



October 2021

# THE LONG ISLAND SOUNDER



ASHRAE Long Island Chapter, Region I...Founded in 1957

[www.ashraeli.com](http://www.ashraeli.com)

**American Society of Heating, Refrigerating and Air Conditioning Engineers, Inc.**

## Inside this issue:

President's Message	1
LI Chapter Officers	2
Meeting Schedule	3
Program	4
LI Past Presidents	5
PAOE	5
Student Activities	6-8
Research Promotion	9
Membership	10-11
History	12-15
YEA	16-17
Refrigeration	18-22
GGAC	23
CTTC	24
ASHRAE Certifications	25
ASHRAE Social Media	26
Advertisements	27-29

## President's Message

Welcome to the October issue of the Long Island Chapter's Sounder!

I want to thank, again, Andy Siegelson from ADE for kicking off our year with his widely received Fan Fundamentals presentation that he performed last month. Very informative as usual!

Special thank you to many of our board members that gave up their Saturday to attend the Chapter Regional Conference virtual workshops.

Attending these not only helps the chapter with PAOE points but also provides the training we need to have a successful ASHRAE year.

Please take note of the upcoming YEA events outlined below and don't forget to talk to Mike if you are interested!

Please keep an eye on the website for monthly meeting pre-registration and also for upcoming events. We are in the process of planning an exciting field trip for 2022.



## CHAPTER MONTHLY MEETING

<b>DATE:</b>	<b>Tuesday, October 12, 2021</b>
<b>TIME:</b>	6:00 PM - Cocktails/Dinner 7:00 PM - Dinner Presentation 8:45 PM - Conclusion
<b>LOCATION:</b>	Westbury Manor 1100 Jericho Tpke. Westbury, NY 11590
<b>FEES:</b>	
Members -	\$50.00
Guest -	\$60.00
Student -	\$15.00

We are also in the process of planning our popular annual golf outing! Please keep an eye out for more info on that as the year progresses.

Regards,

**Matthew Vitrano**  
**President - Long Island Chapter**

Check the ASHRAE Website for Society news and to join/renew membership!  
<http://www.ashraeli.com>

## Long Island Chapter Officers & Committees

### ASHRAE 2020/2021 OFFICERS


POSITION	NAME	PHONE	EMAIL
President	Matthew Vitrano	516.319.9325	<a href="mailto:c006@ashrae.net">c006@ashrae.net</a>
President-Elect	Murat Bayramoglu	631.312.8818	<a href="mailto:c006pe@ashrae.net">c006pe@ashrae.net</a>
Vice President	Michael Nigro	212.643.9055	<a href="mailto:c006vp@ashrae.net">c006vp@ashrae.net</a>
Treasurer	Elizabeth Jedrlnic	516.490.1621	<a href="mailto:c006tr@ashrae.net">c006tr@ashrae.net</a>
Secretary	Matthew Catan	407.489.6684	<a href="mailto:c006sec@ashrae.net">c006sec@ashrae.net</a>
Board of Governors	Michael Razzano	516.805.3084	<a href="mailto:c006bog1@ashrae.net">c006bog1@ashrae.net</a>
Board of Governors	Zhigang Xu		<a href="mailto:c006bog2@ashrae.net">c006bog2@ashrae.net</a>
Board of Governors	Rich Smith		<a href="mailto:c006bog3@ashrae.net">c006bog3@ashrae.net</a>
Board of Governors	Michael S. Gerazounis	212.643.9055	<a href="mailto:c006bog4@ashrae.net">c006bog4@ashrae.net</a>
Board of Governors	James Hanna	718.269.3768	<a href="mailto:c006bog5@ashrae.net">c006bog5@ashrae.net</a>

### ASHRAE 2020/2021 COMMITTEES

COMMITTEE	NAME	PHONE	EMAIL
Programs & Special Events	Murat Bayramoglu	631.312.8818	<a href="mailto:c006pe@ashrae.net">c006pe@ashrae.net</a>
Membership (MP)	Michael Razzano	516.805.3084	<a href="mailto:c006mep@ashrae.net">c006mep@ashrae.net</a>
Refrigeration	Andrew Dubel		<a href="mailto:c006ref@ashrae.net">c006ref@ashrae.net</a>
Chapter Technology Transfer (CTTC)	Murat Bayramoglu	631.312.8818	<a href="mailto:c006cttc@ashrae.net">c006cttc@ashrae.net</a>
Grassroots Government	James Hanna	718.269.3768	<a href="mailto:c006ggac@ashrae.net">c006ggac@ashrae.net</a>
Newsletter Editor	Liset Cordero	212.643.9055	<a href="mailto:c006ne@ashrae.net">c006ne@ashrae.net</a>
Research Promotion (RP)	Michael Nigro	212.643.9055	<a href="mailto:c006rp@ashrae.net">c006rp@ashrae.net</a>
Historian	Elizabeth Jedrlnic	516.490.1621	<a href="mailto:c006his@ashrae.net">c006his@ashrae.net</a>
Student Activities (SA)	Matthew Catan	407.489.6684	<a href="mailto:c006sa@ashrae.net">c006sa@ashrae.net</a>
Young Engineers in ASHRAE (YEA)	Michael S. Gerazounis	212.643.9055	<a href="mailto:c006yea@ashrae.net">c006yea@ashrae.net</a>
Webmaster	Frank Paradiso	631.632.2792	<a href="mailto:c006web@ashrae.net">c006web@ashrae.net</a>
Nominating	Michael Gerazounis, PE, LEED AP	212.643.9055	<a href="mailto:nominating@ashraeli.org">nominating@ashraeli.org</a>
Reception & Attendance	Zhigang Xu / Matt Catan / Michael S. Gerazounis		<a href="mailto:reception@ashraeli.org">reception@ashraeli.org</a>
PR & Engineering Joint	Andrew Manos, LEED AP	631.632.2792	<a href="mailto:pr@ashraeli.org">pr@ashraeli.org</a>
Golf Outing	Peter Gerazounis, PE LEED AP	212.643.9055	<a href="mailto:golf@ashraeli.org">golf@ashraeli.org</a>
Awards	Brian Simkins	203.261.8100	<a href="mailto:c006ha@ashrae.net">c006ha@ashrae.net</a>
ASHRAE LI, P.O. Box 79, Commack, NY 11725			

**Editor's Note:** The appearance of any technical data, editorial material, or advertisement in this set of publications does not constitute endorsement, warranty or guaranty by ASHRAE of any product, service, procedure, design, or the like. ASHRAE does not warrant that information is free from errors, and ASHRAE does not necessarily agree with any statement or opinion in this set of publications. The entire risk of the use of any information in this set of publications is assumed by the user. Statements made in this publication are not expressions of the Society or of the Chapter and may not be reproduced without special permission.

