the report and it is the group's recommendation that discussion of the recommendations take place in executive session.

Mr. Schwedler thanked Mr. Colliver, Mr. Peterson, and the Task Force. He stated that the discussion would be continued in executive session.

HQ BUILDING AD HOC

Mr. Boyce reported. He stated that the goal of a low energy usage building was very well done.

The Ad Hoc continues to work on operational issues and hopes to have them sorted out in the next month or so. The focus is on how to use technology to ensure the building operates as designed.

A paper or seminar on the operational side of the building at the 2022 Annual Conference is being considered.

Mr. Schwedler stated that as the pandemic recedes there will be more staff in the building. He encouraged members to visit and take a tour.

AASA APPLICATION**AIRR - ROMANIAN ASSOCIATION OF BUILDING SERVICES ENGINEERS**

Mr. Mehboob moved that

7. The application of AIIR the Romanian Association of Building Services Engineers to the AASA be approved.

Mr. Littleton stated that there are two other Romanian associations that are already members of AASA. He stated that the motion is a good idea and that there is no limit to the number of AASA members from any one country.

Mr. Hogeling spoke in favor of the motion. There are three organizations in Romania and all three work together.

Mr. Gagnon spoke in favor of the motion. He stated that it is important for Society to be global.

MOTION 7 PASSED (Unanimous Voice Vote, CNV).

EXECUTIVE SESSION

Executive session was called at 3:25 pm.

Open session reconvened at 4:38 pm.

Mr. Giesler moved and Mr. Crawley seconded that

8. Motion 4 be moved from executive session to open session.

MOTION 8 PASSED (Unanimous Voice Vote, CNV).

Mr. Gray moved and Mr. Macauley seconded that

9. ASHRAE, as a matter of policy with BOD oversight, address decarbonization of the global built environment with the same level of importance and urgency as ASHRAE tackled energy efficiency during the energy crisis.

MOTION 9 PASSED (Unanimous Voice Vote, CNV).

APPOINTMENTS UPDATE**STANDING COMMITTEE APPOINTMENTS (SINCE JUNE 2021)**

Mr. Schwedler reported that the update attached to the agenda highlights changes made since June 2021 in yellow. He thanked Ms. Jolly for the work she does with the appointments process.

PRESIDENTIAL APPOINTMENTS

Mr. Schwedler reported that there had been no changes to Presidential appointments since June 2021.

INFORMATION ITEMS

REPORT OF THE PRESIDENT

Mr. Schwedler thanked the DRCs from the regions he had visited thus far, as they have done a fantastic job helping to coordinate the President's travel.

This year, the President issued a challenge to visit chapters where a Society President hasn't been in some time. This was achieved with Mr. Schwedler's visit to the West Texas Chapter, which had only had a Presidential visit as part of the 2009 CRC.

MARKETING UPDATE

Mr. Schwedler stated that the report attached to the agenda includes a lot of information. The Marketing team has done a tremendous amount of work.

BOD members were asked to review the report and reach out to Marketing staff with any questions or comments.

He thanked Ms. Gupta and her team for their work.

STANDARDS ANALYSIS SHEETS - JANUARY 2022

Mr. Schwedler reported that this information was distributed prior to the Annual Conference. BOD members were asked to review the information prior to the Wednesday, February 2 BOD meeting.

STRATEGIC DISCUSSIONS

MAKING ASHRAE A HOUSEHOLD NAME

Mr. Schwedler stated that the work of the TFBD has made ASHRAE somewhat of a household name. How can Society leadership go about making ASHRAE even more of a household name?

A summary of the discussion is below:

Region II has gotten multiple media interviews by sending a lot of information to various media outlets.

TV campaign.

If we go beyond what the ETF has done it could open a new revenue source. As a Society, we have a certain social responsibility beyond serving the industry.

There are many industries that see ASHRAE as "the source." Need to find people who know and appreciate what we're doing and get them to tell our story.

Start with the young. "Lucy's Engineering Adventure" is one of the best things we've done in the past year and more books like that are needed.

Social media has to be worked at continuously.

ETF reported that website impressions increased from roughly one million to ten billion. As to the question of becoming a household name, that's a big responsibility because we would then

have a constituency that is that large. Do we have a structure that can deal with that big of an audience on a regular basis? What would be the purpose?

Notoriety makes it easier to do business in the industry.

Reach out to small contractors.

Booklets written in such a way that the general public can understand. The household market is large, and they have questions. Booklets for the general public would open up a large market for ASHRAE.

Mr. Peterson and Mr. Colliver gave great presentations. If our focus is going to be in that direction, why don't we use their presentation materials? Need to sit back and make some tough decisions. What rooms do we want to be in? What organizations do we want to collaborate with? If we do that, we are a household name around the world.

ETF one-page documents were most successful. Information should be easy to find and distribute as a source and should make it easier for someone else to do their job or make their point.

The one-page documents from the ETF were incorporated into guidance and policies across the globe. Schools love ASHRAE; we can do more, and we should do more as it relates to schools.

The ETF was amazing and showed us the reach that we have but that doesn't get us into homes. ASHRAE was the leading organization during the pandemic and not once did we go out and offer to be that resource. We have to get outside of our comfort zones.

A big component of decarbonization is residential construction. ASHRAE certified carbon free homes gets us out there more in that way.

Society has to have a product that individuals need. What are the products or tools that individuals need, that we can offer, to help them make decisions? What products or tools can we offer to assist the public in making decisions?

Locally, we saw a lot of engagement at the chapter level with the media. Brand awareness is going to be very important.

