September 2019

THE LONG ISLAND SOUNDER

ASHRAE Long Island Chapter, Region I...*Founded in 1957* www.ashraeli.com

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

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President's Message

Hello everyone and welcome to another year for the ASHRAE Long Island chapter.

The summer is quickly coming to a close and hopefully everyone has enjoyed some sunny vacation time and the hot weather.

I would like to thank Richard Halley for the past presidential year and congratulate him on his leadership of the ASHRAE Long Island chapter during the 2018-2019-chapter year. I am thankful for the continued efforts of the men and women who volunteer for the chapter.

I particularly would like to thank Liset Cordero who is continuing her great work on our chapter newsletter and has been a wonderful asset to the chapter in past years.

The ASHRAE Long Island chapter's Board of Governors and committee chairs attended the Chapter Regional Conference in Buffalo NY during August 15-17. It was the 100th year celebration of the Niagara Frontier chapter. The conference setting was Hotel Henry, a hotel rich with history as it's a converted Buffalo State Asylum for the Insane opened in 1880. Watching the distant fireworks over Niagara Falls was a great cap to the first evening.

The Presidential Dinner was aboard the USS Little Rock at the Buffalo Naval Park. It was a great pair of evenings meeting and speaking with people from all over Region 1.

The conference was mixed with training workshops for the upcoming year as well as the recognition of the efforts and accomplishments of the members of the BOG and committee chairs.

The Long Island chapter received awards and recognition for Presidential Award of Excellence (PAOE), Membership Promotion, Government Activities, CTTC, YEA and Research Promotion.

As the Long Island chapter is consistently recognized for its efforts with Research Promotion, I want to thank all those individuals and companies that have generously donate to last year's campaign as well as to the chapter. Your support is sincerely appreciated.

This year's society president, Darryl K. Boyce, has issued his new presidential theme: Building for People & Performance-Achieving Operational Excellence. We will try to follow that theme throughout the year.

I am excited for the year ahead and I invite everyone to please make an effort to invite co-workers, employees, and other industry peers to our meetings. I would also ask you to include younger professionals that you may work with that would benefit from our professional community.

Frank Paradiso
President - Long Island Chapter

CHAPTER MONTHLY MEETING

DATE:	**Tuesday, September 10, 2019**
TIME:	6:00 PM - Cocktails/Dinner 7:00 PM - Dinner Presentation 8:45 PM - Conclusion
LOCATION:	Westbury Manor 1100 Jericho Tpke. Westbury, NY 11590
FEES: Members - Guest - Student -	 $50.00 $60.00 $15.00

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

Long Island Chapter Officers & Committees

ASHRAE 2019/2020 OFFICERS

POSITION	NAME	PHONE	EMAIL
President	Frank Paradiso	631.632.2792	president@ashraeli.org
President-Elect	James Hanna	718.269.3768	president_elect@ashraeli.org
Vice President	Bill Artis	516.732.2519	vice_president@ashraeli.org
Financial Secretary	Matthew Vitrano	212.643.9055	finsec@ashraeli.org
Treasurer	Murat Bayramoglu	631.312.8818	treasurer@ashraeli.org
Secretary	Michael Nigro	212.643.9055	secretary@ashraeli.org
Board of Governors	Elizabeth Jedrlinic	516.490.1621	bog1@ashraeli.org
Board of Governors	Andrew Blom	631.626.1695	bog2@ashraeli.org
Board of Governors	Matthew Catan	407.489.6684	bog3@ashraeli.org
Board of Governors	Michael Razzano	516.805.3084	bog4@ashraeli.org
Board of Governors	Richard Halley	516.490.1616	bog5@ashraeli.org

ASHRAE 2019/2020 COMMITTEES

COMMITTEE	NAME	PHONE	EMAIL
Programs & Special Events	James Hanna	718.269.3768	programs@ashraeli.org
Membership (MP)	Michael Razzano	516.805.3084	membership@ashraeli.org
Refrigeration	Murat Bayramoglu	631.312.8818	refrigeration@ashraeli.org
Chapter Technology Transfer (CTTC)	Matthew Catan	407.489.6684	cttc@ashraeli.org
Grassroots Government Activities (GGAC)	Andrew Blom	631.626.1695	ggac@ashraeli.org
Newsletter Editor	Liset Cordero	212.643.9055	editor@ashraeli.org
Research Promotion (RP)	Andy Manos	631.632.2791	rp@ashraeli.org
Historian	Matthew Vitrano	212.643.9055	historian@ashraeli.org
Student Activities (SA)	Elizabeth Jedrlinic	516.490.1621	sa@ashraeli.org
Young Engineers in ASHRAE (YEA)	Michael Nigro	212.643.9055	yea@ashraeli.org
Webmaster	Bill Artis	516.732.2519	web@ashraeli.org
Nominating	Michael Gerazounis, PE, LEED AP	212.643.9055	nominating@ashraeli.org
Reception & Attendance	Matthew Catan		reception@ashraeli.org
PR & Engineering Joint Council of LI (EJCLI) Liaison	Andrew Manos, LEED AP	631.632.2792	pr@ashraeli.org
Golf Outing	Peter Gerazounis, PE LEED AP	212.643.9055	golf@ashraeli.org
Awards	Brian Simkins	203.261.8100	bsimkins@accuspecinc.com
ASHRAE LI, P.O. Box 79, Commack, NY 11725			