## Chapter Monthly Meeting - Program for 2021/2022

<b>September 14, 2021</b> * At Westbury Manor  Dinner Presentation – Fan Fundamentals Presenter: Andy Siegelson <b>Refrigeration Night</b> <b>**1 PDH**</b>	<b>March 8, 2022</b> * At Westbury Manor Dinner Presentation— TBD Presenter: TBD <b>Student Activities Night</b> <b>YEA Night</b> <b>**1 PDH**</b>
<b>October 12, 2021</b> * At Westbury Manor Dinner Presentation — PPRCT Pipe and Fitting Systems for HVAC Water Distribution and Compressed Air Distribution Presenter: Jordan Stern <b>**1 PDH**</b>	<b>April 12, 2022</b> Dinner Presentation— TBD Presenter: TBD <b>**1 PDH**</b>
<b>November 9, 2021</b> * At Westbury Manor Dinner Presentation— TBD Presenter: TBD <b>Membership Promotion</b> <b>Student Activities Night and YEA Night</b> <b>Resource Promotion Night</b> <b>**1 PDH**</b>	<b>May 2, 2022</b> * Cherry Valley Club, Garden City, NY <b>ANNUAL GOLF OUTING</b>
<b>December 14, 2021</b> * At Westbury Manor Dinner Presentation— TBD Presenter: TBD <b>**1 PDH**</b>	<b>May 10, 2022</b> <b>Annual Field Trip</b>
<b>January 11, 2022</b> * At Westbury Manor Dinner Presentation— TBD Presenter: TBD <b>**1 PDH**</b>	<b>June 14, 2022</b> * At Westbury Manor <b>Free Buffet Dinner for Members</b> <b>PAST PRESIDENTS NIGHT &amp; OFFICER INSTALLATION</b> <b>STUDENT SCHOLARSHIPS TO BE AWARDED</b> <b>ASHRAE History Quiz and prize Give-A-Ways</b>
<b>January 29 - February 2, 2022</b> ASHRAE Winter Conference	<b>June 2022 - TBD (4pm-8pm)</b> * Dixie II @ Captree State Park Boat Basin, NY <b>ANNUAL FISHING TRIP</b>
<b>February 8, 2022</b> * At Westbury Manor Dinner Presentation— TBD Presenter: TBD <b>Membership Promotion Night</b> <b>Resource Promotion Night</b> <b>**1 PDH**</b>	<b>August 2022</b> <b>CHAPTERS' REGIONAL CONFERENCE (CRC) REGION I</b> <b>GRANIT STATE</b>
<b>February 20-26, 2022</b> <b>NATIONAL ENGINEERS WEEK</b>	

## Meeting Program



### Dinner Presentation

#### PPRCT Pipe & Fitting Systems for HVAC Water Distribution & Compressed Air Distribution

*Presented by*

**Jordan Stern**  
**Platsky Company**

**Attendees  
Will Earn  
1 PDH!**

<b>DATE:</b>	<b>TUESDAY, OCTOBER 12, 2021</b>		
<b>Time:</b>	6:00 PM - Cocktails and Hors D'oeuvres 7:00 PM - Dinner Presentations 8:45 PM - Conclusion	<b>Fee:</b>	\$ 50.00 Member \$ 60.00 Guest \$ 15.00 Student
<b>Location:</b>	<b>WESTBURY MANOR</b> (516) 333-7117 1100 Jericho Tpke., Westbury, NY 11590 <b>Directions are posted at @ <a href="http://www.ashraeli.org">www.ashraeli.org</a></b>		
<b>Presentation:</b>	PPRCT pipe and fitting system designed for water and air distribution is an intelligent choice of HVAC piping systems. Being an Inert product PPRCT Polypropylene - Random Crystalline Temperature) is the perfect pipe and fitting system for condenser water, chilled water, cooling towers and limited boiler applications. Our presentation will show your members multiple reasons why copper, and steel pipe for mechanical applications has its place in the industry but in many applications makes sense to replace it with PPRCT. With its smooth walls and substantially better flow rates. PPRCT can help engineers in reducing the size and cost of operations for pumps, pipes and chemical feeds for many systems. Because it doesn't scale, pit or corrode it's allows engineers to size systems based on real flow rates and not worry about reductions in flow rates over time.  <b>All attendees will receive 1 PDH.</b>		
<b>About our Speaker:</b>	Jordan Stern is the Director of Business Development for Platsky Company. He has been educating engineers in the greater New York City market on new technologies in the HVAC and plumbing market for 20 years.		

CHAPTER MAY NOT ACT FOR SOCIETY

An International Organization

**The Long Island Chapter is looking for presenters for the remainder of the year.  
Please contact us if you are interested in presenting to our membership.**

## Long Island Chapter - Past Presidents

1958	H. Campbell, Jr. PE	1990	Robert Rabell
1959	Clyde Alston, PE	1991	Gerald Berman
1960	Sidney Walzer, PE	1992	Donald Stahl
1961	Sidney Gayle	1993	Ronald Kilcarr
1962	William Kane	1994	Jerald Griliches
1963	Louis Bloom	1995	Walter Stark
1964	Milton Maxwell	1996	Joe Marino
1965	Will Reichenback	1997	Norm Maxwell, PE
1966	Joseph Minton, PE	1998	Alan Goerke, PE
1967	Irwin Miller	1999	Frank Morgigno
1968	Walter Gilroy	2000	Michael Gerazounis, PE, LEED AP
1969	Charles Henry	2001	Ray Schmitt
1970	William Wright	2002	Steven M. Stein, PE
1971	Louis Lenz	2003	Andrew Braum, PE
1972	Ronald Levine	2004	Claudio Darras, P.E.
1973	Henry Schulman	2005	Craig D. Marshall, P.E.
1974	Myron Goldberg	2006	John Nally
1975	John N. Haarhaus	2007	Peter Gerazounis, PE, LEED AP
1976	Richard K. Ennis	2008	Steven Friedman, PE, HFDP, LEED AP
1977	Kenneth A. Graff	2009	Steven Giammona, P.E., LEED AP
1978	Evans Lizardos, PE, LEED AP	2010	Nancy Román
1979	Albert Edelstein	2011	Carolyn Arote
1980	Ralph Butler	2012	Brian Simkins, LEED AP
1981	Robert Rose, PE	2013	Andrew Manos, LEED AP BD+C
1982	Timothy Murphy, PE	2014	Richard L. Rosner, P.E.
1983	Leon Taub, PE	2015	Thomas J. Fields, P.E., LEED AP
1984	Raymond Combs	2016	Donald Kane, P.E.
1985	Edward W. Hoffmann	2017	Andrew Dubel, P.E., LEED AP
1986	Jerome T. Norris, PE	2018	Richard Halley
1987	Abe Rubenstein, PE	2019	Frank Paradiso
1988	Michael O'Rourke	2020	James Hanna
1989	Mel Deimel		

## PAOE POINTS FOR 2021/2022

Chapter Members	Chapter Operations	CTTC	Communi-cations	GGAC	History	Member-ship	Research Promotion	Student Activities	YEA	Chapter PAOE Totals
282	445	150	0	0	120	550	150	0	575	1,990

## Student Activities

### Overview

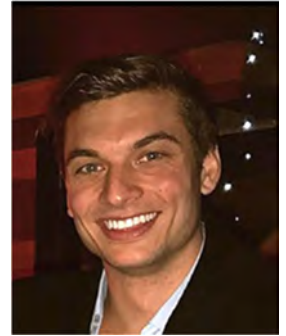
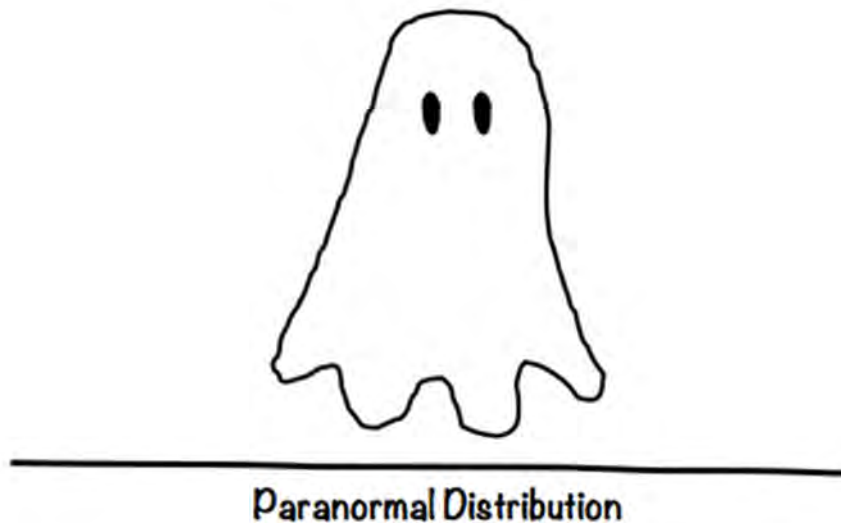
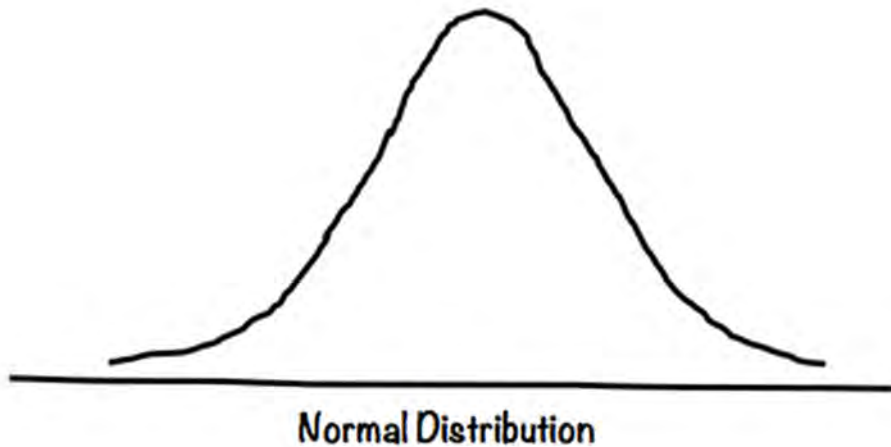
The Long Island Chapter ASHRAE Year is in full swing with a very successful first meeting. It was great to see many friends and colleagues and catch up on. We are looking forward to another great meeting this Tuesday October 12<sup>th</sup>. We hope to see more of the areas students and young adults join!

