



TC 6.8 Ground Source Heat Pump and Energy Recovery Applications

2023 Summer Hybrid Meeting

Location: JW Marriott Waterside,
Florida Salon VI (2): Virtual

T.C. 6.8 SUB COMMITTEE MEETING AGENDA

Tuesday, June 27, 2023
3:00 PM EDT

1. Call to Order

- Welcome, Introductions, and Sign-In
- Visitor Welcome: 1st timers and YEA
- Review Voting Members & Determination of Quorum
 - Need 7/12 *without* members non-quorum

2. Approval of minutes from Winter 2023 Meeting – Atlanta, GA

3. Announcements from ASHRAE

- Section Head – Doug Reindl
- Liaisons
 - Staff – Steven J Hammerling
 - Standards – Paolo M Tronville
 - Research – Stefan Elbel
 - Handbook – Dhamshala (S)/Werman (A)
 - TAC – Craig S Messmer
 - ALI/PDC –
 - Codes: Steve Ferguson
 - Chapter Technology Transfer Chair – Elizabeth M Zakelj

4. Announcements from the Chair

- **Officers**
 - Chair: Howard Newton
 - Vice Chair: Roshan Revankar
 - Secretary: Brenden Hall
 - New Voting Members to replace those rolling off (4)
- **Subcommittee chairs**
 - Research: Harrison Skye
 - Geothermal handbook: Matt Mitchell
 - Applied heat recovery: Mike Filler
 - Standards: Cary Smith
 - Programs & Education: Steve Kavanaugh
 - Membership: Need Membership Sub-Com
 - Webmaster: Craig Buschur

5. Subcommittee Reports:

- Research - Harrison Skye
 - Work statements and RTARs
 - WS 1890 Update
 - Committee Vote
 - Discuss research topics.

CURRENT VOTING MEMBERS

- Roshan Revankar (23)
- Steve Kavanaugh (23)
- Steve Carlson (23)
- Howard Newton (24)
- Dr. Michel Bernier (24)
- Carl Huber (24)
- Brendan Hall (24)
- Xiaobing Liu (24)

Rolling off

- Craig Buschur (25)
- Harrison Skye (25)
- Lisa Meline (25)
- Steve Hamstra (25)

Rolling on

Need New Voting Members



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- Unsolicited Research Topic
 - RP 1812 Co-Sponsor – Zackary Siefker TC7.5
 - Smart Building Systems - Research
- Kirk T. Mescher Award – Lisa Meline
- Geothermal Handbook - Matt Mitchell
- Applied Heat Recovery – Mike Filler
- Standards – Cary Smith
- Programs - Roshan Revankar
- Membership - Cary Smith
- Webmaster - Craig Buschur
 - Minutes
 - Virtual meeting agenda
- **Industry Liaison Reports:**
 - IGSHPA – Jeff Hammond
 - NGWA – Cary Smith
 - IAPMO – Lance MacNevin
 - Hydronic Alliance – Cary Smith
 - GEO – any updates from anyone?
- **Old Business**
 - Use of TC 6.8 Base Camp – If you would like to be added to the list to access our TC 6.8 Base Camp, please email Howard Newton at howard.newton@iegmeep.com and in the Subject Line enter **TC 6.8 Base Camp – Add Me**
- **New Business**
 - Howard Newton
 - Subcommittee Update Electrification & Decarbonation – Draft Title
 - **“Heat Pump Application, Design, and Operation for Decarbonization”**
 - There is a Draft Work Statement going out for bid. Has been sent out for bid.
 - Open Discussion
- **Adjourn**