Chapter Monthly Meeting - Program for 2019/2020

September 10, 2019 * At Westbury Manor Dinner Presentation – Builds & NYC Code Compliance Presenter: Ian Nelson ****1 PDH**** **Refrigeration Night**	**March 10, 2020** * *At Westbury Manor* Dinner Presentation - Natatorium Design Presenter: Joseph Schmitz ****1 PDH**** **Student Activities Night** **YEA Night**
October 8, 2019 * *At Westbury Manor* Dinner Presentation— Back to Basics: Hot Gas Bypass and Hot Gas Reheat (and why mixing them up will cost your money) Commissioning for Dummies (by dummies) Presenter: Bill Artis ****1 PDH****	**April 14, 2020** Dinner Presentation - TBD Presenter: ****1 PDH****
November 12, 2019 * *At Westbury Manor* Dinner Presentation-- Energy Efficient Solutions for Commercial Kitchen Ventilation Presenter: Dr. Andrey Livchak ****1 PDH**** **Membership Promotion** **Student Activities Night and YEA Night** **Resource Promotion Night**	**May 4, 2020** * *Cherry Valley Club, Garden City, NY* **ANNUAL GOLF OUTING**
December 10, 2019 * *At Westbury Manor* Dinner Presentation-- Belimo Presenters: Belimo ****1 PDH****	**May 12, 2020** **Annual Field Trip**
January 14, 2020 * *At Westbury Manor* Dinner Presentation– Grow Rooms– And how to Design them Presenter: Geoff Kelman ****1 PDH****	**June 9, 2020** * *At Westbury Manor* **Free Buffet Dinner for Members** **PAST PRESIDENTS NIGHT & OFFICER INSTALLATION** **STUDENT SCHOLARSHIPS TO BE AWARDED** **ASHRAE History Quiz and prize Give-A-Ways**
February 1-5, 2020 ASHRAE Winter Meeting Orlando, FL	**June 2020 - TBD (4pm-8pm)** * *Dixie II @ Captree State Park Boat Basin, NY* **ANNUAL FISHING TRIP**
February 11, 2020 * *At Westbury Manor –* Dinner Presentation– TBD Presenter: ****1 PDH**** **Membership Promotion Night** **Resource Promotion Night**	**August 13-15, 2020** **CHAPTERS' REGIONAL CONFERENCE (CRC) REGION I**
February 16-22, 2020 **NATIONAL ENGINEERS WEEK**	

September Meeting Program

Dinner Presentation

"Strategic Electrification in NYC and VRF"

Presented by

Ian Nelson
Mitsubishi Electric Trane HVAC US LLC

DATE:	**TUESDAY, SEPTEMBER 10, 2019**		
Time:	6:00 PM - Cocktails and Hors D'ouevres 7:00 PM - Dinner Presentations 8:45 PM - Conclusion	**Fee:**	$ 50.00 Member $ 60.00 Guest $ 15.00 Student
Location:	**WESTBURY MANOR** (516) 333-7117 1100 Jericho Tpke., Westbury, NY 11590 **Directions are posted at @ www.ashraeli.com**		
Presentation:	This month's presentation will cover the growing trend of strategic electrification in the New York City metropolitan area and the role of Variable Refrigerant Flow (VRF) systems. The role of strategic electrification in recent legislation such as New York State's Climate Leadership and Community Protection Act (CLCPA) and New York City's Climate Mobilization Act (CMA) along with its historic passing of Local Law 97 will also be examined. Emerging green building programs such as Passive House and Zero Net Energy will also be analyzed for their alignment with this legislation. Then, the basics of VRF systems, the potential solutions that they offer for local climate legislation, and utility incentives for air sourced heat pumps (ASHP) will also be discussed in detail. **All attendees will receive 1 PDH.**		
About our Speaker:	**Ian Nelson** is a Commercial Area Manager for Mitsubishi Electric Trane HVAC US LLC covering the New York City Metro Area. In his role, he serves as a Variable Refrigerant Flow (VRF) design resource to the engineering and architecture community. Before his position at Mitsubishi Electric, Ian worked as a consulting engineer in New York City where he was active with green infrastructure, resiliency, and utility projects. Ian earned his B.S. and M.S from the Manhattan College School of Engineering.		

Long Island Chapter - Past Presidents

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

PAOE POINTS FOR 2019/2020

Chapter Members	Chapter Operations	CTTC	Electronic Communications	GGAC	Historical	Membership	Research Promotion	Student Activities	Chapter PAOE Totals
282	0	0	0	0	0	0	0	0	0

Student Activities

Welcome back to another great year at ASHRAE. This year we are looking forward to having some great events for our Student members, college students and STEM students in our local area.

Graduating students, don't forget about the SmartStart program. Simply put, it's the best way for ASHRAE student members to receive the many benefits of Associate grade membership after finishing college. SmartStart is a 3-year program that allows Student members to transfer to Associate grade membership at a rate that is recent-graduate friendly.

*Please note that the SmartStart program is only for current ASHRAE Student members who have been a Student member for at least one year.