If you are interested in attending a meeting, please reach out and I would be happy to provide all meeting information!

**Article Structure:** In this Edition the sections we have are:

1. Joke of the Month | 2. Show me the Money (Scholarship Grants) | 3. #Winning (Competitions)

### **1. Joke of the Month: Spooky Halloween Graph**





## Student Activities

### 2. Show me the Money Zone | For Student Scholarship and Grant Information

#### 2022 ASHRAE Winter Conference Student Program

**GET READY FOR VEGAS!!! FREE TRAVEL!!! SEE BELOW!!!!**



The 2022 ASHRAE Winter Conference is scheduled for January 29–February 2, 2022. The Winter Conference will be a hybrid experience, offering both in-person and virtual options for participation for attendees. The in-person conference will be held in Las Vegas, Nevada at Caesars Palace. The conference will be an opportunity for students and other HVAC professionals from around the world to share industry ideas and learn more about ASHRAE. Students must register to attend the conference, which will open later this fall.

#### **VEGAS Student Travel Grant**

**Applications due September 30, 2021**

With generosity from the ASHRAE Life Members Club, the Student Activities Committee is offering up to five \$1,000 USD travel grants to help subsidize students to travel to the Winter Conference in Las Vegas, Nevada in February 2022. Apply [here](#).

#### **46 Society Scholarships Available for 2022-23!**

**Applications due December 1, 2021**

Through its scholarship program, ASHRAE seeks to motivate students worldwide to pursue an engineering or technology career in the HVAC&R field that will further promote sustainable technology for the built environment. Scholarships range from \$3,000 to \$10,000 and awarded for the academic year following the application deadline beginning with the fall semester. Qualified students are encouraged to apply at [ashrae.org/scholarships](https://ashrae.org/scholarships). Now accepting applications for our Undergraduate Engineering, Engineering Technology, Regional/Chapter, & University-specific Scholarships.



#### **Undergraduate Program Equipment Grants**

**Applications due December 15, 2021**

The ASHRAE Undergraduate Program Equipment Grants provide funding to engineering, technical and architectural schools worldwide with the goal of increasing student knowledge, learning and awareness of the HVAC&R industry through the design and construction of equipment. Grants are to be used to fund equipment and supplies for senior projects and 2-year technical school projects that focus on ASHRAE-related topics. Grants may cover projects lasting from one academic term up to one year. [Learn More](#).

## Student Activities

### 3. #Winning Zone | For Student Competition Information:

#### **2022 Design Competition**

The 2022 student competition focuses on a new performing arts building on a university campus located in Sydney, New South Wales, Australia. ASHRAE sponsors these competitions to encourage students to become involved in a profession that is crucial to ensuring a sustainable future for our Earth – the design of energy-efficient HVAC systems.

**Link:** <https://www.ashrae.org/communities/student-zone/competitions/2022-design-competition>

#### **2022 Applied Engineering Challenge**

As the global pandemic rages on, the need for climate-controlled transport containers for vaccine delivery has become a top priority. The 2022 Setty Family Foundation Applied Engineering Challenge (AEC) is focused on designing an ultra-cold refrigeration system that is capable of being transported to all global locations.

**Link:** <https://www.ashrae.org/communities/student-zone/competitions/2022-applied-engineering-challenge>

#### **2022 Building EQ (Building Energy Quotient) Competition**

The Student Activities Committee and Building EQ Committee have collaborated to create a new Building EQ competition. Students will have the opportunity to work evaluate and audit building energy consumption for buildings in operation to give the building a Building EQ score using the ASHRAE Building EQ online tools.

**Link:** <https://www.ashrae.org/communities/student-zone/competitions/2022-building-eq-building-energy-quotient-competition>

#### **Solar Decathlon**

The Solar Decathlon is a collegiate competition that challenges student teams to design and build highly efficient and innovative buildings powered by renewable energy. The combined competition features two tracks, the Design Challenge and the Build Challenge.

**Link:** <https://www.ashrae.org/communities/student-zone/competitions/solar-decathlon-competition>

*Please reach out for more information If you are interested in participating of any of the above competitions!*

**Matthew K. Catan**  
**Student Activities Chairman**

**Zhigang Xu**  
**Student Activities Co-Chairman**



## Research Promotion

A huge thank you to all of the individuals and companies who donated towards research promotion this year. As a result of all the generosity, the Long Island Chapter was successful in raising \$27,800!!! All money raised directly funds research to continuously improve standards and overcome new industry challenges.

I hope that once again the Long Island ASHRAE Chapter can count on the continued support of past contributors to continue raising funds to better the HVAC&R industry .

'Thank you' again to all the contributors listed below who have donated to ASHRAE this past year:



### INDIVIDUALS

Kevin O Khan  
Michael Nigro  
Michael H Razzano  
Murat Bayramoglu  
Matthew Vitrano  
Christian Meszaros  
Andrew E Manos  
Elizabeth Jedrlinic  
James R Tauby, PE  
James Hanna  
Ronald J Kilcarr, PE, CEM

Michael F Schiavo  
Donald W Kane, PE  
Frank D Morgigno  
John D Nally  
Peter Gerazounis, PE  
Frank Paradiso  
Matthew K Catan  
Frank Dupointe  
Scott Strouse  
Christopher Lamond

### COMPANIES

RMF Engineering, Inc  
Klima - New York  
Mason East Inc.  
GA Fleet Associates Inc  
Lizardos Engineering Associates  
PC  
Ultimate Power  
Rathe Associates  
Highmark Building Efficiency  
Wales Darby Incorporated

Analytical & Combustion Systems  
Outsourcing Concepts LLC  
SMACNA - Long Island  
Catan Equipment Sales  
MWSK Equipment Sales Inc  
G.A. Fleet Associates, Inc  
MV Controls  
Tower Enterprises of New York &  
New Jersey  
Mitsubishi  
Accuspec Inc

### CONTRIBUTIONS CAN BE MADE IN THE FOLLOWING WAYS:

1) You can mail your checks, made out to ASHRAE Research Promotion, to our Treasurer:

Elizabeth Jedrlinic  
ASHRAE LI Chapter Treasurer  
c/o Trane — 245 Newtown Road, Suite 500, Plainview, NY 11803

2) You can bring your check to any of the meetings and hand to myself or Elizabeth.

3) You can contribute via PayPal from the ASHRAE LONG ISLAND web site, just click on the donate button.