What is the product that we can sell to get into people's household? We don't have a physical product, but we do have information. Society's YouTube should be used to push out a little bit of information that gets people hooked and used to it, to the point that Society becomes a resource.

ADJOURNMENT

The meeting adjourned at 5:25 pm.

A handwritten signature in black ink, appearing to be "JH Littleton", with a horizontal line extending to the right from the end of the signature.

Jeff H. Littleton, Secretary

ATTACHMENTS:

- A. Addresses to the Board of Directors
- B. General Reserves Research Reserves Investment Policy Statement
- C. 2022-23 Slate of Nominees for Officers and Directors
- D. BOD Operational Streamlining Subcommittee Report
- E. Task Force for Building Decarbonization Presentation

ADDRESSES TO THE BOARD OF DIRECTORS

- **Craig Wray, Manitoba Chapter**

*Currently, all ASHRAE committee agenda are required to have a Code of Ethics statement (<https://www.ashrae.org/about/governance/code-of-ethics>). That statement is a paraphrasing of many items in the Code, but surprisingly excludes Item A of the Code, which pertains to enhancing public health, safety, and welfare. It is unclear why Item A was not included, given that its scope applies to the public as a whole and not just to ASHRAE (which is the more limited scope of ASHRAE's Commitment to Care). Also, the paraphrasing requires the avoidance of conflicts of interest, but the Code allows those conflicts of interest that do exist be disclosed. To address these issues, I propose that the BOD revise the required Code of Ethics statement for agenda to state: *Efforts of the Society, its members, and its bodies shall be directed at all times to enhancing the public health, safety, and welfare. In this and all other ASHRAE meetings, we will act with honesty, fairness, courtesy, competence, inclusiveness and respect for others, which exemplify our core values of excellence, commitment, integrity, collaboration, volunteerism and diversity, and we shall avoid all real or perceived conflicts of interests whenever possible.**

- **Victor Goldschmidt, Western Michigan Chapter**

I come to you with a heavy burden. But first I want to thank you for service in ASHRAE, and embracing the purpose of “advancement for the benefit of humanity” Let us never forget that.

My purpose now is to create some discomfort, I do not have an answer but I am very concerned.

Allow me to first just remind you, that in years past I led a graduate class on turbulent flows, and a second mini course on Air Pollution. So I have some background in some of these issues before us.

We are now under a “fad” word; first recall the past – I will abbreviate and ready to provide more background if desired. Just bear with me, starting from the 1970's

- *Energy Conservation (and I was blessed to have served as vice-chair of the first 90-75)*
- *Ozone depletion (and I served as chair of the task group for a short time)*
- *In the peak of the ozone issue I found data showing that the ozone concentration over the years measured at the same station was solely dependent on the temperature – and hence independent of the surrounding contaminants.*
- *Models of global warming are not validated, at best guesses*
- *There are data that exhibit that temperature changes before CO2 for short time scales (for instance Cynthia Kuo)*
- *There is early unmodified data showing temperature leading CO2 for astronomical time scales (Vostok ice cores)*
- *While the models suggest it, there appears not be a tangible culpability of CO2*

Now the word is hard to pronounce – decarbonization, and hard to embrace. Why?

- *It is a penalty to fossil fuel generated electricity– and this will hurt many countries - one out of 6 inhabitants in the world currently are without electricity*
- *There are numerous examples where electricity costs increase in the shift to wind and solar sources*
- *As we noted in Glasgow, as well in practices such as China flooding the market with wind turbines while at the same time dramatically increasing coal-fired plants, the issue is political more than technical.*

I know that most of you could add to the above. But there remains a fundamental question. How can supporting the decarbonization “advance the arts and sciences for the benefit of humanity”? And a secondary concern, if we truly acknowledge there are detrimental outcomes, and remain silent, are we violating our Code of Ethics?

ASHRAE

General Reserves Research Reserves Investment Policy Statement

Adoption

This Investment Policy Statement (“IPS”) was adopted by the Board of Directors of the American Society of Heating, Refrigerating and Air-Conditioning Engineers (“ASHRAE”) on January 30, 2022.

Introduction and Purpose of IPS

The Funds have been established to support and promote the mission, growth, and general welfare of ASHRAE.

The purpose of this IPS is to outline the following general provisions affecting the Funds by:

- Assisting the Finance Committee (“Committee”) and Board of Directors (“Board”) to fulfill their fiduciary responsibilities;
- Conveying the Funds’ purpose(s), investment objective(s), investment strategy(ies) and constraints;
- Establishing a decision-making framework to promote the effectiveness of the Funds;
- Setting forth the roles and responsibilities of the Board, Committee(s), Investment Advisor (“Advisor”) and other relevant parties.
- Intending for the Fund to be maintained in compliance with applicable laws, including the Uniform Prudent Management of Institutional Funds Act (UPMIFA) if applicable.

Statement of Objectives

The **primary** investment objective is to preserve the long-term purchasing power of the Funds’ assets after accounting for spending. This means that the Funds intend to seek, on average, a minimum total annual rate of return equal to inflation plus actual Fund spending over a perpetual investment time horizon. In order to have an opportunity to meet this **primary** objective, a long-term investment perspective is required when formulating investment strategy and evaluating spending levels. (For purposes of this IPS, a “long-term investment perspective” is defined as more than 10 years.)

Secondary investment objectives include prudently diversifying Fund assets in order to mitigate risk, maintaining sufficient liquidity to meet the obligations of the Fund, and achieving investment results over the long-term that compare favorably with appropriate market indexes.