Application
https://www.ashrae.org/File%20Library/Membership/Join%20Now/Applications/2019-2020-smartstart_student-application.pdf

Universities- There is a Grant program provide by ASHRAE. Please see the link below for details.
https://www.ashrae.org/communities/student-zone/scholarships-and-grants/about-undergraduate-program-equipment-grants

Elizabeth Jedrlinic
Student Activities Chair
Elizabeth.jedrlinic@trane.com

ASHRAE™
Long Island Chapter

Research Promotion

I would like to thank all the Individuals and companies who generously donated this past year with your support the Long Island Chapter was able to raise $28,031 towards research. Without this money the handbooks and standards like 90.1 and 62.2 would not be possible, all money raised is used for the research to keep these items up to date. I also would like to thank all the companies who have participated in the annual 2019 Product Directory of Manufacturers and their Representatives.

The Product Directory has been prepared as a service to all its members and as a service to the local HVAC industry. It will be will be made available to all ASHRAE and non-ASHRAE members at no-cost and can be obtained from our monthly meetings or directly from our web-site. The Directory is intended to provide better communications between manufacturers and their sales representatives; engineers who specify products; contractors who purchase and install the equipment; and other interested parties. Product Directory listings are not limited to ASHRAE members and the listings are not to be considered as advertising or endorsement by ASHRAE of any product, manufacturer or representative.

I am hoping I can count on the continued support of all of our past contributors who have generously supported us over the years. I also look forward to gaining the support of new contributors this coming year. Please help support ASHRAE in any way you can.

I would like say 'thank you' again to all the contributors listed below who have donated to ASHRAE this past year:

INDIVIDUALS

Ronald J Kilcarr, PE, CEM
Peter Gerazounis, PE
Michael Gerazounis, PE
John D Nally
Andrew E Manos
William Artis, Jr
Michael Nigro
Matthew Vitrano
Donald Kane, PE
Elizabeth Jedrlinic
Frank Paradiso
Richard Halley
Murat Bayremoglu
Robert Fuchs
Andrew Dubel
Charles Lesniak PE
Brian Simkins
Andrew Blom
Thomas Fields
Kenneth Mueller
Richard Halley
Paul Freeman
James Tauby
Jerome Norris
John Fanneron
Robert Fuchs
Anthony Rosasco Sr

COMPANIES

Catan Equipment Sales
Accuspec, Inc
Gil-Bar Industries, Inc.
Trane
ASAP Sales
RPG Associated
Chimney Design Solutions
MV Controls
Chimney Design Solutions
VMC East, Inc
ADE Group
Miller Proctor Nickolas Inc.
Technical Air Systems Inc.
Vertiv – Liebert
Albert Weiss – Air Conditioning
RPG Associates
Mitsubishi Electric
Rathe Associates
Mason East
PVI
Eastern Industrial Services of NY
SRS Enterprises
ADE Systems Inc.
Technical Air Systems Inc.
Highmark
Clean Air Company
Platsky
Bush Wholesalers
Siemens Building Technologies
Rathe Associates
Klima – New York
Carrier
RMF Engineering
Delta Cooling Towers
Gil-bar Industries
Wales Darby Inc.
Metro Air Products

CONTRIBUTIONS CAN BE MADE IN THE FOLLOWING WAYS:

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

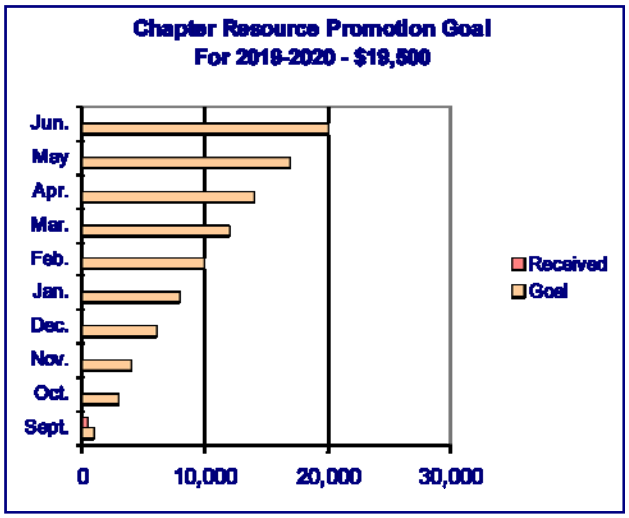
Andrew Manos, LEED AP BD+C
ASHRAE Research Promotion Chair
c/o Stony Brook University
Campus Planning, Design and Construction
Research and Support Services, Building 17, Suite 160
Development Drive, Stony Brook, NY 11794-6010

2) You can bring your check to any of the meetings and give it to me. I will mail it into headquarters.

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**

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



Thank you again for all of your support!