Location: Hybrid

Date: Feb 7, 2023
Time: 3:00 PM – 5:00 PM**Participants:**

Name	Online	Representing	E-Mail
Brendan Hall		CHA	bhall@chacompanies.com
Harrison Skye		NIST	harrison.skye@NIST.gov
Howard Newton		IEG	hnewton@iegltd.com
Patrick Dempsey		Cannon Design	pdempsey@cannondesign.com
Antonio Romeo		AHRI	aromeo@ahrinet.org
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Shawn Hern		Climatemaster	shhern@yahoo.com
Josh Kavanaugh		MEP Engineering	jkavanaugh@mepengineering.com
Craig Buschur		Total Green Mfg	lmacnevi@plasticpipe.org
Derek Birdsell		Carrier	Derek.birdstall@carrier.com
Harrison Skye		NIST	Harrison.skye@nist.gov
Helen Walter-Terrinoni		AHRI	HWalter-Terrinoni@ahrinet.org
Vivian Cox		AHRI	vcox@ahrinet.org
Doug Reindle		Univ of Wisconsin	dreinsle@wisc.edu
Xiobing Liu		Oak Ridge National Labs	luix@ornl.gov
Hugh Henderson		OCI	Hugh.henderson@
Bill Murphy		Retired	William.murphy@uky.edu
Steve Kavanaugh		Energy Information	Skavanaugh@eng.ua.edu
Kay Thrasher		Townsend Engineering	kay@townsend-engineering.com
Roshan Revankar	X		roshanrevn@gmail.com
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Mike Fuller		Turntide Technologies	m.fuller@turnside.com
Anthony Fontanini		NREL	Anthony.fontanini@nrel.gov
Xia Fang		Mckinstry	xiaf@mckinstry.com
Mingute Liu		Texas A&M Univ.	Minghe37@tamu.edu
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Greg Tinkler		Page	gtinkler@pagethink.com
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Mark Smith		Sound Geothermal	masmith@soundgt.com
Hayes Zirnheff		Whole Systems Energy	hayes@wholesystemenergy.com
Alex Ussery		Intertek	Alexander.ussery@intertek.com

Issues Covered:

Note: "Status" column indicates responsible party, or "CR" (Comment for Record).

Item No.	Description	Status
1	<ul style="list-style-type: none"> Welcome, Introductions, and Sign-In Quorum confirmed for the meeting Approval of Minuets from Summer 2022 Meeting Update on Liaisons - No updates from society Approval of minuets from June 2022 meeting, <ul style="list-style-type: none"> Huber motion, second Kavanaugh. Motion 7-0 to approve minuets Announcements <ul style="list-style-type: none"> Voting members rolling on - Steve Hamstra, Harrison Skye, Lisa Meline, Craig Busher Voting members rolling off - Dr. Piljae Im, Derek Birdsall, Hugh Henderson, Steve Hamstra 	CR
2	<p>Research</p> <p>2 Research projects in various stages of development.</p> <ul style="list-style-type: none"> TRP 1890 - Min flow velocity for purging piping systems <ul style="list-style-type: none"> Currently a standard for purging air from piping systems, velocity of 2 ft/s is used. But there is anecdotal evidence that this may not be sufficient to remove dirt and debris. Covering pipe sizes from 3/4 - 24". Covering both length and velocity of purging. Bids have been reviewed, there is a recommended contractor. To be covered in exec session. Project could begin as early as March. RTAR - Evaluation of GSHP with thermal energy storage for residential and commercial buildings. <ul style="list-style-type: none"> TC6.9 are also interested and will co-sponsor. Draft is prepared, the research committee is ready to vote to send to RAC. Funding request is \$300k, 24 months. Scope is broad (Ice, SBTES, cold water) Mostly literature review and simulation. TES has become a hot topic because of intermittent renewable sources. Increase performance, reduce cost of GHX. Time of use. SK : Would like to get more info on the cost of systems. Would like to see examples. Construction Cost data is really needed. University funding has gone up, roughly \$100k per year. Roshan motion to approve RTAR, <ul style="list-style-type: none"> Xiaoping Liu Second. Approved 6-1. Voice vote. Need for more cost data. <ul style="list-style-type: none"> What is the utility of the cost database? Project budgeting, used for optimization research. 	CR

