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UPCOMING EVENTS

- **April 20th**
Spring Golf
11:30am to 4:30pm
LaFortune
- **April 27-29**
CRC Monterrey, MX
- **May 3rd**
Chapter Meeting
11:30am to 1:30pm
Tulsa Country Club

PRESIDENT'S MESSAGE

By Keith Averitt

It is hard to believe that spring is already here, which means the ASHRAE year is almost over. It has been an honor serving as your chapter president this year! I know that we still have a few months left and I am looking forward to the wonderful things we have yet to accomplish in this short time. We had a great turnout at our March Chapter Meeting, honoring our Life Members and Past Presidents. It was especially meaningful to me, as I got to bring my 93 year old Dad to this meeting. For those of you who don't know, I broke into this industry 20+ years ago working with my Dad. He had a great time catching up with all the "old timers"!

We were also fortunate enough to host Patrick Chapman from AAON. Mr Chapman gave an insightful look into upcoming changes regarding refrigeration. There will be no April Chapter Meeting, as we will be having our Inaugural Par 3 Golf Tournament on April 20. This should be a great time with good weather, so come out and join us! A big shout out to our Programs Chair, Michael Floyd, for doing such a great job of lining up DL's for our meetings. This helps our chapter attendance and also gives us opportunities to collect a lot of PAOE points. In the month of March we also had a few of our NEOK ASHRAE members travel to Oklahoma City for the GCAC Outreach Day. If you haven't been to one of these, I encourage you to go next year – it's a great opportunity to see our Capitol, as well as interact with our Legislators, and educate them on HVAC topics that impact our line of work.

Although the chapter year is almost over, the hard work is really just beginning with the CRC in Monterrey, Mexico coming up in April. The BOG is hard at work getting all of our chapter reports pulled together to turn in prior to CRC. We will also present our chapter summary while at CRC and enter into the Golden Gavel award. We hope that we will have plenty of hardware and awards to bring back to the chapter after CRC!

Keith Averitt

Keith Averitt
2022-2023 Chapter President
kaveritt@eei-ok.com





Tulsa, Oklahoma

Newsletter of the NEOK Chapter of ASHRAE Region VIII

www.ashrae.org | www.ashrae-neok.org

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SPECIAL EVENTS

By Nolan Chance

We would like to officially welcome you to play in our first annual ASHRAE Par 3 tournament, hosted at LaFortune Park. Click link below for more information.

<https://www.eventbrite.com/e/2023-neok-ashrae-par-3-golf-tournament-tickets-595048946417>



PAR 3 GOLF TOURNAMENT

APRIL 20
THURSDAY | 2023

LAFORTUNE PARK GOLF COURSE
5501 SOUTH YALE AVENUE
TULSA, OK 74135



Feel free to connect with us on LinkedIn or Facebook. As always, chapter information is offered on these two social media sites and our chapter website, www.ashrae-neok.org.



Click on one of these logos to visit our pages.



Nolan Chance

nolanc@midwestmachinery.net

HONORS & AWARDS

By Mike Beda

The Monterrey CRC is upon us. I hope you have made your reservations for attending the meeting on April 27-29. Who will win the Golden Gavel this year?

I sent my report to Mark Fly, Chair of the Nominating Committee, with NEOK nomination of 2 members for the Chapter Service Award. If we did our homework correctly, they will be receiving their certificates at CRC next spring.



Mike Beda
918.706.8309
mikebeda1945@yahoo.com

TREASURER REPORT

By Austin Barton

Our chapter's current net worth as of February 2023 is as follows.