Andrew Manos, LEED AP BD+C - Research Promotion Chair

YEA

Welcome back to another exciting year of ASHRAE! My name is Mike Nigro and I am your new YEA chair for the next year. What does YEA actually do, you might ask?? The YEA committee works with all young engineers (under 35 years old) to encourage, educate and network thru chapter events. *The first opportunity will be in November, so stay tuned!*

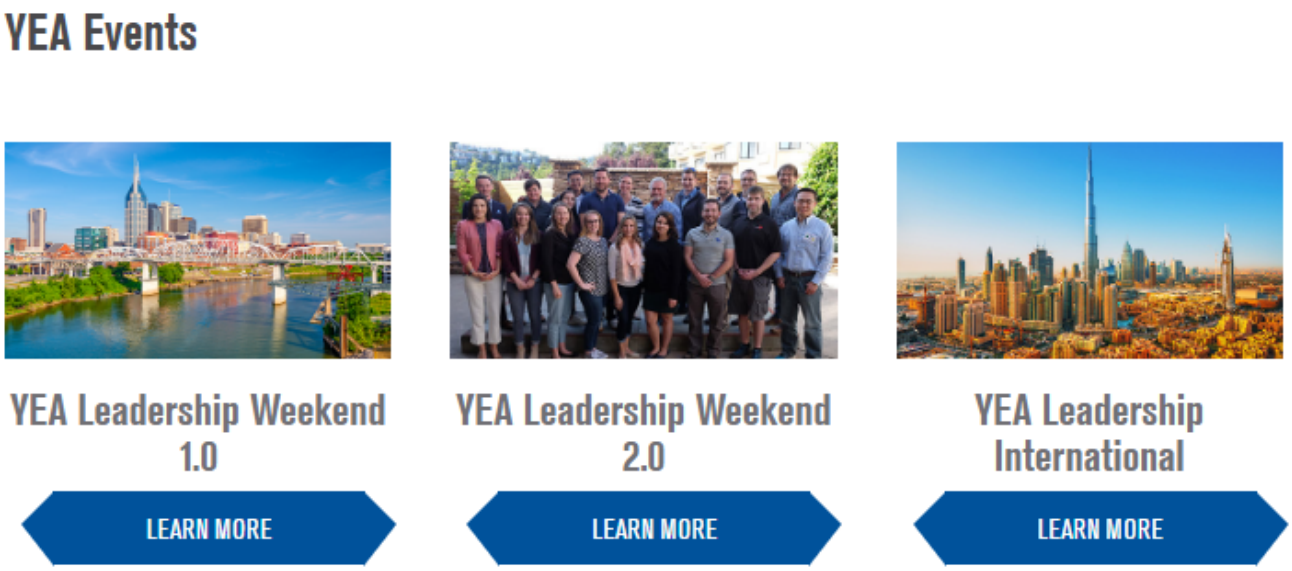
CALLING ALL STUDENT MEMBERS

Have you heard of ASHRAE's "Smart Start Program"? This is a 3 year program that allows student members to transfer to "associate" membership at a very cost friendly rate. Contact me for more details!

YEA EVENTS – DO IT!

There are some great Leadership weekend events coming up. If you have never attended one of these, you are missing out! There are scholarships available which can cover the entire cost!

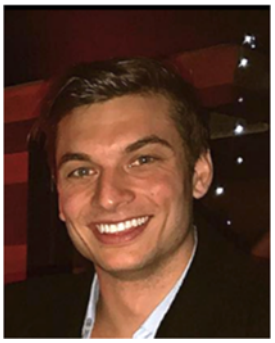
I attended the YEA Leadership Weekend 1.0 in Seattle, Washington so feel free to ask any questions if you are nervous.



LINK FOR LEADERSHIP WEEKEND FLYER: https://www.ashrae.org/File%20Library/Communities/Young%20Engineers%20in%20ASHRAE%20(YEA)/YEA%20Events%20and%20Programs/YEA-Leadership-Weekend-Flyer_web.pdf

Michael Nigro
YEA Chair

CTTC



My name is Matthew Catan and I am proud to be serving the ASHRAE Long Island Chapter as the CTTC Chairman. My goal for this year is keep the chapter informed on technical issues relating to HVAC technology, assist our chapter in maximizing PAOE points, enhancing our monthly chapter meetings, and also providing a little humor!

Joke of the Month:

Technician: "How long has the AC not been working?"
Customer: "2 weeks".
Technician: "Why did you wait 2 weeks to have it fixed?"
Customer: "My in-laws were here. They were planning to stay for a month."

Chapter HVAC Technology Update

This past weekend the LI Chapter board returned from a fun weekend in Buffalo for the annual CRC. Overall the weekend was a success! A big shout out to all the officers that won awards, including Done Kane the previous LI CTTC chair! Working with the other committee members, we have put together a great line up of speakers for the 2019 – 2020 LI Chapter meetings, including a few ASHRAE distinguished lectors.

As the year progresses, we will have more updates regarding Award Submission Candidates, Ways to Earn PDH Credits, and special events!

HVAC Global Technology Watch

Ductless HVAC System Market Expected to Surpass CAGR of 8.5% From 2016-2021: Samsung Electronics, Hitachi, Johnson Controls, Mitsubishi Electric Corp and More

Ductless HVAC is a system used for cooling and heating purpose. It has advantage over traditional HVAC such as it is easy to install, and low-cost systems. Due to its size, temperature adjustment can be done very easily. Ductless HVAC system consume low energy and have easy installation procedures as ductless system doesn't uses duct for cooling process.

The advancement in technology attracts more customers, having a positive impact on the global market. Moreover, manufacturers mainly ensure to deliver the best quality products based on innovative technologies, and best practices. – Read the full article below:

URL: https://www.marketwatch.com/press-release/ductless-hvac-system-market-expected-to-surpass-cagr-of-85-from-2016-2021-samsung-electronics-hitachi-johnson-controls-mitsubishi-electric-corp-and-more-2019-03-15

Matthew K. Catan
CTTC Chairman

History

This month I interviewed ASHRAE Fellow and Designated Lecturer James Tauby. James is a longtime member of ASHRAE and the Chief Executive Engineer at Mason Industries:

Name: James Tauby

Born & Raised: Born in NYC, Raised on Long Island

Schools: Brentwood High School, University of Alabama

Degrees: Bachelor of Science in Mechanical Engineering. Professional Engineering license in 46 States.