Item No.	Description	Status
	<ul style="list-style-type: none"> ○ Would it be possible to involve utilities, or NYSERDA for example to include costing. ○ TVA (1995), updated in 2010. They Utility funded studies. The way to do it is going to be though utility funded ○ ASHRAE can lend credibility. ○ Table for now. Referred to research subcommittee. ● Current average project is \$150k, 20 mo. Funding levels are coming back. 	
3	Handbook <ul style="list-style-type: none"> ● Was updated last year, ● Mike Filler - Should handbook be split between chapters. CH 9 subcommittee. ● March 2023 need to be approved by. Revisions are too late. ● Motion to split handbook committees by chapter <ul style="list-style-type: none"> ○ (Kavanaugh) Hall Second. Motion approve 7-0-0. ● Mike Filler will be handbook chair for the 2028 cycle. 	CR
4	Standards <ul style="list-style-type: none"> ● Cary is not present for an updated 	CR
5	Applied Heat Recovery <ul style="list-style-type: none"> ● No Update. 	CR
6	Programs and Education <ul style="list-style-type: none"> ● Steve Kavanaugh has volunteer to take programs chair. ● Using federal incentives to install geothermal heat pumps. <ul style="list-style-type: none"> ○ Climate master and water furnace reps. ● Using GSHP to decarbonization in cold climates ● Abstracts due : 2/27 	CR
7	Membership <ul style="list-style-type: none"> ● 2 new members added on Sunday 	CR

Item No.	Description	Status
8	Mescher Award Award this year : Masish Alvary (Ontario Chapter) Webmaster <ul style="list-style-type: none"> New format rolled out. Working through some bugs. Also maintaining the basecamp site. 	CR
9	Webmaster New format rolled out. Working through some bugs. Also maintaining the basecamp site.	CR
10	Industry Liaisons <ul style="list-style-type: none"> IGHPSA - Jeff Hammond - Conference is in December 5-6. Looking for presentations. Starting committees back up as well as a training. Certified residential designer is out, technician route is being developed. IAPMO - No updates ISO/CSA C448 - Model code for ambient loop is in process. <ul style="list-style-type: none"> Revised ISO 13256 standard <ul style="list-style-type: none"> Water temps will be changing, static pressure for rating, integrated number, discussion on what is going on water side Further updates on 90.1 would be needed to match. Efficiencies would likely be revised down. DOE would like an IEER for all products (commercial). Early development Geoexchange - Trade organization (Lobbying group) <p>Dear TC 6.8 members, I am sorry I'm not there to deliver this message in person. I hope to join future TC meetings and get more actively involved in the important work you are doing.</p> <p>The enactment of the Inflation Reduction Act will change the geothermal heat pump industry's future. The support Congress and the Administration has given us is a once in a lifetime opportunity. GeoExchange is currently engaged in several IRA implementation activities, most notably the definition of and regulation around 1MW thermal system capacity. This is the threshold which triggers prevailing wage and apprenticeship requirements. Our proposal puts this</p> 	



Item No.	Description	Status
	<p>threshold at 445 tons for a distributed system instead of 285 tons. We met with the White House two weeks ago to lay out the industry's proposed approach and we were well received. We will meet with the Treasury Department soon to finalize the guidance.</p> <p>We have also spent over 15 months now working on the issue of loop leasing with Treasury. We are actively pursuing a safe harbor exemption from limited use rules at the IRS. This work looks close to paying off.</p> <p>Finally, GeoExchange has gotten involved in ongoing Notices of Proposed Rulemaking. DOE is getting very aggressive on the topic of increased efficiency standards. There needs to be a reasonable balance between increased standards and deployment goals.</p> <p>I hope to attend upcoming TC meetings to discuss these issues amongst many others and get your feedback and guidance. With gratitude, Ryan Dougherty, President, GeoExchange.</p>	
	<p>New Business</p> <ul style="list-style-type: none">• Heat Pump Application Design and Operation for decarbonization<ul style="list-style-type: none">○ There is a draft work statement going out for bid.○ Resources are from handbook and blue book.• Hybrid systems - How does that apply to IRA?• Unsolicited research project - Greywater heat recovery.	CR
	<p>Executive Session</p> <p>Approved contractor for TRP 1890</p>	CR
	<p>Meeting Adjourned – 5:00PM</p>	



TC 6.8 Geothermal Heat Pump and Energy Recovery Applications

2023 Summer meeting in Tampa, FL

Marriott Waterside Florida Salon VI (2): Virtual

Handbook Publication Dates

Hi Howard—

Certainly! **The target date for the 2027 publication update is currently 15 April, 2026, with a hard deadline of 31 July** of that year.