1. NEOK General Checking Account (Checking)

Statement Period	2/01/2023 to 2/28/2023
Opening Ledger	\$ 29,677.04
Deposits	\$ 1,100.36
Expenditures	\$ 1,007.06
Closing Ledger	\$ 29,770.34

2. Invest/CRC Checking Account (Investment-CRC-Training)

Statement Date:	2/28/2023
Account Value:	\$35,284.69

3. Savings Account (Jack Tumilty Scholarship Fund)

Statement Period	2/01/2023 to 2/28/2023
Opening Ledger	\$ 26,526.29
Deposits	\$ 7.12
Expenditures	\$ 0.00
Closing Ledger	\$ 26,533.41
Account Value:	\$ 26,533.41

- Total Assets: \$91,588.44**



Austin Barton
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CHAPTER TECHNOLOGY TRANSFER/PROGRAMS

By Michael Floyd

Thank you to everyone who was able to attend the March ASHRAE meeting! I hope everyone found Patrick Chapman's presentation over the refrigeration change out to be very informative. I'd like to thank Patrick for taking time out of his busy schedule to present at our chapter's March meeting.

Our May meeting's presentation will be by Dr. Marwa Zaatari. Her topic will be over ASHRAE Standard 62.1 IAQP. Dr. Marwa Zaatari is Partner at D ZINE Partners. She leads the research of "Air as a Service" around indoor air quality, filtration and air cleaning systems, and IAQ measurements to design and operate buildings for optimal energy and people efficiency. Dr. Zaatari has extensive experience in identifying and quantifying the sources, fate, and transport of indoor air pollutants, building energy and environmental management, assessing performance-based procedures of HVAC ventilation and air cleaning, and developing and applying models for energy efficiency, indoor air quality, exposure assessment, and economic impacts of indoor air pollution. Prior to founding D ZINE Partners, she was Vice President of Building Solutions at enVerid Systems since 2015, and currently serves on the Board of Advisors. She leads the design of ventilation and filtration/sorption systems in buildings, integration into HVAC systems, and was responsible for managing customer-site installation and ongoing operations and field service. Zaatari earned a PhD in Architectural and Environmental Engineering from the University of Texas at Austin with a focus on the built environment and a master's degree in engineering management from The American University of Beirut, Lebanon with a focus on energy management.

Michael Floyd
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michael.floyd@leeandbrowne.com

RESEARCH PROMOTION

By Chad Marazas

Our Research Promotion (RP) campaign is going well. We have hit 83% of our goal of \$18000. We also have hit our Scholarship Goal of \$500. I want to thank everyone for their donations. We have a few events coming up that should help us meet or exceed our goal for the year.

<https://xp20.ashrae.org/secure/researchpromotion/rp.html>

Chad Marazas
918.688-6784

cmmarazas@trane.com



YEA

By Zach Seizinger

Thanks to everybody who came out for our most recent March Madness event! Looking forward to an early summer event, feel free to send your ideas my way.



Zach Seizinger
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zseizinger@eei-ok.com

MEMBERSHIP PROMOTION

By Brian Biggerstaff

If anyone you know is interested in joining ASHRAE, you can share the below link with them, or send them a personalized message using Connect-A-Colleague. We've kept it simple: Enter your name and email, your colleague's name and email, and press send. That's it! This pre-written invitation will be sent on your behalf, and includes options to reference an ASHRAE technical committee section, and to add a custom message.

http://web.ashrae.org/connect_a_colleague/

If you prefer to simply share a link with a friend they can join ASHRAE using the below:

<https://join.ashrae.org/>



Brian Biggerstaff
918.624.1005
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STUDENT ACTIVITY

By Sara Fazel

Hey everyone! Happy Spring! We just closed the applications for the NEOK College Scholarship for 2023. Join us during our May meeting to celebrate the two recipients! In the next month,

Student Activities is planning on partnering up with Greenheck to do some HVAC related activities at a local elementary school! We are very excited to have this opportunity, please reach out to sara.fazel@airetechcorp.com if you would be interested in joining!

I'd also like to welcome the newest student members, Elaine Asher, Jackson Habrock, Anna Kinnunen. Welcome to ASHRAE!