Spending Policy

The Board has established rules associated with the distribution of funds and exhibition revenue. In general, funds shall be provided for the use of research within the society and can be seen as matching funds for RP. The board has the flexibility to utilize investment funds as per the ROB or operating revenues. The investment policy needs to provide the ability for use of the Reserve Fund as needed to meet the rules of the board.

Reference the rules of the board as listed below:

2.102.002.7 Distribution of ASHRAE/AHRI Exposition Revenue
(99-01-24-15/07-01-28-04/08-01-20-02/08-06-22-05)

A portion of the revenue received from the ASHRAE/AHRI Exposition will go into the ASHRAE Research Fund. The annual amount contributed will be a dollar-for-dollar match with the dollars raised by the Research Promotion program in the fiscal year ending twelve months prior to the budget fiscal year (i.e., \$1 from exposition revenue for each \$1 raised by Research Promotion). Exception: If the total income using a 1-1 match is insufficient to prevent a deficit in the annual research fund budget, the exposition contribution in any single year shall not be lower than \$1.5 million. The total matching funds from exposition revenues shall be limited to a maximum of \$2 million. Matching funds in excess of \$1.5 million will be transferred from the General Reserve Fund. In the event that not all of the annual Research budget is spent in any given fiscal year that portion of the matching funds from the ASHRAE/AHRI Exposition that remains unspent shall be transferred to the General Reserve Fund.

2.102.002.10 Portfolio Value Budgeted as Income (01-01-28-10/03-01-29-10/05-02-06-1708-06-22-06)

A minimum of four percent (4%) of the Research Reserve Fund portfolio value shall be budgeted as income annually. The Finance Committee may recommend a higher percentage up to 10% of the Research Reserve Fund portfolio value provided that the assets in the Research Reserve Fund are at least equal to the annual Research Fund expenditures. Transfers in excess of 10% of the Research Reserve Fund portfolio value shall be approved by the Board of Directors as part of the annual budget approval process.

Roles and Responsibilities

The following is a summary of roles and responsibilities of various parties involved in overseeing or safeguarding the Fund's assets:

Board

- Select members to serve on the Committee
- Provide guidance to Committee on the Fund's objectives
- Review and approve Investment Policy Statement
- Periodically receive performance updates from Committee

Committee (Finance Committee)

- Act solely in the best interest of the Funds and its objectives.
- Determine investment objectives and constraints. Immediately communicate any revision in objectives or constraints to the Advisor.
- Set and revise the investment policies and receive board approval as necessary.
- Select Advisor, custodians, and any other vendors required to administer the fund, and oversee such parties.

- Review and evaluate investment results with the assistance of the Advisor.

Advisor

- Assist Committee in the development and periodic review of the investment policy.
- Manage the Fund's strategy and assets within IPS constraints.
- This may entail periodically making revisions to the investment strategy and/or the IPS in order to seek to achieve the Fund's long-term objectives.
- Select and terminate underlying investment managers.
- Periodically review Fund-related investment expenses.
- Monitor aggregate and manager-level performance.
- Provide the Committee with performance-related information on a regular basis, no less than quarterly.
- On a timely basis, notify the Committee if there are material developments with the investment strategy or any of the Fund's underlying investment managers.

Investment Managers

- Manage assets in accordance with the guidelines and objectives outlined in prospectuses (mutual funds), investment agreements (commingled funds, private partnerships, etc.), or manager-specific investment guidelines (separate accounts).
- Exercise investment discretion to buy, manage, and sell assets held in the portfolios.
- Promptly vote proxies and related actions in a manner consistent with the long-term interest of the Fund as an investor (separate accounts).
- Communicate all organizational changes in a timely manner, including but not limited to ownership, organizational structure, financial condition, and professional staff.
- Seek "best price and execution" for transactions. Both explicit and implicit transactions costs should be considered.
- Use the same care, skill, prudence, and due diligence under the circumstances then prevailing that experienced investment professionals acting in a like capacity and fully familiar with such matters would use in like activities for like portfolios with like aims.

Custodian(s)

- Safeguard portfolio assets.
- Accurately value portfolio holdings.
- Execute buy/sell orders and cash transfers in a timely manner as directed by the Advisor.

- Collect all income and dividends owed to the Fund
- Settle all transactions (buy-sell orders) initiated by separate account investment managers.
- Provide monthly reports that detail transactions, cash flows, securities values, and changes in the value of each security and the overall portfolio since the previous report.
- Provide all requested portfolio information to the Advisor and Committee in a timely manner.

Staff

- Act solely in the best interests of the Funds and its objectives.
- Review investment decisions quarterly with the Finance Investment Subcommittee to ensure that they comply with the guidelines of this Policy;
- Review monthly custodial statements;
- Provide quarterly investment status reports, in conjunction with the Advisor, to the Committee, in order to monitor portfolio, fund and investment manager performance.
- Communicate to the Advisor, on a timely basis, all information relevant to the portfolio, such as changes in investment objectives, time horizon, and liquidity requirements;

Finance – Investment Subcommittee – Meeting Cadence

- In general the committee will meet four times annually. The meetings shall have flexibility for either being remote or in person. In general the dates and outline is as listed below:
 - February
 - Spending policy trends
 - Expense structure review
 - May
 - Portfolio attribution
 - Asset class review
 - August
 - Investment policy statement review
 - Stewardship best practices
 - November
 - Updated capital market assumptions
 - Asset modeling assumption comparison.