If you have changes you want made before then, Handbook Online supplements are always available – there is no due date for those, but the turnaround time depends heavily on staff workload and time of year. (If we're neck deep in finalizing that year's volume, for instance, out-of-publication-sequence updates will go on the back burner until that volume is wrapped.)

We may be rearranging target dates soon: the idea is to spread the workload so staff doesn't get all the chapters in one fell swoop, but some of the target dates are impractical. **Probably the safest goal would be to plan for the chapter to be circulated and ready to vote on by the summer 2025 meeting**, which would allow a good chunk of time to make any required changes and fill out the chapter approval checklist.

I hope this helps! If you have further questions, please let me know.

Kind regards,

--Heather

(aka Moli; they/them/Mx)



Shaping Tomorrow's
Built Environment Today

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ASHRAE Publications Committee

ASHRAE Special Publication	Year Publ	Committee or Project
Geology and Drilling Methods for Ground-Source Heat Pump Installations: An Introduction for Engineers	2002	TC 6.8
Commissioning, Preventive Maintenance, and Troubleshooting Guide for Commercial Ground Source Heat Pumps	2002	TC 6.8
Commercial Ground-Source Heat Pump Systems [papers collection]	1996	TC 6.8
Operating Experiences with Commercial Ground-Source Heat Pump Systems	1998	TC 6.8
Geothermal Heating and Cooling: Design of Ground-Source Heat Pump Systems	2015	TC 6.8

Several of the listed publications are over 20 years old. ASHRAE must rely on the expertise of your committee to inform decisions about whether these publications contain up-to-date information in their current state, need to be revised for publication of a subsequent edition, or need to be withdrawn from bookstore sales.



TC 6.8 (Research) Geothermal Heat Pump and Energy Recovery Applications

2023 Summer meeting in Tampa, FL

Conference Room: Virtual

T.C. 6.8 RESEARCH SUBCOMMITTEE MEETING MINUTES

Wednesday, Jun 14, 2023

1:00-2:30 PM (Eastern)

Minutes prepared by chair, Harrison Skye (harrison.skye@nist.gov)

1 Attendance

- Approx. 12 members attended the virtual meeting.

2 Research Chair Breakfast – content from Feb. 6, 2023 Research Breakfast

- 2021 Research Strategic Plan approved: <https://www.ashrae.org/technical-resources/research/research-strategic-plan>
 - RTARs and WSs should address topic areas in RSP
 - RSP topic areas
 - i. Resilience
 - ii. IEQ –Environmental Quality in Occupied Spaces and Impacts on Work and Learning Health and Well Being, and Transmission of Airborne Infectious Viruses
 - iii. Sustainability, Decarbonization, Energy and Resources
 - iv. HVAC&R Equipment, Components, and Materials
 - v. Tools and Applications
 - vi. Education and Outreach
- Grants and Awards – As of 2023 these awards are back to being funded!
 - Innovative Research Grants (\$125k over 3 years) -
 - New Investigator Award (\$125k over 3 years)
 - Grant In Aid –Typically 20-25 per year @ \$11,500
- Current Research activity:
 - Research activities picking up.
 - Currently 42 active research project, total value of active projects is \$6.2M; avg duration is 20 months; average cost is \$150 K
 - 9 projects went out for bid for 2023.
- ASHRAE is one of the few professional societies to sponsor research to supports standards and technology transfer
- Research Development Documents
 - RTARs
 - Short, quick topic development, should illustrate support of the ASHRAE Research Strategic Plan. Show state of the art, need, how will ASHRAE benefit. Must present convincing argument about project benefit.
 - Work Statement
 - More detailed, with no specific page limit, with clear objectives, tasks, deliverables.
 - Project and scope need to be well defined. This minimizes no-cost extensions, which are burdensome to ASHRAE, PI.
 - Could be submitted without RTAR for time-critical research, though approval is more difficult.
 - Few WS approved on 1st submission. But can be re-submitted next ASHRAE meeting.
- RAC Meetings
 - March 15, May 15, August 15, December 15
- Section 6 Research Liaison: Stefan Ebel (StefanEbel@gmail.com)

- MANDATORY: Project Evaluation Committee (PEC) and Project Monitoring Subcommittee (PMS) training is available on the ASHRAE Research Webpage: <https://www.ashrae.org/technical-resources/research>
- Publication Topic Acceptance Request (PTAR) process is officially available.
- New Basecamp sight for Research Subcommittee chairs
- Project Monitoring Subcommittees -
 - Meeting should be listed in the conference program or announced to TC (if it is not during conference). Ensure that Mike Vaughn and your Research Liaison are invited to all PMSc meetings.
 - Should be regularly updating the TC of progress.