Sara Fazel
918.584-9976
Sara.fazel@airetechcorp.com

GOVERNMENT AFFAIRS

By Chad Smith



(Ben Dye, State Rep. Amanda Swope, Chad Smith, Jeff Ferguson)

What an exciting time to be participating in our GAC committee outreach activities. We had our annual Capitol Outreach Day on March 8th last month. While we didn't have as many members participating as we had hoped for, it was definitely a quality over quantity trip. Thanks to Jeff Ferguson and Ben Dye for participating, and we were able to meet with 8 different legislators during our trip to the capitol.

We partnered with the Central Oklahoma chapter, and between the 2 chapters, we had over 22 different legislators we met with. We shared with them resources that are available to them through ASHRAE and, of course, offered our knowledge and experience as members of the industry. We received our legislative report from the GAC office at Society and were able to discuss 4 bills going through the legislature now at different stages that impact our industry dealing with new refrigerant use, professional licensure requirements, and empowering the OUBCC to serve as the state's independent code review body.



(Central Oklahoma and North East Oklahoma ASHRAE Chapter day on the hill participants)

We have been doing this long enough now that legislators we have built relationships with have moved on due to term limits or other aspirations, so we are now connecting with the next generation of elected leaders and are excited to see how those relationships will grow.

I have included pictures from our visit to the Hill. We are trying to coordinate an outreach meeting with some local school boards. Please reach out to me if you are interested in participating, please contact me for more information.



(Chad Smith, State Rep Mark Lawson, Jeff, Ben Dye)



(Ben Dye, Jeff Ferguson, Senator Jo Anne Dosssett)



(Chad Smith, Senator Todd Gollihere, Ben Dye)



(COK chapter preparing)



Chad Smith
 918.704.7905

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ELECTRONIC COMMUNICATIONS

By Matt Simmons

Thank you to everyone who attended our NEOK ASHRAE Skeet shooting event. Hope everyone had a Blast. If you did not make it this year we hope to offer this again next year.

(Below are some photos of this years Skeet Shooting event.)



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HISTORY

By Gene Redford

History: continued from last month

Continued from last month. It wasn't long before Carrier realized that humidity control and air conditioning could benefit many other industries, and he eventually broke off from Buffalo Forge, forming Carrier Engineering Corporation with six other engineers.

Public Buildings Get Cool

At the St. Louis World's Fair in 1904, organizers used mechanical refrigeration to cool the Missouri State Building. The system used 35,000 cubic feet of air per minute to cool the 1,000-seat auditorium, the rotunda and other rooms within the Missouri State Building. It marked the first time the American public was exposed to the concept of comfort cooling. A big breakthrough in comfort cooling technology came in the 1920s, when Americans flocked to movie theaters to watch Hollywood stars on the silver screen.

Early cooling systems for public theaters were essentially heating systems modified with refrigeration equipment that distributed cold air through floor vents, resulting in hot, muggy conditions at upper levels and much colder temperatures at lower levels, where patrons sometimes resorted to wrapping their feet with newspapers to stay warm. In 1922, Carrier Engineering Corporation installed the first well-designed cooling system for theaters at Metropolitan Theater in Los Angeles, which pumped cool air through higher vents for better humidity control and comfort throughout the building.

In May 1922 at Rivoli Theater in New York, Carrier publicly debuted a new type of system that used a centrifugal chiller, which had fewer moving parts and compressor stages than existing units. The breakthrough system increased the reliability and lowered the cost of large-scale air conditioners, greatly expanding their use throughout the country.

Bringing Cooling Home

Despite advancements in cooling technologies, these systems were too large and expensive for homes. Building off refrigeration technology, Frigidaire introduced a new split-system room cooler to the marketplace in 1929 that was small enough for home use and shaped like a radio cabinet. However, the system was heavy, expensive and required a separate, remotely controlled condensing unit. General Electric's Frank Faust improved on this design, developing a self-contained room cooler, and General Electric ended up producing 32 similar prototypes from 1930 to 1931.