Liquidity Constraints

The Investment Committee intends to construct the portfolio to provide adequate liquidity to meet the spending and operational needs of the organization. Portfolio liquidity will be monitored using the following guidelines:

Category	Market Value Guideline	Liquidity Description
Liquid	No less than 80%	Daily to monthly
Semi-Liquid	No more than 20%	Greater than monthly and up to one year

Due to market volatility and the uncertain nature of commitments, drawdowns and distributions, it may not be possible to monitor liquidity continuously. However, attempts will be made to manage liquidity constraints to the greatest extent possible.

Unique Considerations

ASHRAE investments shall reflect the vision, mission, ethics and diversity of the organization.

Mission: To serve humanity by advancing the arts and sciences of heating, ventilation, air conditioning, refrigeration and their allied fields.

Vision: A healthy and sustainable built environment for all.

Code of Ethics Commitment

In this and all other ASHRAE meetings, we will act with honesty, fairness, courtesy, competence, inclusiveness and respect for others, which exemplify our core values of excellence, commitment, integrity, collaboration, volunteerism and diversity, and we shall avoid all real or perceived conflicts of interests.

Diversity Commitment

ASHRAE is committed to providing a welcoming environment. Our culture is one of inclusiveness, acknowledging the inherent value and dignity of each individual. We proactively pursue and celebrate diverse and inclusive communities understanding that doing so fuels better, more creative and more thoughtful ideas, solutions and strategies for the Society and for the communities our Society serves. We respect and welcome all people regardless of age, gender, ethnicity, physical appearance, thought styles, religion, nationality, socio-economic status, belief systems, sexual orientation or education.

Investment Strategy and Rebalancing

The Committee acknowledges that the Fund’s asset allocation strategy is likely to be its primary determinant of performance. The Fund’s investment strategy involves diversifying among various asset classes, investment strategies and investment managers in order to pursue the Fund’s investment objective(s) while complying with its constraints.

The Fund's allocation will be monitored on a periodic basis to determine whether rebalancing back to its target allocation is warranted. This rebalancing process is likely to result in withdrawing from investments that have recently outperformed and/or adding to investments that have recently underperformed. With regards to periodic withdrawals (or contributions) that may be made to (or from) the Fund, partial rebalancing will generally have the objective of bringing the Fund closer to its target asset allocation.

The asset allocation ranges set forth in Appendix A represent a long-term view. Short-term market volatility may cause the asset mix to fall outside the targeted range.

Investment Manager Selection

The Funds may select investment managers through a variety of investment vehicles including, but not limited to, separate accounts, mutual funds, exchange traded funds (ETFs), commingled funds, or private partnerships. The Committee understands that managers have full responsibility for security selection, diversification, turnover, and allocation of holdings among selected securities and industry groups, as particularly detailed in the Investment Guidelines of each of the Fund's separately managed accounts or in the prospectus or offering memorandum for each mutual fund/ETF/commingled fund/private partnership.

The underlying investment managers selected for the Fund are intended to be selected with the care, skill and diligence that would be applied by a prudent person acting in a like capacity and knowledgeable about investing.

The Advisor will examine investment managers' investment objectives and processes; historical adherence to stated objectives and processes; depth of resources; quality of personnel; historical performance (including risk) versus various appropriate benchmarks; appropriateness of diversification; reasonableness of fees; and any other metric that may be material when evaluating investment managers' capabilities. The Advisor will use all available information and its best judgment when seeking to hire skillful investment managers. The Advisor may also select low cost, passively managed investment products where appropriate.

Investment Manager Evaluation and Oversight

The Advisor intends to periodically review the performance of the underlying investment managers and will report back to the Investment Committee. Performance monitoring is the mechanism for revisiting the investment selection process and confirming that the criteria originally satisfied remain intact and that an investment continues to be appropriate for the Fund. While frequent change is neither expected nor desirable, the process of monitoring investment performance relative to specified guidelines is an on-going process.

Events that may trigger termination of a manager include, but are not limited to, illegal or unethical behavior on the part of the manager; failure to follow investment guidelines; turnover among key personnel; a change in investment style or strategy; insufficient infrastructure to keep pace with asset growth; significant increase in expenses or fees; performance-related concerns; and any other observation the Advisor deems may prevent the manager from carrying out its duties effectively. Since several studies have demonstrated that the vast majority of strong long-term performing investment managers suffer multi-year periods of underperformance, failure to meet performance or other qualitative guidelines will not

automatically trigger a manager termination. The Advisor intends to use all known information and their best judgment to determine if and when terminating a manager is warranted. In addition, managers may be terminated at any time for any reason at the discretion of the Advisor.

Evaluating and Selecting Service Providers

In carrying out the policies of this IPS, the Committee may rely on various service providers including, but not limited to, the Advisor, trustee, custodian, administrative services provider(s), and investment managers. Such service providers generally shall be evaluated and selected based on the following:

- Furthering the Purpose of the Fund in Cost-Effective Manner. Each service provider is intended to advance the purpose of the Fund, which is to meet the objectives previously stated in this IPS. The service providers shall be expected to deliver administratively efficient services and charge fees that are reasonable given the service(s) provided.
- Core Business Commitment and Expertise. Each service provider is intended to have a history of providing services to other similar Funds and demonstrate an ongoing commitment to such business. Its employees should have a reputation among its clients for the quality of its services. The firm should show an appropriate knowledge of other applicable statutes and regulation.
- Fiduciary Status and Conflicts of Interest. To the extent required based on the services being provided to the Fund, the service provider shall acknowledge its role as a fiduciary to the Fund. Service providers are expected to disclose any potential conflicts of interest to the Advisor and Committee.

Voting of Proxies

Each investment manager is responsible for and empowered to exercise all rights, including voting rights, as are acquired through the purchase of securities, where practical. Each investment manager shall vote proxies in the best interest of the client.