3 Existing Research Projects

3.1 Project Monitoring

3.2 Active Research Projects

- 1890-RP “Minimum flow velocities for purging air and debris from hydronic piping systems.”
 - Timeline: April 2023 – May 2025
 - Co-sponsors TC 6.1 & 6.2
 - Status: Work has begun. Contractor and PMS met for a kickoff meeting. Contractor is working on literature review and preliminary experiment design.
 - Contractor: Purgerite (P.I. Russel Buras)
 - Project Evaluation Subcommittee: Lisa Meline (Chair), Howard Newton, William Murphy, Harrison Skye
 - Comment from Rick C. – What is the maximum size of debris that can be removed at each velocity? They’ve seen 1 -2 inch rocks.
- Project Monitoring Subcommittee (Tentative): Harrison Skye (chair), Lisa Meline, Gary Phetteplace, Lance MacNevin, Steve Tredinnick

3.3 Tentative Research Projects (approved for bidding)

- None

3.4 Work Statements (WS)

- None

3.5 Research Topic Acceptance Requests (RTAR)

- “Evaluation of ground source heat pumps (GSHP) with thermal energy storage (TES) for residential and commercial buildings”
 - Approved by RAC with comments.
 - The comments can either be addressed in a revised RTAR, or in the Work Statement. Needs approval from Section 6 Research Liaison (Stefan Elbel, RL6@ASHRAE.net).
 - Comments from RAC:
 - “The project scope needs to be narrowed.
 - The objectives are very broad.
 - The budget of \$300k seems large for a project consisting of largely analysis and modeling, and possibly could be broken into successive smaller projects.
 - The approach should include conducting Literature review or survey to solicit case studies with some real costs to enable the comparison of economics of different integrated systems.”
 - RTAR/WS committee currently includes: Xiaobing Liu, Michel Bernier, Masih Alavy, Harrison Skye.

- Steve K. – DOE has invested in these types of systems. The first part of this project should be the cost analysis. The outcome of the project would be to reduce the GHX size, but that only accounts for 25 % of the cost. We should instead be focused on the other costs of the GSHP systems.
- Carl H. – Need to focus on either residential or commercial. Pick one for a first project. For WS, need to link the GSHP & TES to decarbonization.
- Rick C. – His company has been working with these types of systems, esp. for smaller systems at residential scale (3-ton). Recommends for \$300k budget, needs a field demonstration. Need high-quality, interactive results, with real-world data.
- Howard N. – Solutions would need to be tailored to geographical areas. In Texas, the cooling loads are dominant, and there is not enough need to use it at a later time.
- Michel B. – RTAR was meant to explore the GSHP & TES concept. Some TES systems don't exist, so cost data might be difficult to get. Part of benefit of TES is peak shaving.
- Rick C. – Project at MIT. 2050 grid will have highly variable sources of renewable energy; GSHPs & TES can help capture & use these sources. Designing to interact with grid, to reduce stress on grid, reduce build-up of grid capacity.