4) You can contribute directly on-line. [www.ashrae.org](http://www.ashrae.org)

**\* Please make sure you accredit your contribution to the LONG ISLAND CHAPTER 006 \***

Thank you again for all of your support!

**Michael Nigro**

**Research Promotion Chair**

## Membership Promotion

Last month was a great start to get together and we hope to continue our meeting attendance & membership growth. Speaking of membership growth, I would love to touch base with all our current members and make sure your up to date on your renewals. You can check your membership status, go over your ASHRAE benefits, look at honors & awards, renew your membership along with so much more by visiting <https://www.ashrae.org/membership>.



This brings me to the next membership point of:

- Why is renewal & uninterrupted membership so important?
- Are you aware there are multiple membership grades with different benefits that are all based on your time in ASHRAE?

To start & as many people enter ASHRAE, they start as students. In my opinion, the only downside of being a student member is not holding office but there are so many positive aspects. Students are permitted to participate in technical committees, which essentially shape the industry. As a student, it also allows them to network with other HVAC professionals and forge relationships & explore other potential career paths within the HVAC field. These relationships will help them build bridges that can potentially serve them well when they're ready to enter the workforce. Personally, I think being a student member of ASHRAE & having this on your resume is a great way to spend \$25 each year!

After graduation, students can advance to Affiliate Members. For three (3) years, this membership level allows them to keep their fees relatively low while they continue to build their network & advance their careers. Some of the added benefits other than access to discounted ASHRAE publications are able to hold office and vote at the Chapter, Regional & Society levels, access to the technology portal and one eLearning Course or one ASHRAE Standard (PDF version).

Affiliate members naturally advance to Associate Members after 3 years. This now allows you to get more involved in the governance of their chapters and take advantage of leadership opportunities all over the globe. If you are interested in traveling for leadership training, then this is for you!

Following Affiliate Member is Member, which is after 12 years. At this point in your career, you have a well round base of comfort in leadership positions, professional skills & established within the industry. The best part is you are qualified to hold office and vote all the way up to the Society level.

Unfortunately, none of this is possible if you allow your membership to lapse. Even if you've been a member for 20 years, allowing your membership to expire (90 days past due) surrenders your seniority, and the clock goes back to zero when you come back! Please don't let this happen to you! Don't lose what you've worked so hard for and renew your membership. Renewing your membership will allow you to hold your esteemed place in the conversation.

A program that we would like to implement this year is a "Membership Battle". This "Membership Battle" is an employer recognition program that's meant to thank employers for supporting ASHRAE membership, while publicly recognizing employers who support ASHRAE to create value & encourages continued support of ASHRAE membership. The goal of the membership battle is to:

1. Create a competition among employers to help increase membership
2. Recognize employers that support ASHRAE
3. Promote continued support

This "Membership Battle" is relatively simple since we will have (3) categories that will be based on your firm's size & the "winner" will be based on your percentage growth at the end of the year. The three (3) categories are:

1. Small Firms - 15 employees or less
2. Medium Firms - 16 to 50 employees
3. Large Firms - over 51 employees

## Membership Promotion

The plan is to publish updates within each monthly newsletter & make announcements at each of our monthly meetings. In order for a firm to be enrolled, I will ask at our next monthly meeting for the firms (this can range from engineering firms to manufacturers, mechanical contractors, architect firms, etc.) that would like to enroll. PLEASE UPDATE YOUR ASHRAE PROFILE INFORMATION & RESPECTIVE EMPLOYEE! From there, I will work with the board to see the actively enrolled members at each firm & access your monthly percentage growth. At the end of the year, the employers with the highest percentage growth in each size category will be presented an ASHRAE plaque & recognized at our final meeting. We will also have another "Honorable Mention" awarded that will be presented to an employer who has all their employees as registered ASHRAE members.

I would also like to informally welcome our new members:

1. Brandon Mendez
2. Christopher Cawley
3. Christopher Romano

Your Long Island Chapter wishes you many years of partnership and success with ASHRAE!

Please contact me with any questions regarding the Smart Start Program and/or ASHRAE membership needs. Also & if you have a testimonial about the benefits of ASHRAE that you'd like to share, can you please reach out to me? I can be reached at [Michael.H.Razzano@gmail.com](mailto:Michael.H.Razzano@gmail.com).

Looking forward to another great month and thank you in advance for your support, time & guidance.

**Michael H. Razzano**  
**Membership Promotion Chair**

**Richard Smith**  
**Membership Promotion Co-Chair**



## History

The Long Island Chapter of ASHRAE was created in 1957. See below for a copy of our original Constitution.

*Elizabeth Jedrlinic*  
History Chair

*Michael Razzano*  
History Co-Chair



### CONSTITUTION OF THE LONG ISLAND CHAPTER OF THE AMERICAN SOCIETY OF HEATING, REFRIGERATING AND AIR-CONDITIONING ENGINEERS, INC.

Approved by the Society:

#### ARTICLE I - NAME

The name of the organization is the Long Island Chapter (herein "Chapter") of the American Society of Heating, Refrigerating and Air-Conditioning Engineers, Inc. (herein "Society").

#### ARTICLE II - PRINCIPAL OFFICE

The principal office of the Chapter is located in Garden City, New York.

#### ARTICLE III - OBJECTS

The objects of the Chapter are exclusively scientific and educational and include, but are not limited to: (a) the advancement of the sciences of heating, refrigerating and air-conditioning engineering and related sciences; (b) the continuing education of the members and other interested persons in said sciences, through lectures, demonstrations, and publications; (c) the rendering of career guidance and financial assistance to students of the sciences; and (d) the encouragement of scientific research.

#### ARTICLE IV - POWERS

The Chapter shall have the power to perform all lawful acts which may be deemed necessary for the proper and successful prosecution of the objects and purposes for which it is organized and operated, consistent with the Certificate of Consolidation, Bylaws, and Rules of the Board of Directors of the Society, and applicable tax regulations for non-profit organizations or corresponding provisions of tax laws.

#### ARTICLE V - LIMITATION OF POWERS



## History

5.1 The Chapter is not operated for the pecuniary profit of its members. No part of the net income of the Chapter shall be payable to or shall otherwise be available for the personal benefit of any proprietor, employee or shareholder. No salary emolument or compensation shall be paid to any member, and no part of the activities of the Chapter shall consist of the performance of particular services for individual members.

5.2 The Chapter shall not have the authority to act for or in the name of the Society and notice to such effect shall be imprinted on the Chapter stationery; the Chapter shall not use the name of the Society except as a part of its own name; the Chapter shall not use the emblem of the Society without the written approval of the Board of Directors of the Society; and the Chapter shall not incur any financial liability or contractual obligation in the name of the Society.

5.3 The Chapter shall not issue publications for distribution to persons other than members without prior approval of the Board of Directors of the Society. Certain publications for members such as a chapter newsletter or chapter membership roster/product directory may be distributed to persons other than members provided it clearly complies with paragraph 5.2.

5.4 The Chapter shall not contribute to, affiliate with, or hold membership in any society, association, council, or other organization without prior approval of the Board of Directors of the Society.

5.5 The Chapter shall not recommend, endorse or approve any product, service, publication, person or entity for the promotion of private interests.

### ARTICLE VI - DISSOLUTION

6.1 The chapter may be dissolved:

- a. with the consent of not less than sixty (60) percent of the members in good standing of the chapter with voting rights expressed, either in person or by proxy, at a special meeting called for that purpose, or



## History

- b. by a two-thirds vote of the ASKRAE Board of Directors after written preferment of charges, sixty (60) days written notice of hearing sent by registered mail to the President of the Chapter, and an adequate opportunity for the chapter representative to be heard before the Board of Directors or a committee of three (3) or more members designated by the Board of Directors.