Around this same time, Thomas Midgley, Albert Henne and Robert McNary of General Motors synthesized chlorofluorocarbon (CFC) coolants, which became the world's first non-flammable refrigerating fluids, substantially improving the safety of air conditioners. However, the chemicals would be linked to ozone depletion decades later and were eventually phased out by governments all across the globe after the Montreal Protocol in the 1990s. Hydrofluorocarbons (HFCs), which don't destroy the ozone, gain popularity but are eventually linked to climate change. Recent breakthrough research by the Energy Department's Building Technologies Office and Oak Ridge National Laboratory is resulting in new refrigerants and technologies that are less harmful to the planet.



Gene Redford
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gredbird@yahoo.com

MEETING MINUTES

By Eric Mulliniks

Recording of Minutes

Chapter: Northeastern Oklahoma Chapter 069
Meeting: February 9 BOG
Attendance: 11

Meeting Date: February 9, 2023

Compiled By: Eric Mulliniks

Attendees: Keith Averitt, Claire Farr, Zach Seizinger, Steve Johnson, Austin Barton, Eric Mulliniks, Matt Simmons, Sarah Fazel, Austin Whetstone, Pam Dunlap, and Mike Beda.

The NEOK February BOG Meeting was held at Elgin Park, 325 E Reconciliation Way, Tulsa, OK 74120. President Keith Averitt called the meeting to order at 11:38 AM.

President: Keith Averitt

- CRC in Monterrey – Matt Simmons and Keith Averitt are attending as delegate and alternate. Chad Smith, Sarah Fazel, LeeAnn Reynolds, and Chad Marazas are also attending.
- The Skeet Shoot Event will take place on March 31st.
- Michael Floyd is working on our March meeting needs.
- Chad Smith is heading up the nominating committee.
- The next Board of Governors meeting will be held on March 9th, 2023 at Elgin Park.

Vice President: Matt Simmons

- Discussed the deadline for newsletter articles. March lunch meeting set for March 1st, -2023.
- Treasurer: Austin Barton
- January financials, \$28,000 in checking.
- Discussed adding budget performance update – actual vs. year to date.
- Discussed regional dues to CRC. Do we pay society?
- Discussed paying via check or electronically.

Secretary: Eric Mulliniks

- Chapter meeting minutes for February emailed out today and in confirmation process. Need a couple of more votes for approval.

Attendance / Reception: Richard Shoemaker

- We had 34 attendees for the February chapter meeting + 1 online attendee.
- Discussed coming up with ways of collecting money for lunches for non-show RSVPs.

CRC Delegate / PAOE: Claire Farr

- Printed copies of PAOE points. 0

CTT Chapter Programs: Michael Floyd.

- March speaker will be Patrick Chapman.

Electronic Communications and Publicity: Austin Whetstone

- No update.

GAC: Chad Smith

- March 8 Capital visit
- Had a meeting with Senator Lankford's team.
- Scholarships will be awarded in May.

Historian: Gene Redford

- Working on who will receive lifetime achievement award.

Honors & Awards: Mike Beda.

- Honors and awards go be given in March.
- Has the new banner stand been ordered?

Membership Promotion: Brain Biggerstaff.

- No update.

Refrigeration: Eric Mulliniks.

- Working on setting up a tour of Vicinity.

Research Promotion: Chad Marazas

- No update.

Special Events: Nolan Chance (Main), Ryan Dunkerson

- The Par 3 Tournament will be held on April 13th, 2023 at 1:00 p.m. in place of the April chapter meeting. Brochure for the event should state what portion of funds will go to CRC, special events, etc.

Student Activities: Sarah Fazel

- 60 attendees were present for Mark Fly's presentation at TU.
- The TU ASHRAE chapter has been reactivated.
- Scholarship award given during March meeting.
- Sustainability: No update.

YEA: Zach Seizinger

- No update.

New Items / Other Business: BOG Attendees

- Next BOG meeting on March 9th, 2023 at Elgin Park.

Meeting was adjourned at 12:40 p.m.