Career: Mr. Tauby is the Chief Executive Engineer for Mason Industries. He has 25 engineers who work under him. In my industry. Mason Industries offers free health and dental insurance, and retirement plans. A company is nothing without its employees, and Mason Industries strives to recruit young people right out of college with engineering and technology degrees and mold them into stellar employees.

1. **What attracted you to engineering and the HVAC industry?**
   - I am a hands-on person. I like to take things apart and put them back together. My father was a plumber, and my neighbors were electricians.
   - I wanted to build buildings. Civil or structural engineering. After the first thermodynamics class, I realized I enjoyed that much more. I designed a radiant heat program from a residential building.

2. **What was your first job in the HVAC industry and where did it lead?**
   - I graduated college, got a job with Mason, and stayed with company 38 years.

3. **Describe the industry at that time.**
   - All drafting was on drafting boards done by hand. There were no computers, apps, anything. AutoCAD was adopted later.

4. **Who are the main customers you work with?**
   - Engineers, owners, contractors (50%).

5. **How and when did you get started in ASHRAE?**
   - One of my professors recommended that I join ASHRAE.
   - 1977 ASHRAE University of Alabama ASHRAE Student Chapter

6. **What was your ASHRAE chapter, regional and Society experience?**
   - I am a member of the Long Island Chapter
   - Nationally- Chaired and Vice Chaired TC 2.7, Standard Committee SPC 171 (chair), Standards Committee for 4 years, in two weeks from now you roll off TAC, Liaison between ASHRAE and section 10.
   - ASHRAE Fellow- you become a fellow by being nominated. You are nominated and approved by the way-ups.
   - Distinguished Lecturer- ASHRAE had asked for a few talks. South America, Italy. I then applied to become a distinguished lecturer through ASHRAE.
   - Originally, ASHRAE put out for bid to have a seismic design manual written up. I put in the bid and won it. I was the 1st manufacturer to win this kind of research bid.

History

- Student Activities
  - TAC throws a party for students from local universities
  - Different Activities for students, 200 kids
  - Chicago Winter Conference
  - Atlanta - 400 students
  - Kansas City - 400 Students – Students got a playing card from each station and the first person with a flush won an Ipad!

7. **What has ASHRAE meant to you personally?**
   - It's a home. It's a second or 3rd home. I am working all year round. Technical committees are merging and I have been working on that for a year.
   - The ASHRAE connections. Hiring people and finding jobs.
   - I have friends from all over the country now.
   - I enjoy traveling. I wanted to hit all 50 states. ASHRAE has helped with that. North Dakota, Alaska are two places I would still like to get too.
   - I have been to the CRC in Qatar, Tel Aviv, and Santiago, Chile. Those were incredible experiences.
   - My favorite event so far has been the bomb blast design and earthquake effects in London. It was a two-hour streaming video from the University of London with 200 people streaming.

8. **What advice would you give to a young person entering the HVAC field?**
   - Joining ASHRAE - You can't be an introvert and be in ASHRAE. You have to challenge yourself. You need to talk and be involved in committees.
   - Sit in a committee and volunteer for the position. I started by taking the first available position. I don't think of it as paperwork or being a secretary. It is a way to get your foot in the door and hear from your peers.

9. **What other interests and/or hobbies do you have?**
   - Woodworking. Building and refurbishing cabinets.
   - I'm looking forward to retiring. In five years.
   - Grandkids.
   - Travel

10. **Would you recommend young people get the PE exam?**
    - Yes. Everyone should do it!

Matthew Vitrano
History Chairman

Refrigeration

The following article is from engineer, Baltu Yorkos:

Murat Bayramoglu
Refrigeration Chair

Lowering Peak Demand with Ice Storage
by Baltu Yorkos, PE, LEED AP, CxA

As expected, recent high electric cost made us focus considerable attention on thermal storage technologies. New York city has always had high electric demand during peak season (July and August) and building operators try many methods to reduce the peak electric demand to avoid demand charges. Cooling is a major contributor to peak electric demand, but it also represents one of the few areas where load management methods are not widely applied. It is time to pay attention to thermal storage systems, well designed thermal storage system will effectively and efficiently reduce electrical demand, exploit time-of-day rates and remain totally transparent to a building's occupants. In this article, we will try to explain the types of ice storage systems and applications. We will also explain what kind of systems can use ice storage, design challenges, where to locate them, and financial benefits.

There are many types of storage systems, but chilled water-based ice storage systems always stand out to provide efficient design and operation. Ice storage system is a relatively basic concept, during off peak hours chilled water system operates to make ice and during peak hours ice can be used to meet the load. Using ice during peak hours will reduce the chiller load and chilled water system initial size. This approach will save tremendous electric cost and chilled water system initial capital cost.

Designing Ice Storage Systems

There are two types of ice storage systems, both systems use glycol mix for making ice. Chillers circulate glycol mix below freezing point through the ice storage tank and make ice during off peak hours.