Note that ASHRAE is responsible for voting proxies received from mutual funds and ETFs.

Appendix A

Asset Allocation Guidelines:	Lower Limit	Upper Limit
Cash or Cash Equivalents	0%	10%
Fixed Income	15%	40%
Publicly Traded Global Equity	40%	80%
<i>Domestic Equity</i>	20%	50%
<i>International Equity</i>	10%	40%
Real Assets	0%	20%
Marketable Alternatives (Hedge Funds)	0%	20%



SLATE OF OFFICERS AND DIRECTORS FOR 2022-23

PRESIDENT-ELECT:

Ginger Scoggins

TREASURER:

Dennis Knight

VICE PRESIDENTS:

Billy Austin

Dunstan Macauley

Sarah Maston

Ashish Rakheja

DIRECTORS AND REGIONAL CHAIRS:

Region IV - Bryan Holcomb

Region V - James Arnold

Region VI - Susanna Hanson

Region XII - John Constantinide

Region XIII - Cheng Wee Leong

DIRECTORS-AT-LARGE:

Blake Ellis

Luke Leung

Wei Sun

Patrick Marks (Alternate)



BOD Subcommittee: Operations Streamlining

Saturday January 29 12:00 to 2:00 PM

Caesars Palace, Palermo (P)

CHARGE: Our approach is that the size of the BOD will not change. The questions we are addressing is how to improve and make more effective the BOD and its governance of ASHRAE.

1) Motions for Board Approval:

I) That the attached agenda template (Item A) be used as the starting document for BOD agendas.

- a. **Background:** President Mick Schwedler has done an admirable job in moving the BOD towards strategic discussions. Attached is a sample agenda that captures this approach. Control size of reports from ASHRAE groups to Strategic issues and required motions or actions by the BOD. Rest of report to be provided in written format. Committee 6-0 cnv

II) Move that ROB 2.303.002.5 RESEARCH PROJECT APPROVAL LIMIT

This council may approve research projects, within the Board-approved research budget, up to a total project cost not to exceed ~~\$500,000~~ ~~\$250,000~~. Within this limit, this council may delegate project approval authority to the Research Administration Committee. Technology Council may ask for BOD review on projects if they deem it necessary.

Background: Discussion involved around the size of the number (up to one million) and how the BOD could provide input on projects that may have controversy or other issues. The line added at the paragraph is to be sure Technology Council is aware that the BOD is available for consultation. Committee 4-2 cnv.

III) Move that Technology Council, Standards Committee, this committee and SRC develop motion(s) to change the Standards Approval process such that the BOD is removed from providing approval for the majority of Standards

Background: The following issues will have to be looked at during this process

- a) Would ASHRAE lose self-accreditation?
- b) Are there Standards (i.e. – those on continuous maintenance, etc.) that the BOD should approve or other criteria (such as negative votes or controversies) that the BOD should be available for consultation.

Committee 4-2 cnv

- IV) Move that Technology Council, this committee and SRC makes revision to the ROB for new Standards and Guidelines development will require approval from Technology Council in lieu of the BOD.**

Background: Any individual, group, etc. may propose a Standard or Guideline. This will remove the BOD from the process. The BOD may be consulted by Technology Council for any given Standard or Guideline. Committee 6-0 cnv

- V) Move that SRC change the ROB to have Councils and other ASHRAE Groups take responsibility for developing the nominees (include CRC's, member's nominations and other methods) and election of members to serve on committee's and groups reporting to them in lieu of the BOD. Presidential appointments will remain unchanged with Councils and ASHRAE Groups responsible for providing individuals for consideration along with the solicitation from CRC's members and other methods of creating a slate.**

Background: This will remove from the BOD the responsibility so they can spend time on strategic issues. This allows for improvement of creating of a slate and election of members since Councils and other ASHRAE Groups will have responsibility for selecting the members of the bodies reporting to them. Committee 6-0 cnv

- VI) Move that Honors and Awards review which awards should be approved by the BOD due to the prestige of the award and propose changes to the ROB for presentation to the BOD for approval.**

Background: Reduce the awards that require BOD approval. Committee vote 6-0.

- VII) Move that VP's be removed from Chair and Vice Chair of PEC and TC.**

Background: The intent is to free up VP's from operational duties so they can concentrate on strategic initiatives of the Society. These two Councils can be led by former members of the Council. Communication back to the BOD and Excom will be from the BOD members that service on the Councils. Committee 6-0 cnv

- VIII) Move that Excom be expanded in membership by adding two BOD members. These BOD members to Excom shall be elected by the BOD. One will be assigned to serve on Technology Council and one will be assigned to Pub Ed Council.**

Background: These BOD members will serve on Excom and facilitate communication between the two Councils and Excom. Committee 3-2-1 cnv on adding BOD members and Committee 4-1 cnv on the number to add

Information Items:

- 1) Thank you to SRC for bringing forward ROB changes at this meeting for reducing the size of the ROB and changing our Rules for Meetings.