2022/2023 Calendar of Events

Important Dates

Meeting

Location

September 15, 2022	Board of Governors	Elgin Park
September 29, 2022	Golf Tournament	LaFortune Golf Course
October 5, 2022	Chapter Meeting (Lunch)	Tulsa Country Club
October 12, 2022	ASPE&ASHRAE EXPO	Oklahoma City Convention Cent
October 20, 2022	Board of Governors	Elgin Park
November 2, 2022	Chapter Meeting (Lunch)	Tulsa Country Club
November TBD	Board of Governors	Elgin Park
December 7, 2022	Chapter Meeting (Lunch)	Tulsa Country Club
December 15, 2022	Board of Governors	Elgin Park
January 18, 2023	Chapter Meeting (Lunch)	Tulsa Country Club
January 12, 2023	Board of Governors	Elgin Park
February 1, 2023	Chapter Meeting (Lunch)	Tulsa Country Club
March 1, 2023	Chapter Meeting (Lunch)	Tulsa Country Club\
March 31, 2023	Skeet Shoot	TBD
April 13, 2023	Spring Golf Tournament	LaFortune Golf Course
April 27-29, 2023	Monterrey ASHRAE CRC	Monterrey, Mexico

Check back in each subsequent newsletter as new events will be added as they are scheduled.

2022/2023 NEOK PAOE Points

0 1,000 2,000 3,000 4,000 5,000 6,000 7,000 8,000 9,000 10,000





2022/2023 Chapter Volunteers

Officers

President	Keith Averitt	918-624-1005	kaveritt@eei-ok.com
President Elect	Matt Simmons	918-417-9953	msimmons@eda-fki-engineers.com
Treasurer	Austin Barton	918-359-9107	barton.a@mcintoshok.com
Secretary	Eric Mulliniks	918-640-1542	emulliniks@eei-ok.com

Board of Governors

BOG	Steve Johnson	918-955-4462	Steve.johnson55@cox.net
BOG	Susan Crenshaw		SCrenshaw@harrisonenergy.com
BOG	Ray Gomez	918-584-0102	gomez@phillipsgomez.com
BOG	Mike Beda	918-706-8309	mikebeda1945@yahoo.com

Committee Chairs

CRC Delegate	Keith Averitt	918-624-1005	kaveritt@eei-ok.com
CRC Alternate	Matt Simmons	918-417-9953	msimmons@eda-fki-engineers.com
Attendance/Reception	Richard Shoemaker	918-812-2149	rjii@shoemakerac.com
Audit	Dan Owens	918-359-9110	owens.d@mcintoshok.com
CTT/Programs	Michael Floyd	918-836-0271	michael.floyd@leeandbrowne.com
GAC	Chad Smith	918-704-7905	chad@airetechcorp.com
Historian	Gene L. Redford	918-346-0444	glredbird@yahoo.com
Honors & Awards	Mike Beda	918-706-8309	mikebeda1945@yahoo.com
Membership Promotion	Brian Biggerstaff	918-219-4030	bbiggerstaff@eei-ok.com
Newsletter	Matt Simmons	918-258-6890	msimmons@eda-fki-engineers.com
Nominating	Chad Smith	918-704-7905	chad@airetechcorp.com
Publicity / Social Media	Austin Whetstone	918-237-3663	austin@okchiller.com
Refrigeration	Eric Mulliniks	918-382-6432	ericm@aaon.com
Research Promotion	Chad Marazas	918-688-6784	cmmarazas@trane.com
Special Events Co-Chair	Nolan Chance	918-877-6000	nolanc@midwestmachinery.net
Special Events Co-Chair	Ryan Dunkerson	918-430-6793	rdunkerson@es2ok.com
Student Activities	Sara Fazel	918-584-9976	Sara.fazel@airetechcorp.com
Sustainability	TBD		
Webmaster/ECC	Austin Whetstone	918-237-3663	austin@okchiller.com
YEA	Zachary Seizinger	918-998-0007	zseizinger@eei-ok.com