For an ice storage system, we commonly describe chiller capacity in two modes a conventional daytime cooling capacity and a nighttime, ice-making capacity, which is typically 65% to 70% of the daytime value.

First system is called partial storage, basically ice capacity is only meeting the portion of the peak demand, chillers must run while burning ice to make up the capacity. But chillers would not be running full capacity since ice storage would meet the partial cooling load.

The second type of system is the full ice storage system, where chillers are completely shut down during ice burning mode. This system requires more capital or initial investment. Please remember, as an engineering approach we use ton-hr for sizing the ice storage systems. The total integrated cooling load (ton-hours), must be met by the chiller over its entire operating period, with appropriate capacity adjustments for different conditions.

How do engineers know which system is the best approach for the building? The first step is to prepare full energy model. Load calculation can also be used but reports will only show the tonnage and will not show the financial benefits. Engineers will calculate ton-hr demand for the building and size the storage tanks to avoid peak demand charges. It depends on the building operation and the region; tank capacity may need to meet 8 hours of cooling or partial cooling while the chiller plant is operating.

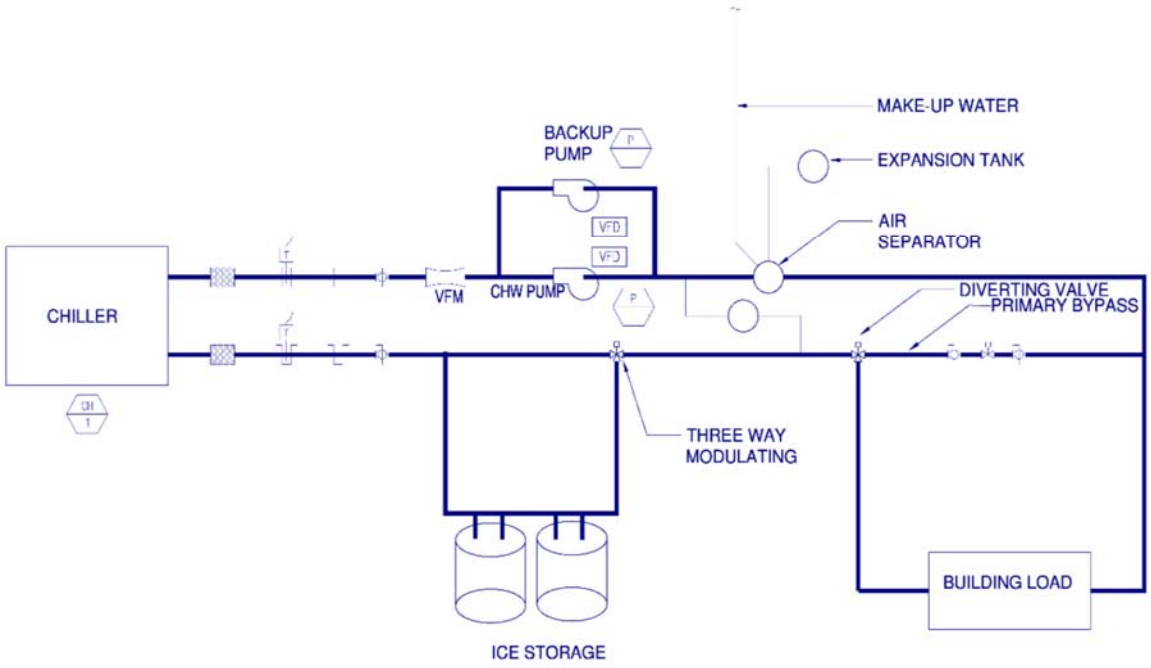
For each of the approaches we might consider, minimum chiller capacity based on energy model that can supply all of the required cooling. The minimum chiller capacity is now defined in terms of its daytime load. The minimum storage capacity will equal to the total ton hours less the daytime chiller capacity contribution. Some approaches may use larger than minimum chillers that allow the use of either more or less storage, but the required storage capacity will still be accurate as long as the actual daytime chiller contribution is properly described.

Total Load (ton-hrs) = Chiller day capacity (ton-hrs) + chiller after hours capacity (ton-hrs)

Both chiller day capacity (ton-hrs) and chiller after hours capacity (ton-hrs) comes from energy modeling or load calculations.

Refrigeration

Of course, the simplest approach is to use full ice storage system design to meet the peak demand load. This is clearly the most expensive of both options and is most common where extended payback periods are acceptable or where incentives or rebates are offered.



ICE STORAGE CHW SCHEMATIC
SCALE: NTS

With this basic explanation, imagine a commercial building in NYC, occupied during business hours and pays for peak demand in August and July. Meanwhile chillers are just running low load at night. The benefits of using ice storage system will be substantial if we use ice storage system and make ice at night and use ice during daytime.

Challenges for Implementing Ice Storage Systems

So why the storage systems are not common. Designing and implementing ice storage systems have three challenges

- Sizing and designing the storage system correctly based on building operation
- Chiller efficiency during ice making
- Control system reliability
- Locating the storage systems. This is mainly NYC specific challenge.

All these challenges have improved past twenty years. Engineers can model the buildings accurately and select more accurate chiller and storage, chillers are far more efficient and controls systems are more advanced and reliable. Locating the storage systems in the NYC underground parking garages is becoming more common.