Respectively submitted for the committee by Art Giesler, Chair



Board of Directors Meeting

Open Session Agenda

Date - Time

Location

1. **CALL TO ORDER -**
2. **CODE OF ETHICS** - *In this and all other ASHRAE meetings, we will act with honesty, fairness, courtesy, competence, inclusiveness and respect for others, which exemplify our core values of excellence, commitment, integrity, collaboration, volunteerism and diversity, and shall avoid all real or perceived conflicts of interest.*
(Code of Ethics: <https://www.ashrae.org/about/governance/code-of-ethics>)
(Core Values: <https://www.ashrae.org/about/ashrae-s-core-values>)
3. **ROLL CALL/INTRODUCTIONS -**
4. **REVIEW OF MEETING AGENDA -**
5. **STRATEGIC ISSUES (items subject to change)**
 - A. **FINANCE**
 - B. **MEMBERSHIP**
 - C. **DECARBONIZATION**
 - D. **LOOK INTO THE FUTURE**
6. **COUNCIL REPORTS**
 - A. **Members Council -**
 - B. **Publishing and Education Council -**
 - C. **Technology Council -**

*Indicates Attachment

7. COMMITTEE REPORTS

A. Executive Committee -

- i. Date
- ii. Date

B. Committee 1 -

C. Committee 2 -

D. Committee 3 -

E. Committee 4 -

8. EXECUTIVE SESSION (Separate Agenda)

9. OLD BUSINESS

A.

10. NEW BUSINESS

A.* PEAC Request -

11. UPCOMING MEETINGS

Post Winter Conference Information
Conf. Call | TBD

12. ADJOURNMENT

*Indicates Attachment

Population Growth

1.9 billion

24% increase in the next 30 years

Information Source:
(<https://www.un.org/en/sections/issues-depth/population/>)
The World Population Prospects 2019

Building Growth

2060: **230 billion m²**

Constructing an entire New York City every month

Information Source: <https://architecture2030.org/new-buildings-operations/>

By 2060, the world is projected to add 230 billion m² (2.5 trillion ft²) of buildings, or an area equal to the entire current global building stock*. This is the equivalent of adding an entire New York City to the planet every 34 days for the next 40 years.