6.2 In the event of dissolution, all debts and liabilities legally incurred on behalf of the chapter shall be fully discharged. The remaining funds shall be disposed of in accordance with paragraph 6.3 thereof.

6.3 Upon the dissolution of the Chapter, any assets remaining thereafter shall be conveyed to the Society.

6.4 In the event that the Society is not then in existence or is not then exempt under applicable tax regulations for non-profit organizations or corresponding provisions of tax laws, the assets shall be conveyed to such organization then existent, dedicated to the perpetuation of objectives similar to those of the Society and exempt.

### ARTICLE VII - AMENDMENTS

7.1 All articles of this Constitution shall be subject to alteration or repeal, consistent with the Certificate of Consolidation, Bylaws, Rules of the Board of Directors of the Society, and applicable tax regulations for non-profit organizations or corresponding provisions of tax laws.

7.2 Amendments to this Constitution, set forth in written directives of the Secretary of the Society, shall be adopted by a majority of the Board of Governors. Written copies of said amendments shall be sent by the chapter secretary to all members, or an officer of the Chapter shall read said amendments at the next succeeding meeting.

7.3 Amendments to this Constitution may also be initiated by a written resolution of a majority of the Board of Governors or of not less than five (5) members in good standing with voting privileges, presented at any meeting of the Chapter. If approved by a majority of the members present, the Secretary shall mail copies of the proposed amendments to all members not less than

## History

seven (7) days before the next succeeding meeting. If approved by a two-thirds (2/3) vote at such meeting, the Secretary shall forward such amendments to the Secretary of the Society for approval by the Charter and Bylaws Committee of the Society and review by the Regional Chair. Amendments shall become effective only upon receipt of written notice of approval by the Charter and Bylaws Committee of the Society.

### ARTICLE VIII - ADOPTION

This Constitution shall be completed and adopted by a majority of the Board of Governors. Written copies of the Constitution shall be sent by the Secretary to all members and shall be sent, as amended, to such persons as shall, from time to time, become members of the Chapter.

Adopted by the Long Island Chapter:

\_\_\_\_\_  
Date

\_\_\_\_\_  
Chapter President

tes/00-09-18Long Island C&BL.doc

## YEA

We have a few updates this month regarding a few YEA events and programs.

### YEA Leadership Weekend 1.0

Registration has opened for the YEA leadership weekend next month in Colorado. Please make sure you register soon as the opportunity to do so ends **October 22nd**.

### YEA Leadership Weekend (Fall 2021)

**Denver, Colorado**  
**Sheraton Denver Downtown Hotel**  
**November 12-14, 2021**



Event Schedule. The event will begin at 2pm on Friday, November 12 and will end at 1pm on Sunday, November 14th. Hotel Information. The event will be held at Sheraton Denver Downtown. ASHRAE will reserve your hotel room for the event. You only need to contact the hotel if you require additional nights beyond the nights included with your registration.

**Registration is open until October 22nd!**

You can complete your registration for this event under the "Registration" section:

<https://www.ashrae.org/communities/young-engineers-in-ashrae-yea/yea-events-and-programs/yea-leadership-weekend>

***Please note that if you have any interest in the upcoming 2.0 event in the spring that this event is a required prerequisite.***

### Leadership U

Leadership U is a program in which four (4) YEA members are selected for an ASHRAE Winter or Annual Conference to be matched up with Society Officers and participate in all of their events and board meetings, including social activities.

The deadline to apply for the Leadership U program is also fast approaching as applications close on **November 14th**. You can apply using the "apply now" tab under the program requirements:

<https://www.ashrae.org/communities/young-engineers-in-ashrae-yea/yea-events-and-programs/leadership-u>

If you have any questions regarding this program you can contact YEA at [youngengineers@ashrae.com](mailto:youngengineers@ashrae.com) or by phone at 678-539-1178.

### LeaDRS

This program is still available to all ASHRAE members who wish to shadow their Director and Regional Chair at an ASHRAE conference. Anyone interested should reach out to their region's DRC.

**Michael S. Gerazounis**  
**YEA Chair**

**Rich Smith**  
**YEA Co-Chair**

## YEA

Region	DRC	Email
Region I	Mr. Steven C Sill	r01drc@ashrae.net
Region II	Mr. Ronald Gagnon	r02drc@ashrae.net
Region III	Mr. Mark A Tome, PE	r03drc@ashrae.net
Region IV	Mr. Steven Marek	r04drc@ashrae.net
Region V	Mr. Douglas F Zentz	r05drc@ashrae.net
Region VI	Mr. Richard D Hermans PE	r06drc@ashrae.net
Region VII	Mr. Chris M Gray PE	r07drc@ashrae.net
Region VIII	Mr. Randy C Schrecengost, PE	r08drc@ashrae.net
Region IX	Mr. Tyler J Glesne	r09drc@ashrae.net
Region X	Mr. Devin A Abellon, PE	r10drc@ashrae.net
Region XI	Mr. N Eileen Jensen, PE	r11drc@ashrae.net
Region XII	Mrs. Robin Bryant	r12drc@ashrae.net
Region XIII	Mr. Apichit Lumlertpongpana	r13drc@ashrae.net
Region XIV	Mr. Andres J Sepulveda	r14drc@ashrae.net
Region-at-Large	Dr. Richie Mittal	raldrc@ashrae.net



## Refrigeration

ASHRAE was formed as the American Society of Heating, Refrigerating and Air-Conditioning Engineers by the merger in 1959 of American Society of Heating and Air-Conditioning Engineers (ASHAE) and The American Society of Refrigerating Engineers (ASRE).

See below for a short article on the history of ASRE from ASHRAE's archive.

**Andrew Dubel**  
Refrigeration Chair

**Michael S. Gerazounis**  
Refrigeration Co-Chair



## Chapter 2

### First and Last - The Truth

*"We have started on a mission similar to that which other great societies in the engineering world are so ably accomplishing, and considering that our particular scope of operation touches on almost every department of human interest, our aims, if attained at all, must be reached by manful, honest effort. The Grail of the engineer must be first and last - The Truth."*

John E. Starr  
1904

**R**efrigeration as an industrial practice was already established by 1885. In the United States, which was a recognized world leader in refrigeration at this time, the main applications were the production of ice and beer and cold food storage. Australia and New Zealand were also industry leaders. Their primary uses were mechanical refrigeration for food preservation, for shipping frozen meats to other countries and for producing beer.

By 1900, manufactured ice in the United States could be made for the same low cost as storing natural lake ice, and it was not weather dependent. One contributing factor was due to polluted lakes and rivers near metropolitan areas, ice harvesters had to go further away to obtain their supplies, which increased their shipping costs and provided ice manufacturers' with claims that their product was purer.

"Volumes were written by the two sides as between the merits of lake and machine-made ice....Much that was written was technically unsound as reported from both sides," wrote Willis R. Woolrich in 1969. Those who harvested and sold natural ice touted it as having a greater cooling capacity. Those who manufactured ice said there was no difference, except manufactured ice



Ploughing and storing ice on the Hudson River above New York City in 1870s.

was made from distilled water.

For many years, there was an intense competition for the ice market. With the invention of electric and gas household refrigerators, the market changed for household ice and the natural ice market virtually disappeared by 1950.

Air conditioning or comfort cooling, as it was known then, was not used in every day practice in 1904. There were a few installations, however, which were used primarily to keep valuable records and manuscripts.



## Refrigeration

### *Proclaiming the Truth*

Many other uses of refrigeration that are considered modern conveniences were also common in 1904. These include artificial skating rinks, bakery and candy cooling, fur storage, cooling of drinking water and the use of refrigeration in the making of camera film and ice cream.

Other industries that looked to refrigerating engineers to help make their businesses more cost effective included textiles, tobacco, perfume production, chemicals, and mining. Civil engineers sought the expertise of refrigerating engineers in the building of shafts and tunnels.