Of course, designing and implementing ice storage systems is not a simple task. One of the big challenges' engineers face is the chiller efficiencies. Glycol mix will reduce the chiller efficiency and low leaving water temperatures will impact the chiller operation. the manufacturer may recommend that flow through the storage equipment be in the same direction for charge and discharge. The series arrangement automatically accomplishes this while a parallel arrangement necessitates a change in flow path as the system cycles between charge and discharge. As "full storage" systems are fairly straightforward in selection and application, our focus will be on "partial storage" techniques, where controlling the contribution of chiller and storage are critical to system economy and comfort.

Refrigeration

Ice Storage Chiller Plant Example

We will discuss traditional 6,000 ton chiller plant operation and benefits. This chiller plant is in NYC and completed in 2016. Building is 3.5 million sqft, scope included upgrading the existing standard-duty chillers with one electric drive and one steam turbine, totaling 6,000 tons of chilled water The project included high-efficiency chiller replacements, the installation of a thermal energy storage system, and the implementation of a building automation system

Results:

- Energy Savings: 2 GWh/year
- Summer Peak Demand Reduction: 2.1 MW
- Carbon Footprint Offset: 36 million lbs. CO_2
- Building Operational Cost Savings: $2.5 million/year
- Internal Rate of Return: 12.8%
- Awarded $942,000 in incentives from the NYSERDA Existing Facilities Program

For the past 30 or more years most central chilled water plants have been built without any ice storage systems or considering the peak demand. This approach is completely wrong. Sizing systems for the peak cooling load without considering the thermal storage and peak demand is wasting capital and poor capital planning.

Conclusion

Some of the questions we heard over the years from the operators

- Chiller plant does not make ice or goes through the ice quickly. This is very common problem, mainly because of the undersized tank or poor control sequences.
- Our demand charges are still occurring. This is another common complain, main reason for not meeting the peak demand is either building usage has changed or initial tank sizing is not done correctly.

All these questions are directly related to controls and detailed analysis of the building.
Although the solution is simple, most of the building operators and engineers are not familiar with ice storage systems. Lowering the peak demand for a chilled water based building is directly related to chiller plant efficiency and load. Before changing the existing chillers with new, performing energy analysis and calculating ice storage options is very simple.

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Baltu Yorkos, PE, LEED AP, CxA

About Baltu Yorkos, PE:
Graduated from Florida in 1991, he started his career 28 years ago designing various types and sizes of projects. Baltu has worked for national recognized companies and local small firms. Large commercial buildings, schools, colleges, public buildings and residential buildings are his focus for his practice. He started his own NY engineering practice in 2014 as part of his Florida practice. He has been designing and managing small renovations to large infrastructure projects. His strength comes from using detailed quality control process and applying ISO9000 procedures.

Membership Promotion

"Coming together is the beginning, staying together is progress, and working together is success" - Henry Ford

Hope everyone had a great summer & welcome back to another year here at the ASHRAE Long Island Chapter. Just like the above Henry Ford quote, the Membership Promotion Committee is focused on recruiting new members, retaining existing members, and rewarding members for their involvement. Our recruitment efforts will continue the momentum built the last few years by Bill Artis, as well as focus on the growth of our chapter and increasing new member participation in chapter meetings & events. We hope to continue having a few Membership Promotions themed nights this year that will include incentives for bringing non-members to chapter meetings, as well as getting new members to sign up with ASHRAE & the Long Island Chapter.

Lastly, we will be will working on a number of events, as well as outing for our chapter members this year. Beyond the usual monthly meetings, which include professional development seminars and networking happy hours, we will be doing regular outings and events to further encourage member engagement. Some of these events will include regular chapter sponsored golf events, happy hours, networking events, potentially an event on career development and field trips.

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

Michael Razzano
Membership Chair

Grassroots Government Activities Committee (GGAC)

The following is from the ASHRAE's government affair update:

2019-2020 Better Buildings Webinar Series

The Department of Energy's Better Buildings Initiative has released the schedule for their upcoming webinar series. They are free to the public. You can find more information and register for the webinars by going to the links below:

- How Buildings of All Shapes and Sizes are Achieving Zero Energy – December 3, 2019
- Save Money and Build Resilience with Distributed Energy Technologies – February 4, 2020
- Building Value: Energy Efficiency's Impact on Financial Performance – March 3, 2020

DOE Publishes Data to be Used for the "Process Rule"

The Department of Energy (DOE) has published a Notice of Data Availability (NODA) pertaining to the "Process Rule." The data published will be used by DOE to determine the energy savings threshold for setting energy conservation standards for consumer products and commercial and industrial equipment.

EPA Releases Report on Health Benefits of Energy Efficiency and Renewable Energy

The Environmental Protection Agency (EPA) has released a report to help state and local governments quantify the health benefits of existing or planned energy efficiency and renewable energy projects. It does so by providing benefits per kilowatt-hour (BPK) values that can be a part of a preliminary analysis to determine the impact of a variety of policy scenarios. The full report, that was prepared by the State and Local Energy and Environment Program within the Climate Protection Partnerships Division of EPA's Office of Atmospheric Programs, can be viewed on the epa.gov website.