*UN Environment, Global Status Report 2017

Climate is Rapidly Changing

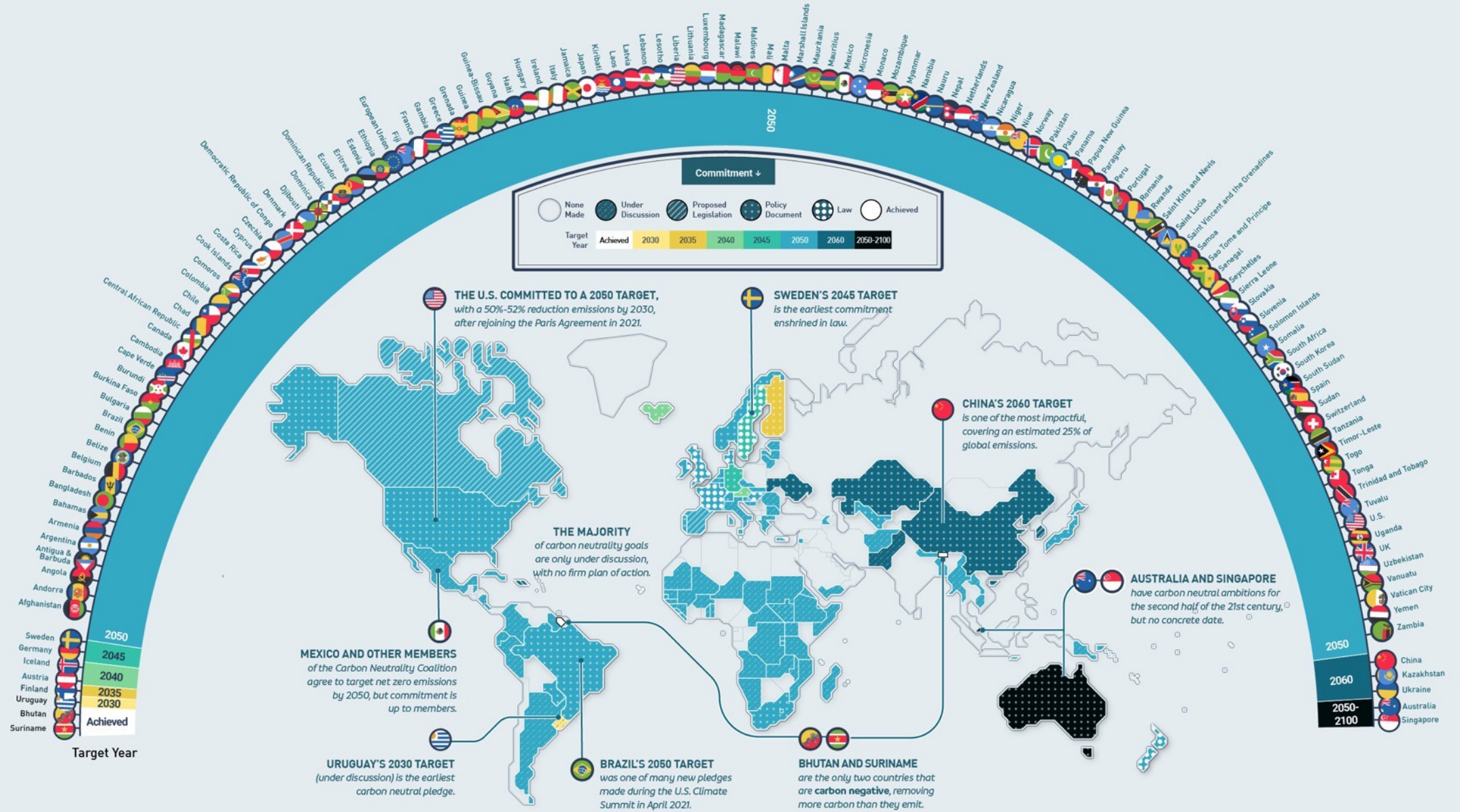
2015 UN Paris Agreement
2°C to 1.5°C

2018 UN IPCC Recommendation
1.5°C

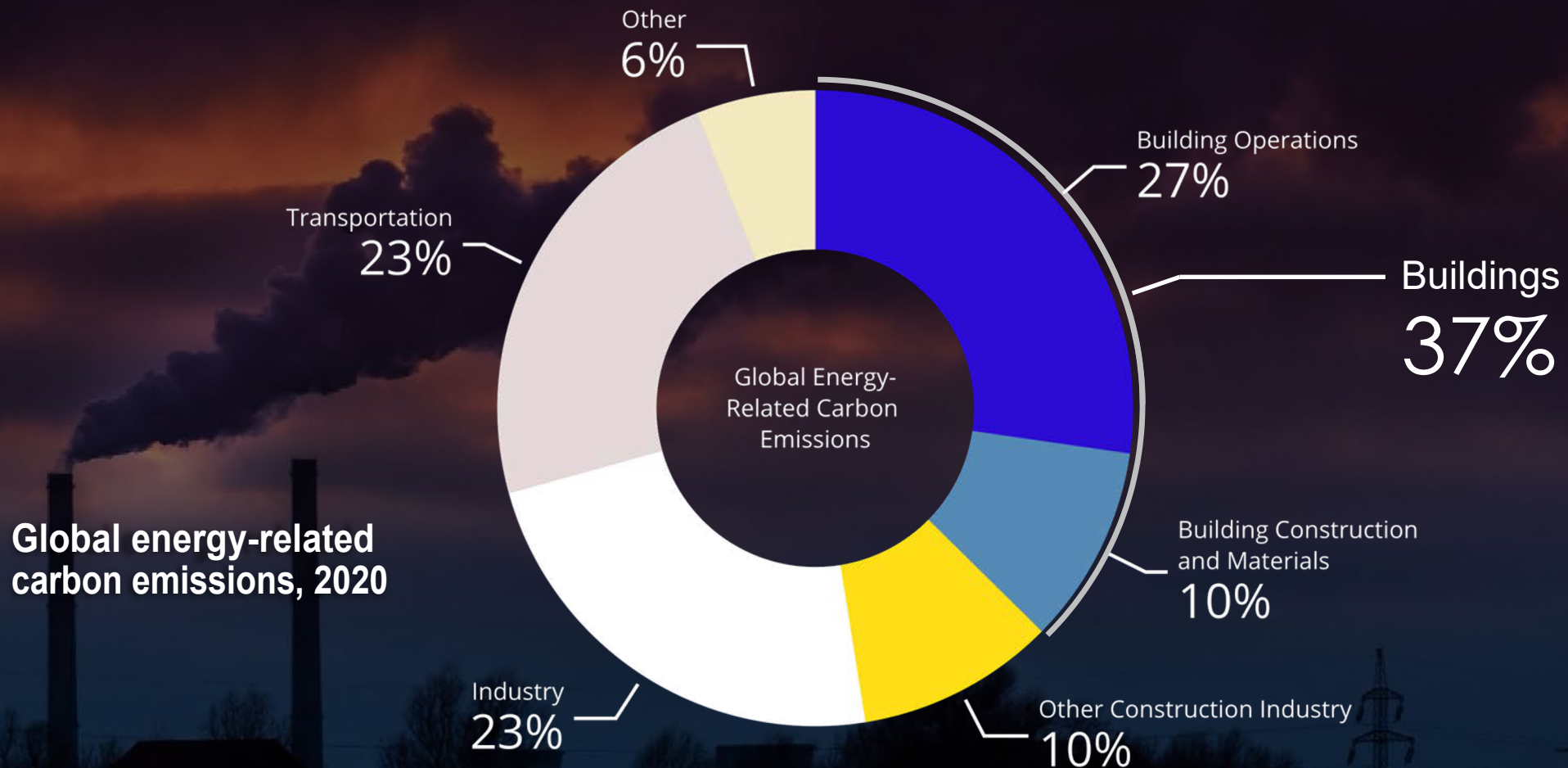


In 2015, the Paris Agreement was adopted to limit the global temperature rise maximum at 2°C with a strong recommendation to retain it at 1.5°C