### Issues Leading to Organization

In the United States the only engineering organization suitable for engineers interested in refrigeration was the American Society of Mechanical Engineers (ASME). Although some very outstanding papers had been presented at ASME meetings from 1889 to 1892, by the turn of the century, ASME members interested in refrigeration "found very little on the programs bearing directly on their professional work," recalled Harry Sloan from Vilter Manufacturing Company. They "had been in a huddle in a corner discussing their problems, but with a new society the whole program would be of interest."

Another factor that inspired the organization of a society of refrigerating engineers was the formation of the American Ice Machine Builders Association in 1903. The work of the American Ice Machine Builders Association, whose members were primarily manufacturers, pointed out the advantages of working together, cooperating with other organizations, and of sharing information. More than one-half of the men who would join the refrigerating engineer's society were also members of this association.

In addition, technological advances and new applications were prompting a need for fundamental data on which to base standards within the refrigeration industry. Some engineers felt that it was time to form a scientific society to meet this need.

### The Society Organizes

William H. Ross, who was employed by *Cold Storage and Ice Trade Journal* and was secretary of the Eastern Ice Association, organized a meeting of thirty to forty refrigeration engineers on April 2, 1904 at the ASME headquarters in New York City to discuss forming a new society. John E. Starr was elected temporary chairman to run the meeting, and Mr. Ross acted as secretary.

Mr. Sloan recalls the meeting: "He [Mr. Starr] opened the meeting with a carefully prepared talk pointing out the needs of such a society, and predicting a rapid growth and secure future for the refrigerating industry. This coming from the leading consulting engineer, who



William Ross

had engineered many large projects, such as cold storage warehouses, distribution of refrigeration by pipe lines through city streets, etc., presented in a very earnest and convincing manner, resulted in carrying the unanimous favorable action of the meeting. I do not remember a single dissenting voice when the subject was opened for discussion."

Following the discussion, a committee was appointed to draft a constitution and by-laws. The committee consisted of L. Howard Jenks, chairman; John E. Starr; W. Everett Parsons; James Wills; Henry Torrance, Jr.; William H. Ross; and George Richmond. Mr. Richmond died before the committee's work was completed. E.L. Phillips took his place.



John E. Starr

the arts and sciences connected with refrigerating engineering.

There were seventy-four charter members of this new society. The officers and directors elected at the meeting were:

On December 4 and 5, 1904, in New York City, these engineers met again to adopt the Constitution and By-Laws and to elect officers, thus forming The American Society of Refrigerating Engineers – the only engineering society in the world solely dedicated to promote



# Refrigeration

*First and Last - The Truth*

<b>President</b>	John E. Starr
<b>Vice Presidents</b>	P. De C. Ball and H. B. Roelker
<b>Treasurer</b>	Walter C. Reid
<b>Directors</b>	W. Everett Parsons; Henry Torrance, Jr.; E. L. Phillips; D. S. Jacobus; Howard Jenks; Louis Block; Edgar Penney; W. T. Robinson; and Thomas Shipley

OFFICERS	
OF	
THE AMERICAN SOCIETY OF REFRIGERATING ENGINEERS.	
1904-1905.	
<b>PRESIDENT.</b>	
JOHN E. STARR.....	New York, N. Y.
<b>VICE-PRESIDENTS.</b>	
H. B. ROELKER.....	New York, N. Y.
<i>Term expired at Annual Meeting of 1905.</i>	
P. D. C. BALL.....	St. Louis, Mo.
<i>Term expired at Annual Meeting of 1904.</i>	
<b>DIRECTORS.</b>	
LOUIS BLOCK.....	New York, N. Y.
W. EVERETT PARSONS.....	New York, N. Y.
EDGAR PENNEY.....	Newburgh, N. Y.
<i>Term expired at Annual Meeting of 1905.</i>	
EDWARD L. PHILLIPS.....	New York, N. Y.
D. S. JACOBUS.....	Holbrook, N. J.
W. T. ROBINSON.....	Philadelphia, Pa.
<i>Term expired at Annual Meeting of 1904.</i>	
HENRY TORRANCE, JR.....	New York, N. Y.
THOMAS SHIPLEY.....	New York, N. Y.
L. HOWARD JENKS.....	New York, N. Y.
<i>Term expired at Annual Meeting of 1905.</i>	
<b>TREASURER.</b>	
WALTER C. REID.....	New York, N. Y.
<b>SECRETARY.</b>	
WILLIAM H. ROSS.....	New York, N. Y.

The business affairs of the Society were managed by a committee called the Council. It consisted of the Society's president, two vice presidents, treasurer and nine Members or Associate members. The secretary was permitted to take part in the Council's deliberations but could not vote.

During the first meeting of the Council, held on January 14, 1905 in New York City, William H. Ross was appointed as secretary of the Society at a salary of \$25.00 per month, out of which all office expenses would be deducted. President Starr appointed standing committees on

finance, publications and membership, and the Council voted to have the Society incorporated under the laws of the State of New York, which was done on August 30, 1905. In addition, the Council voted to locate the Society business offices at 258 Broadway, New York City.

## First Annual Meeting

Exactly one year after the December 1904 organizational meeting, the Society convened its First Annual Meeting in the chambers of ASME in New York City on December 4 and 5, 1905. Eight papers were presented and debated on such topics as plate and can systems for manufactured ice, pipe line refrigeration, and carbonic acid and refrigerating machines.

To comply with the laws in the State of New York, the date of the annual meeting was specified in the Society's Constitution and By-Laws. The founding members specified that the date "shall be on the Monday before the first Tuesday in December" so the Society meeting would be held as close to the ASME meeting as possible, thus allowing out-of-town members of both societies to conveniently attend both meetings.

During his address, President Starr eloquently defined the Society's guiding principles:

"To define our field in a word, I may say that we claim as our own all that relates to the produc-



Characterized as the "dean of refrigerating," John Starr was the most respected refrigerating engineer in the first half of the 20th century.





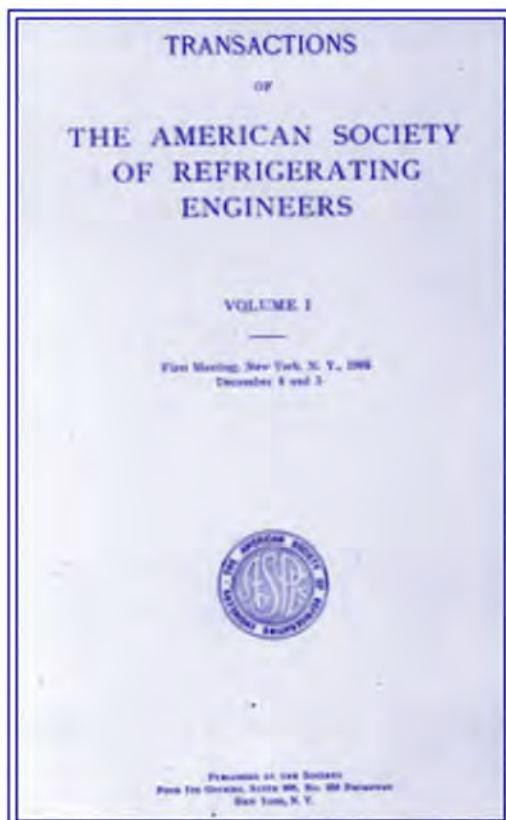
## Refrigeration

*First and Last - The Truth*

tion of temperatures, below the ordinary, for useful purposes....

"We have undertaken the responsibility of speaking with authority, of finding the truth, and proclaiming it, and a critical world will hold us to our task or pass us by as unworthy.

"Our forum, however, must be a forum for all the membership, and its discussion for the good of all. The truth is our aim and the seeking of it our work. Within our doors a perpetual truce should prevail, and the sword and buckle of everyday strife is to be laid aside at the threshold."



The Society immediately began publishing the papers read at its meetings in the *Transactions of The American Society of Refrigerating Engineers*. The *Transactions* also included minutes of Society meetings.