Andrew Blom
Grassroots Government Activities Chair

BOG Meeting Minutes

Turnover Meeting Long Island Chapter
July 23, 2019 / 5:00 PM / Location: Plainview, NY

Board of Governors		
President	Frank Paradiso	X
President Elect	James Hanna	X
Vice President	William Artis	X
Financial Secretary	Mathew Vitrano	X
Treasurer	Murat Bayramoglu	X
Secretary	Michael Nigro	X
BOG-1	Elizabeth Jedrlinic	X
BOG-2	Andrew Blom	X
BOG-3	Mathew Catan	X
BOG-4	Michael Razzano	X
BOG Immediate President	Richard Halley	
Committee Member	Don Kane	
Committee Member	Brian Simkins	
Committee Member	Andy Manos	X

President (Frank Paradiso) Chapter Operations [min-600/Par-1200) Total Points: 0

- PAOE- review new structure and
- Newsletter: Newsletter and meeting notice separate.
- Prior to ASHREA Meeting: Reminder E blast with presenter Meeting reminder, presenter information, and bio goes out prior to the meeting.
- Committee Articles: The articles are due about two weeks after the chapter meeting.
  - Templates: two templates – one has a newsletter, one doesn't have a newsletter.

Programs (James Hanna)

- Fundraising opportunities for cocktail hour sponsorship
- Suggestions for topics & presenters for James keeping with the 2019-2020 theme: Building for People & Performance-Achieving Operational Excellence,' focuses on adapting ASHRAE's resources, investments and technology to energize our membership and empower our chapters Bill Artis possible back to basics?
- Field Trip: Early thoughts? Sterilization Plant, Brewery, Dry-aging Room?

Chapter Technology Transfer (Matthew Catan) [min-550/par-1050) Total Points: (0)

- Work with James (Programs) for PDH certified presentations
- Distinguished Lecturer List

Financial Secretary (Matthew Vitrano)

- Develop Monthly finance report with using actual bank statement with all the credits and debits accounted for.
- Review at BOG meetings - monthly income and spending
- Bill to bring financial book w/ tax forms. File by October 15th.

Treasurer (Murat Bayramoglu)

- Cherry Valley Golf Invoice payment status
- All hands on deck to seek and fundraise sponsorships for chapter operations
- Bank Account:
- Access needed for Frank, Murat, Matt V.
- W-9 form needed for Paypal account, change email from the current email address to an ASHRAE LI email Possibly/Look into replacing PO box with a UPS mailbox or similar due to NYS tax requirements

Government Affairs (Andrew Blom) [min-500/par-650] Total Points (0)

- Activities:
- Update local Politician list
  - Public relations Andy Manos

Historical (Matthew Vitrano) [min-100/par-300] Total Points (0)

- Articles/interviews of past president's Potential life-members/fellows.
  Boards are going to be updated.

BOG Meeting Minutes

Honors and Awards Chair (Brian Simkins)

- Service awards/Technical Awards
- Candidate Projects
- If there are any projects let Brain know

Research Promotion (Andy Manos, Michael Nigro, Matthew Vitrano) [min-800/par-1050] Total Points (0)

- Vendor Book status.
- 50/50, (other ideas to increase raffle purchases)
- Head Start on Full circle.
- Invoice Newsletter Advertisements early in the chapter year.
  Chapter endowment fund

Refrigeration (Murat Bayramoglu)

- Northrop Grumman visit (Mike R)

Membership Promotion (Michael Razzano, Co-chairs, Elizabeth Jedrlinic, Michael Nigro) [min-500/par-800] Total Points (0)

- Membership Upgrades:
- Actively monitor membership list at reception for dues vs non-paying members
- Discussion/suggestions on increasing chapter meeting attendance.
- Increase chapter membership:
- Reach out to companies and Design firms that may have engineers that are not aware of ASHRAE LI and its chapter meetings.
- Combined Membership/YEA/Student activities Social events
- Happy Hours
- Pub crawls
- Brewery visits
- Great South Bay Brewery (Bay Shore)
- Plattdeutsch Brewery (Franklin Square)
- Bowling, Billiards
- Paintball
- BBQ or potluck with yard games at a park, fundraiser? Cedar Beach BBQ?

Student Activities (Elizabeth Jedrlinic) [min-500/par-800] Total Points (0)

- Stony Brook, Suffolk Community College, Hofstra, NYIT
- Discuss which local universities/colleges student chapters are active and which can be re-activated.

YEA (Michael Nigro) [min-300/par-800] Total Points (0)

- 2019 Collaborate with Membership Promotion and Student Activities for Social events throughout the year in order to interest new chapter involvement, volunteers etc.

Reception & Attendance (Matt Catan, Michael Razzano)

- Crushing it 2.0 :

Electronic Communications [min-250/par-650] (0)

- Temp address Society is taking over website.
- www.ashraeli.com
- Recovery of old address (Still Ongoing) – Email from Tom Fields attached in response
  Linked-In

Golf (Peter Gerazounis/Tom Fields)

- May 4th 2020: Cherry Valley Golf event.

New Business…

Next BOG Meeting
Location: Westbury Manor
Date: 9/10/19
Time: 5:00PM

Join ASHRAE on Social Media!

ASHRAE 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

ASHRAE CERTIFICATIONS

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.

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

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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, James Hanna @ 718.269.3768 or by email at finsec@ashraeli.org for further details. Thank you.

Rates (includes all issues September-June):

Business Card	$200	Half Page	$500
Triple Size	$350	Full Page	$800

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