4 Research Results & Publications

- none

5 Research Topic Idea Discussion

- Lisa M. – Challenges in West-coast US states with grout regulations. Grout regulations based on study in Nebraska (Lisa will send, Harrison will post in Basecamp). Regulators are concerned about water migration in grouted wells. Need literature & studies to support use of different grouts in different locations and different installations. Need tests designed specifically for closed-loop GHX, not for open-loop water wells. Which types of grouts are most effective in dry locations? Marine locations? Places with environmental spills? Need to prevent permeation of water between surface and aquifers, or between aquifers. Would like to combat overly-conservative requirements for grouting.
 - Steve K. – Can we have a project that is low cost, i.e. \$25k?
 - Carl H. – As long as there is support from TC, esp. multiple TCs it can be ok. Mostly need to show the benefit. Best if can get outside support too.
 - Howard N. – Can we use the grouted test-bores in the GSHP-TES study?
 - Rick C. – How to test? Lab test could show adhesion. Field test would need to be thought about how to do it.
 - Lisa has some contacts in grout industry who may have good input.
 - Howard hasn't seen overly restrictive grout requirements for Texas. However, it would be good to know what happens to grout as it weathers & ages. Thinks it could be a good study.
 - This idea should be discussed at the main TC meeting.
- Rick C. – how to integrate GSHPs with a grid that is comprised with high percentage of renewable energy with intermittent availability. Time shifting, utilizing free or low-cost power.
 - This comment should be included in the GSHP & TES RTAR.

5.1 Ideas proposed by members via email

5.2 Ideas from previous TC meetings

- Collect data on successful GSHP system installations
- Ambient/district loops: what is the benefit of a headering system?
- Evaluating newer GSHX designs
- Standing column well design tools
- Cost database
- Voltages generated in piping during flushing

6 Other business

- Virtual meetings. The plan is to continue doing the TC 6.8 Research Meeting as a virtual meeting about 2 weeks before the conference.
 - Cost of meetings is high, so virtual option is helpful
 - Meeting a few weeks ahead of ASHRAE conference is helpful
 - Generally, people are happy with the virtual research meeting

7 Old business

- None

8 Adjourn

9 Useful links

- ASHRAE Research website: <https://www.ashrae.org/technical-resources/research>

10 Common ASHRAE & GSHP abbreviations

- ASHRAE – American Society of Heating, Refrigerating, and Air-conditioning Engineers
- GHX – Ground heat exchanger
- GSHP – Ground-source heat pump
- TES – Thermal energy storage
- TRP – Tentative Research Project (ASHRAE-funded research project approved for bidding)
- RAC – Research Administration Committee (ASHRAE committee that governs the allocation of ASHRAE research funding)
- RP – Research Project (active ASHRAE-funded research project)
- RTAR – Research Topic Acceptance Request (1st stage of ASHRAE funded research project proposal. Short proposal that is sent to RAC for preliminary project approval).
- WS – Work Statement (2nd stage of ASHRAE funded research project proposal. A more detailed list of requirements of the research project that is used for bidding purposes. The WS must be approved by RAC before soliciting bids).

TC 6.8 Research Attendance	
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IAPMO Liaison Report



The International Association of Plumbing & Mechanical Officials

Lance MacNevin 6/23/23

This is a brief liaison report on IAPMO code development activities:

- The 2024 version of the IAPMO **Uniform Mechanical Code** (UMC) published in April
 - Chapter 17, a mandatory section, is “Geothermal Energy Systems and Ambient Temperature Loops” and contains much updated content
 - The timing for submission of revisions to this 2024 code (for development of the 2027 code) is open from July 3, 2023 to Jan. 2, 2024
- The 2024 version of the IAPMO **Uniform Solar, Hydronics, and Geothermal Code** (USHGC) is still in development.
 - The TC met on May 16th at IAPMO review over 80 public comments
 - TC members had until June 26th to submit their online ballot for approval of committee decisions
 - The 2024 USHGC is expected to publish in late 2024
 - Ch. 7 is focused on “Geothermal Energy Systems and District Geothermal Loops”
- IAPMO formed a new TSC in 2022 to develop a new standard **Z1381** on “District Ambient Temperature Loops”
 - The 4th meeting of this TSC was in January 2023, then work paused; work is expected to resume in Fall 2023

Lance

MISSION AND VISION STATEMENT

IAPMO Codes and Standards provide innovative codes and standards solutions for the protection of the public's health, safety and welfare. We address the world's codes and standards needs to improve life for a better, more resilient tomorrow.