In echoing the theme of cooperation and exchange of information that inspired the founding members of the Society, President Starr said, "In carrying out our work...there will be no feeling of jealousy between ourselves and our brother organizations...whose field embraces our own, unless it be that fair and honest emulation to be of use to the world."

The financial report, given by Treasurer Walter C. Reid was very encouraging. The Society had received \$1,495.10 in revenue during its first year

and expended \$892.93, for a surplus of \$602.17 cash on hand.

### Membership

The Society's Constitution and By-Laws established three levels of membership: Member, Junior and Associate. Each member paid an initiation fee of \$5.00, and membership dues were set at \$10.00 for Members and Associates and \$5.00 for Junior members for the first six years of membership, after which their dues would be the same as Members and Associates.

Each member received a membership certificate and could purchase an emblem pin, with a different color defining each level of membership -- dark blue for Members, white for Associates and light blue or turquoise for Junior members. The emblem was the seal of the Society and measured 5/8 inch in diameter.

Although the Society was organized as a national institution, by 1906 it already had members from Canada, England, India, the Argentine Republic, Australia and New Zealand. Membership in 1906 totalled 146.

### Primary Issues and Early Actions

The objective of the Society was to conduct research, develop standards, hold technical meetings and present and publish technical articles in journals and handbooks. The founding members of the Society immediately went to work to meet these objectives and the greatest need of refrigerating engineers: the search for fundamental data upon which more accurate data could be published and standards developed.

In an effort to share information, the proceedings of the Society's annual meeting were published and made available for sale each year in a bound book, titled *Transactions of The American Society of Refrigerating Engineers*. It was distributed to other technical publications that might find the technical papers published therein of interest.

Early actions of the Society reflected the members' earnest desire to meet the stated objectives of their society. During the First Annual Meeting, for example, members unanimously passed a resolution recommending that the U.S. Congress appropriate sufficient funds so the U.S. Department of Agriculture could equip and maintain a cold storage plant for the purpose of research. In addition, the Society responded to the issue of establishing a standard unit or "ton" of refrigeration by appointing a committee of five to work with other engineering organizations.



## Refrigeration

### *Proclaiming the Truth*

Another example of an early action by members is that at the January 14, 1905 meeting of the Council, members voted to accept an invitation from Thomas Shipley, chairman of the York Manufacturing Company of York, Pennsylvania, to visit the company's test plant to conduct tests on mechanical refrigeration.

The actions taken during the Society's first meetings, as well as the members' dedication to the work of the Society, planted the seeds of research and committee efforts that would provide significant results and benefits to the refrigerating industry for years to come.



**1916 Beefsteak Dinner**

The "old fashioned beefsteak dinner" in 1916 was held at Murray's Restaurant on December 5.



In 1917, the *Journal of The American Society of Refrigerating Engineers* reported tests to determine the elastic deformation of balsa wood. They were part of a study on the properties of balsa as an insulation material.

## Grassroots Government Activities Committee (GGAC)

### Budget and Infrastructure Bills:

**Infrastructure:** On August 10, the Senate passed a \$1.2 trillion bipartisan infrastructure bill with a 69 to 30 vote. The House Vote is still pending. ASHRAE doesn't have an official position on the infrastructure bill as a whole, however, there is a LOT of stuff in the bill, which is in-line with Society objectives and policy. Provisions of interest in the infrastructure bill are:



#### Section 40503 –ENERGY AUDITOR TRAINING GRANT PROGRAM.

- Creates grant program for states that need assistance in training professional for commercial and residential audits.
- Covered certifications for the training program include the **ASHRAE Building Energy Assessment Professional** certification among others
- \$40,000,000 total for the period of fiscal years 2022 through 2026. Funds are based on state population and will not exceed \$2,000,000 per eligible State.

#### Subtitle B – BUILDINGS (page 1684)

- Funding for cost-effective codes implementation for efficiency and resilience.
  - DOE's BTO will work to support states through a grant program that will help them update their existing code to the most recent version.
  - \$225,000,000 for the period of fiscal years 2022 through 2026.
- \$10,000,000 for establishing building training and assessment centers:
  - To identify opportunities for optimizing energy efficiency and environmental performance in buildings.
  - To promote the application of emerging concepts and technologies in commercial and institutional buildings.
  - To train engineers, architects, building scientists, building energy permitting and enforcement officials, and building technicians in energy-efficient design and operation.
- Commercial Building Energy Consumption Survey
  - EIA and EPA will share information. EPA will provide data from portfolio manager.

#### Subtitle D—Schools and Nonprofits

- SEC. 40541 - Grants for energy efficiency improvements and renewable energy improvements at public school facilities.
  - Need a "consortium" of 1 local education agency and at least one non-profit, school, or for-profit with the capacity to provide knowledge or assist with energy improvements.
  - Can be used for improving or replacing HVAC, lighting system, power system, controls of a building among other strategies to reduce school energy cost. Can be used to improve indoor air quality with a reduction in energy use.
  - Includes lots of information on workplan and assessments.
  - \$500,000,000 for the period of fiscal years 2022 through 2026.
- Other items
  - SEC. 40542. ENERGY EFFICIENCY MATERIALS PILOT PROGRAM
    - \$50,000,000 for the period of fiscal years 2022 through 2026 that can be used as grants for 501(c)(3)'s to update their building. Max \$200,000. Can be used for HVAC and lighting systems.
  - Funding for Weatherization Assistance and Energy Efficiency and Conservation Block Grant Program.

**Budget:** Both chambers of Congress passed a resolution in late August outlining a \$3.5 trillion budget for FY2022, with instructions for numerous committees. The House plans to take a vote this month. Below provisions align with ASHRAE priorities:

- \$100 million for state and localities to adopt ASHRAE 90.1-2019 or 2021 IECC.
- \$200 million for state and localities to adopt a stretch code that meets or exceeds the zero energy provisions in the 2021 International Energy Conservation Code or an equivalent stretch code.
- Grants for k-12 schools for EE retrofitting, indoor air quality, and decarbonization.
- Grants to improve EE/resiliency in affordable and low-income housing.

Remember, your voice means something. Contact your local representatives and discuss these bills with them.

**James Hanna**

**Membership Promotion Chair**

**Rich Smith**

**Membership Promotion Co-Chair**



**CTTC**

The ASHRAE Society recently updated its website. It's much more user-friendly now with unlimited content. The reports by ASHRAE volunteers are full of extensive content for engineers from all levels. This month, I would like to share the executive summary of "ASHRAE Research Project Report 1741-RP" by authors Zahra Sardoueinassab, Tanjebul Alam, Beau Derouen, Albert McBride, Dennis L. O'Neal, Jessica Cramer Author Affiliations, University of Louisiana at Lafayette, Baylor University. This is one of the hundreds of fantastic reports that I encourage our members to look at these amazing reports. I think, the efforts by all the volunteers deserve appreciation from industry professionals.



In the meantime, follow upcoming events on Long Island Sounder Newsletter and on social media link: <https://www.linkedin.com/in/ashraeli/>

We are excited to see all our Chapter members on October 12<sup>th</sup>, 2021, Tuesday 6:00 PM at Westbury Manor.

**Understanding fan coil components and how they relate to energy consumption and energy modeling****EXECUTIVE SUMMARY**

The use of electronically commutated motors (ECMs) and modulation control valves in hydronic fan coil units (FCUs) enable more precise load tracking operation by varying both airflow and water flow. Considering the fact that HVAC equipment are rarely operating at their full load conditions for an extended period of time, the modulation control that varies fan and pump speeds to meet the thermal load has great potential for energy savings compared with conventional on-off control that cycles airflow and water flow. The goal of ASHRAE RP-1741 is to benchmark the energy savings of modulation control relative to the conventional on-off control for hydronic FCUs. As a first step, 47 FCUs from three manufacturers were experimentally evaluated over a range of air and water flow and thermal conditions using a psychrometric testing facility. Fan performance tests were also conducted on the 47 FCUs to characterize the fan airflow and power over a range of external static pressure. The experimental data were then used for the development of empirical and physical FCU performance models. In addition, a series of building energy simulations were conducted using the developed FCU models along with models of chillers, pumps, and fans under different climates.