Carbon Commitments by Country



The Built Environment Needs Solutions

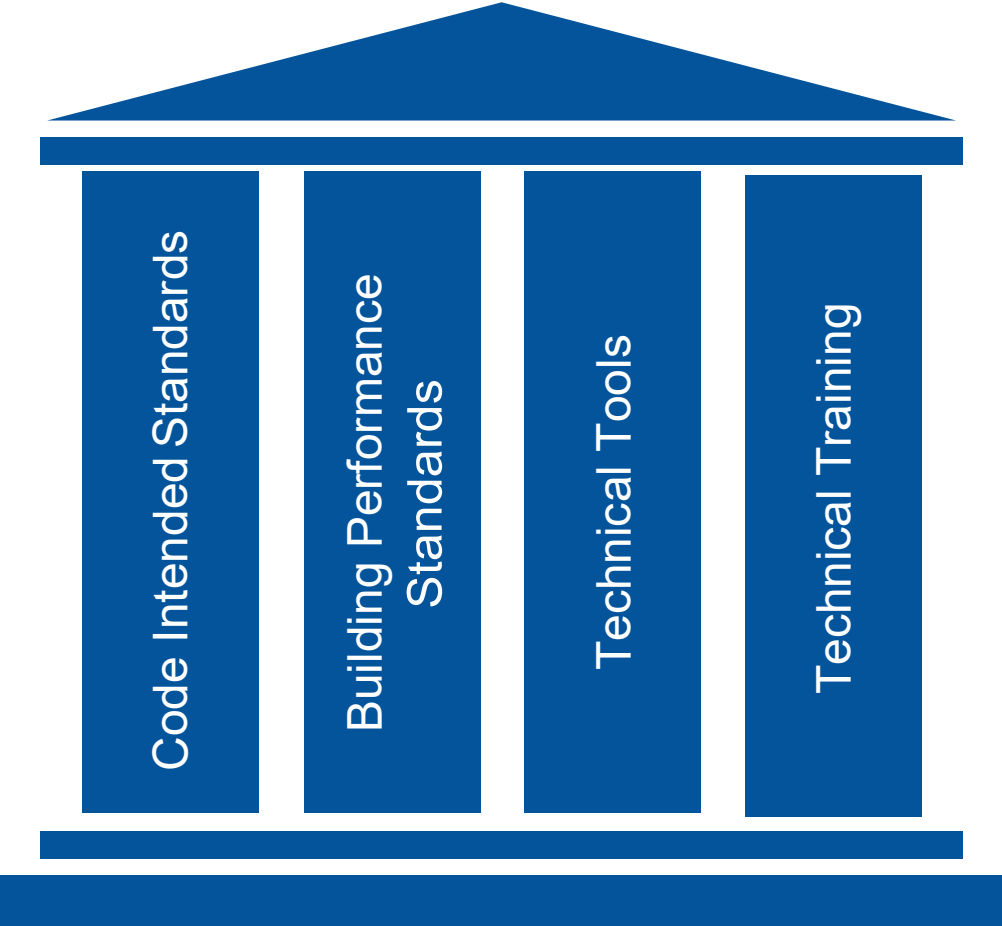


Global energy-related carbon emissions, 2020

Global Building Sector Net Zero Emissions by 2050

Energy Efficiency
30% reduction in direct energy
40% reduction in indirect energy

Electrification
Transition from fossil fuels in buildings to low carbon electricity



Grid Friendly
Storage and sequences for grid responsiveness

Low Carbon Energy
Mostly with renewable energy generation

Source: International Energy Agency (2021), Net Zero by 2050, IEA, Paris

Net Zero by 2050

A Roadmap for the Global Energy Sector

International Energy Agency

iea

BEYOND THE BUSINESS CASE

WHY YOU CAN'T AFFORD NOT TO INVEST IN A SUSTAINABLE BUILT ENVIRONMENT

World Green Building Council

November 2021

Building Decarbonization Code

An overlay to model building codes on the path to net zero

nbi new buildings institute

Version 1.2 | August 2021

Codes for Climate

2021 GLOBAL STATUS REPORT FOR BUILDINGS AND CONSTRUCTION

Towards a zero-emissions, efficient and resilient buildings and construction sector

Global Alliance for Buildings and Construction

UN environment programme

iea UCL BPI

The Building Electrification Technology Roadmap (BETR)

A BETR Path to Decarbonization for California Efficiency Programs

Technical status, barriers and paths to advancing electrification technologies in residential and commercial buildings

Prepared By: Alexis Miller and Cathy Hooper, New Buildings Institute

January 2021

Building Decarbonization Coalition

With Sponsorship From: EPRI, Pacific Northwest Laboratory, Edison, SMUD

Decarbonizing Homes

Improving Health in Low-Income Communities through Beneficial Electrification

RMI

Report / Oct 2021

Image: A woman holding a young child.

GUIDE: BEST PRACTICES FOR ACHIEVING ZERO OVER TIME FOR BUILDING PORTFOLIOS

Urban Land Institute

Image: A modern city skyline with solar panels in the foreground.

ADVANCING NET ZERO

Status Report June 2021

World Green Building Council

Image: A city skyline at night.

JRC SCIENCE FOR POLICY REPORT

Level(s) - A common EU framework of core sustainability indicators for office and residential buildings

Part 3: How to make performance assessments using Level(s) (Beta v1.0)

Nicholas Dodd, Mauro Confella, Maria Traverso, Shane Donatelli (Unit B5)

August 2017

Image: A collage of modern buildings.

ASHRAE

encord GHG

Construction CO₂e Measurement Protocol

A Guide to reporting against the Green House Gas Protocol for construction companies

Image: A construction site with a crane and a building under construction.

Net-zero buildings Where do we stand?

wbcscd

ARUP

Image: A modern building with a courtyard.

NATIONAL ALLIANCES FOR BUILDINGS AND CONSTRUCTION

Long-term partnerships for the energy transition

PEEB

Image: A group of people shaking hands.

RMI

Reducing Embodied Carbon in Buildings

Low-Cost, High-Value Opportunities

Report / July 2021

Image: A hand holding a pen over a blueprint.

Accelerating the Decarbonization of Buildings: The Net-Zero Carbon Cities Building Value Framework

BRIEFING PAPER JANUARY 2022

World Economic Forum

Image: A stylized green tree graphic.

GlobalABC Roadmap for Buildings and Construction

2020-2050

Towards a zero-emission, efficient, and resilient buildings and construction sector

Global Alliance for Buildings and Construction

iea UN environment programme

Image: A modern building facade.

Decarbonizing construction

Guidance for investors and developers to reduce embodied carbon

wbcscd

One Click

Image: A curved building facade.

Federal Sustainability Plan

Catalyzing America's Clean Energy Industries and Jobs

December 2021

Image: A collage of clean energy and construction images.

2022 ZERO CODE™ for CALIFORNIA

A California building energy standard for new nonresidential, high-rise residential and hotel/motel buildings.

Architecture 2030

in collaboration with ATA California

Image: A city skyline at sunset.