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Update From GeoExchange Prepared for ASHRAE TC 6.8 June 22, 2023

Dear TC 6.8,

Thank you for the opportunity to provide an update on GeoExchange's ongoing public policy work. Following the monumental achievement for the industry with the enactment of the Inflation Reduction Act, GeoExchange has been diligently working to ensure that implementation of the law delivers its intended benefits. There are a number of outstanding IRA-related issues that we are currently working on:

- 1 Megawatt of net thermal energy. This is the threshold for a project where prevailing wage and apprenticeship requirements kick in. GeoExchange worked with Steve Hamstra, Bob Brown, Dan Ellis, and Dr. Liu to come up with a model to calculate net thermal output in a distributed geothermal heat pump system. This average threshold is 445 tons. We continue to press the U.S. Treasury Department and the Department of Energy to render a verdict on our proposed approach which was submitted formally in November.
- Third-Party Ownership. Longstanding rules at the IRS prevent third-party ownership of ground loops in leases. This rule, known as limited use property doctrine, was successfully overcome by the solar industry and it drove rapid growth in solar adoption. We are seeking a safe harbor exemption in the form of IRS guidance and have met with DOE, the White House, Treasury, and numerous other federal officials to garner this guidance. We are currently organizing a letter from members of Congress to Treasury on the matter and hope for a resolution later this year.
- Domestic Content Bonus Credit. The IRA includes, for commercial geothermal heating and cooling systems, an additional credit of 10% for systems that meet a certain threshold of domestically produced products. The IRS issued guidance on this bonus credit on May 12, but per the rules and how the credit is calculated, it seems very unlikely that any projects would qualify. This is because manufacturers would be required to reveal to system owners their production costs excluding labor and profit margin. This flies in the face of corporate competition and is a nonstarter for manufacturers. We are compiling comments, questions, and concerns with the issued guidance and current approach to claim the credit and will be convening meetings with key stakeholders to propose an alternate methodology.

GeoExchange will be back on Capitol Hill next month meeting with dozens of members on both sides of the aisle. We were pleased to see that in House Ways and Means Committee Chairman Jason Smith's recently released tax proposal, the American Families and Jobs Act, major portions of the IRA are repealed, but geothermal heat pump credits are left intact. This is a testament to the hard work of educating lawmakers GeoExchange has engaged in. There is much more to do, not only at the federal level, but also with states, and I look forward to continuing to provide updates to TC 6.8 on our wide-ranging advocacy efforts.

Thank you for the important work you do on behalf of the geothermal heating and cooling industry.

Kind regards,

Ryan Dougherty
President
GeoExchange



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Update from IGSHPA

June 23, 2023

Dear TC 6.8 Committee:

Thank you for the opportunity to provide an update on IGSHPA's activities. IGSHPA is gearing up for the expected increases in GSHP installations in the U.S. and Canada. Things are so busy right now that unfortunately, I am not able to attend the ASHRAE committee meetings this summer. Some of the current activities are as follows:

- Training: The IGSHPA training committee is making good progress on transitioning the Accredited Installer (AI) course into modules for easier access and training that is geared towards job descriptions. AI will likely end up as 6 or more modules with the first two, service technician and install technician targeted for the end of the year.
- ANSI/CSA/IGSHPA C448 Design and Installation Standard: We are very close to being ready to go out for public review (targeting July). This will allow us to publish the updated standard by the end of the year. The 2017 IGSHPA standards will be sunset when the next edition of C448 is published.
- Preparation for the 2023 annual conference in Las Vegas, December 5-7, 2023: We have received 76 abstracts for speakers. This year will include 4 tracks, including many more topics than previous years. We will also have awards for commercial innovation, residential innovation, and excellence awards. IGSHPA is partnering with NGWA again this year, expecting even better attendance.
- Preparation for the 2024 research conference in Montréal, May 28-30, 2024: IGSHPA will be partnering with Polytechnique Montréal, and the conference will be on Polytechnique's campus. A call for abstracts will be going out soon.
- Updates to igshpa.org: You will see a new website by Fall that will be much easier to navigate and have new resources for members.
- Two new board member sectors: At the next election this Fall, the board of directors will go from 5 to 7 members with the addition of a manufacturing sector and utility sector to the board.

Thank you, committee members and ASHRAE, for your important work for the GSHP industry!

Best Regards,
Jeff Hammond
Executive Director
International Heat Pump Association