Building energy simulation results show that the modulation control could save over 50% of FCU fan energy by keeping them running at part load conditions instead of cycling on and off. The modulation control can also maintain a higher water  $\Delta T$  at part load conditions, leading to reduced chilled water flow at a given load and over 50% savings in pump energy. Maintaining a high water  $\Delta T$  allows chillers operating to its full load before activating other chillers.

The total HVAC system savings range from 5% to 15% compared with the conventional on-off control. The developed FCU models and operating sequence could be used by engineers and researchers to estimate the building energy consumption for design and retrofit projects. The generated building energy simulation results demonstrate the benefits of modulation control on the energy savings of chillers, pumps, and FCU fans and benchmark the savings compared with the conventional on-off control. Because this project primarily focuses on energy comparison, other benefits of modulation control, such as less indoor temperature fluctuation and lower fan noise levels, are not evaluated in this report.

The Authors:

Zahra Sardoueinassab, Tanjebul Alam, Beau Derouen, Albert McBride, Dennis L. O'Neal, Jessica Cramer Author Affiliations, University of Louisiana at Lafayette, Baylor University

**Murat Bayramoglu**  
**CTTC Chairman**

**Thomas DiBenedetto**  
**CTTC Co-Chairman**

## ASHRAE CERTIFICATIONS

### Certification



**Certified**

*ASHRAE, accredited by ANSI under ISO/IEC 17024 for the High-Performance Building Design Professional (HBDP) program, has certified more than 2,000 Built Environmental Professionals.*

Energy Assessment

Energy Modeling

Commissioning

Healthcare  
Facility Design

High-Performance  
Building Design

Building Operations

#### ASHRAE certification programs:

- Are developed by industry practitioners who understand the knowledge and experience that are expected for superior building design and system operation
- Assure employers and clients of subject mastery
- Serve as a springboard for continued professional development
- Offer an easy-to-apply process

FOR MORE INFORMATION GO TO - <https://www.ashrae.org/education--certification/certification>

## Join ASHRAE on Social Media!



Follow **ASHRAE on Twitter** @ashraenews for up-to-date news, events, and articles about HVAC&R. Search #MyASHRAE on Twitter to see member photos from around the world.

Follow us on [Twitter](#)



### Most Popular Tweets

**Does It Cost More To Build Green? Benefits include reduced operating costs & construction waste.**

**Online Thermal Comfort Compliance Tool Included In New ASHRAE User's Manual.**

**87% of households in the US have #AC, 5% do in India. India's tough choice on air-conditioning and climate.**



**The November issue of the Journal is tested for binding strength to see how many times a page can be turned before the binding would fail.**

**Harvard & SUNY Upstate Medical University find that workers are healthier and happier in certified green buildings.**

**ASHRAE Standard 90.1 has been redefining energy savings since 1975. A new version is available now.**

**Adapting historical buildings for sustainable reuse.**

Get To Know ASHRAE





**ADVERTISEMENTS****PLACE YOUR AD HERE****OR  
HERE****OR  
HERE****OR  
HERE****OR  
HERE**

**AN AD OR BUSINESS CARD LISTING IS A GREAT WAY TO GET YOUR COMPANY'S NAME IN FRONT OF THE HUNDREDS OF LI CHAPTER MEMEBERS, AND TO HELP SUPPORT THE CHAPTER'S ACTIVITIES.**

If you would like to place an advertisement in the Long Island Sounder, please contact our Chapter Financial Secretary by email at [finsec@ashraeli.org](mailto:finsec@ashraeli.org) for further details. Thank you.

**Rates (includes all issues September-June):**


Business Card    \$200  
Triple Size        \$350

Half Page    \$500  
Full Page    \$800

## ADVERTISEMENTS

**PLACE YOUR  
AD HERE**

MATT ROMANELLI  
E-MAIL: MRDMANELLIGIL-BAR.COM



**GIL-BAR INDUSTRIES**

**NEW YORK OFFICE**  
5 WEST 18TH STREET  
NEW YORK, NY 10011  
TEL: (212) 331-8272  
FAX: (212) 331-8273

**LONG ISLAND OFFICE**  
25 NEWBRIDGE ROAD  
HICKSVILLE, NY 11801  
TEL: (516) 216-4310  
FAX: (516) 889-4042



631-491-1300 x16  
FAX 631-491-8551

**Ultimate Power Inc.**

INDUSTRIAL BURNERS • BOILERS  
GAS • OIL • BURNER SERVICE • A/C & INSTALLATION  
NATIONAL BOARD CERTIFIED "R" STAMP REPAIR CO.  
DDC CONTROL SYSTEMS  
MECHANICAL CONTRACTORS FOR OVER 36 YEARS

RONALD MILANO

45 NANCY STREET  
WEST BABYLON, NY 11704-1498

EMAIL: RMILANO@ULTIMATE-POWER.COM

Leonard Van Sicklin  
President



**Mechanical Services Inc.**  
• HEATING & AIR CONDITIONING •  
• SHEET METAL • SERVICE •

440 Wyandanch Avenue  
North Babylon, NY 11704  
lv@anronac.com  
www.anronac.com

Phone: 631-643-3433  
Fax: 631-481-6983  
Cell: 631-860-4349

**== JAR ==**

J. A. Robertson, PE  
Mechanical Engineer  
HVAC/Plumbing System Design

P.O. Box 4982  
Richmond, Virginia 23220  
jar4d@alumni.virginia.edu  
Licensed: DC/MD/VA

**PLACE YOUR  
AD HERE**

**PLACE YOUR  
AD HERE**

Frank D. Morgigno - President/CEO fm@atiofny.com



90 Plant Ave. • Ste. 310 • Hauppauge, NY 11788  
Tel: 631-331-0215 • Fax: 631-928-4625  
www.atiofny.com

**PLACE YOUR  
AD HERE**

**SIEMENS**

Industry

Siemens Industry, Inc.  
Building Technologies Division

50 Orville Drive  
Bohemia, NY 11716  
USA

Tel: +1 631 218-1000 Ext. 214  
Fax: +1 631 218-1009  
Mobile: +1 516 924-2913  
vincent.catalano@siemens.com  
usa.siemens.com/buildingtechnologies

Vincent Catalano, C.E.M.  
Account Manager

**chimney  
DESIGN  
solutions®**

134 W. 29TH ST., 11TH FL., NY, NY 10001  
800-685-7077 FAX: 212-685-4777  
chimney design solutions.com

## ADVERTISEMENTS

# CONSTRUCTION CREDIT SERVICES

**The recognized leader in construction industry collections  
and A/R management in the tri-state area.**

- Total receivables management •Problem account collection
- Credit application processing
- Lien & payment bond claim filing services

---

*"Since engaging Construction Credit Services to manage our Accounts Receivable, I have been very pleased with the results we have received. By employing an effective collection strategy, strong follow up, and superior relationship building skills, Corey and his team have more than delivered on their promise to increase our cash flow and reduce bad debt write offs while preserving our valued customer relationships. I highly recommend their services!"*

Craig Marshall, Principal, Accuspec, Inc.

---

***Call today for a complimentary consultation!***

T: 908-319-5155 | [cdevito@constructioncreditservices.com](mailto:cdevito@constructioncreditservices.com)

[www.constructioncreditservices.com](http://www.constructioncreditservices.com)

**Corey M. De Vito, President**

**Advertising Rates:**

***Business Card \$200***

***Triple Size \$350***

***Half Page \$500***

***Full Page \$800***