



Shaping Tomorrow's
Built Environment Today

MINUTES (DRAFT)

**Refrigeration Committee (REF)
October 7, 2019
Web Meeting**

These minutes have not been approved and are not the official, approved record until approved by this committee.

MEMBERS PRESENT:

Rajan Rajendran, *Chair*
Yunho Hwang, *Vice-Chair*
Walid Chakroun
Didier Coulomb
Ayman Eltalouny – Late arriving
Stephen Gill
Dustin Lilya
Carlos Alberto Mitroga
Sarah Maston, *BOD Ex-O*

GUESTS: None

MEMBERS NOT PRESENT:

Martin Dieryckx,
Charles Hon
William Walter
Malcolm Knight, CO
Tony Welter

ASHRAE STAFF:

Mike Vaughn, MORTS

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MOTIONS

No.	Motion	Page
1	the minutes from the 2019 REF Annual Meeting be approved.	1
2	REF Approves new Subcommittee Chairs as listed below: <ul style="list-style-type: none"> • <u>Awards</u> - Ayman Eltalouny • <u>Cold Chain</u> - Dustin Lilya • <u>HVAC</u> - Walid Chakroun • <u>Program</u> – Steven Gill • <u>Research</u> - Yunho Hwang • <u>R in ASHRAE</u> - Didier Coulomb • <u>Refrigeration Technology Report</u> - Martin Dieryckx 	1
3	Motion to adjourn meeting	2

NEW ACTION ITEMS – Fall 2019 – Meeting

No.	Responsibility	Action Item	Status
1	Staff	Create MS-Excel spreadsheet of SY 19-20 REF MBOs with tabs for each new REF-CPCC Subcommittee	Complete
2	REF	Full REF committee will vote on proposed new Subcommittee Chairs versus REF Chair appointing Subc. Chairs	Complete
3	Staff	Arrange for REF representative to speak to TC Chairs at the TC Breakfast in Orlando	Complete
4	Chair & Staff	Review new draft MOP concerning subcommittee member voting status	On-going

ACTION ITEMS – Annual 2019 – Kansas City

No.	Responsibility	Action Item	Status
1	Rajendran	Review strategic plan and align SY 19-20 REF MBOs	Complete
2	REF	Review final report of the R in ASHRAE ad hoc and consider plan to implement activities of interest.	On-going
3	Staff	Arrange for REF to speak to TC Chairs at the TC Breakfast in Orlando	Complete
4	Rajendran	Attend Sunday BOD meeting to read the World Refrigeration Day resolution	Complete
5	REF	Imagine one or more new program ideas for REF's SY 20-21 budget to discuss in fall.	On-going
6	Dieryckx, Hon, Eltalouny and Mitroga	Serve as judges for the Briley Award	On-going
7	Kazachki, Hwang	Submit program on 'state of the art of refrigeration technologies with lower environmental impact' for Orlando meeting	On-going
8	Hwang	Hold a Program Subcommittee web conference in late July to discuss program ideas for Orlando. Participants asked to bring 3-4 ideas for discussion	Complete
9	REF	Develop plan to take ownership of the new Refrigeration website and monitor and update content	On-going
10	Staff	Staff was asked to poll for and set up a web meeting to review the newly approved MOP, adding the two new subcommittees and to make assignments	On-going

11	Maston	Review MOP changes and consider how members could be added to REF as non-voting members	On-going
12	REF	Revisit MOP section A2.2 at Winter Meeting to determine criteria for invited liaison organizations	On-going
13	Trent Hunt, Guru Ravi, Adnan Ayub, Georgi Kazachki, and Hon	Review and comment on draft bi-annual report proposal	On-going

ACTION ITEMS – Winter 2019 - Atlanta

No.	Responsibility	Action Item	Status
AT-1	Rajendran , Lilya, Hon, Dieryckx, & Rydkin	Explore a change to the name and scope of REF and reorganization of subcommittees.	complete
AT-2	Gill , Chakroun, Rajendran, Maston	Review ROB/MOP changes that could incorporate membership on REF from outside other organizations	complete
AT-3	Dieryckx , Lilya, Rajendran, Hon, Maston, D. Scott, G. Ravi	to work out a more formal proposal on what REF's biannual 'state of the art of refrigeration document' would be and how it could be done and maintained for REF's for next meeting	See KC #12
AT-4	Staff	Share draft ASHRAE strategic plan and four initiatives with REF	complete
AT-5	Gill	Consider program(s) relate to World Refrigeration Day for future conference	complete
AT-6	Coulomb	Develop a program with Peter Domansky for Kansas City on IIR activities	complete
AT-7	REF, Staff	Propose which TC/SSPC they participate on and can serve as REF liaison to.	complete
AT-8	Coulomb	Send harmonized IIR/ASHRAE to REF	complete
AT-9	REF	Review ASHRAE/GCCA MOU and prioritize list of activities.	complete

LIST OF ATTACHMENTS

No.	Attachment
A	REF-CPCC SY 19-20 MBOs & Subcommittee Rosters

LIST OF ACRONYMS

AI	Action Item	MORTS	Manager of Research & Technical Services
ASHRAE	American Society of Heating, Refrigerating and Air-conditioning Engineers	MOU	Memorandum of Understanding
BOD	Board of Directors	MTG	Multidisciplinary Task Group
CNV	Chair Not Voting	OPS	TechC Operations Subcommittee
CTTC	Chapter Technology Transfer Committee	PAOE	Presidential Award of Excellence
DRSC	TechC Document Review Subcommittee	PD	Position Document
Ex-O	Ex-Officio	RatRU	Refrigerants and their Responsible Use
GCCA	Global Cold Chain Alliance	REF	Refrigeration Committee
IIR	International Institute of Refrigeration	SY	Society Year
IoR	Institute of Refrigeration	TAC	Technical Activities Committee
MBO	Management by Objectives	TC	Technical Committee
MOP	Manual of Procedures	UNEP	United Nations Environment Programme

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1. WEB MEETING LINK: <https://global.gotomeeting.com/join/272778269> - Access Code: 272-778-269

2. CALL TO ORDER

Chair Rajan Rajendran called the meeting to order at 10:00 AM ET. Members and guests introduced themselves. Staff confirmed quorum.

2. ASHRAE CODE OF ETHICS COMMITMENT

'In this and all other ASHRAE meetings, we will act with honesty, fairness, courtesy, competence, integrity and respect for others, and we shall avoid all real or perceived conflicts of interests.' (See full Code of Ethics: www.ashrae.org/about-ashrae/ashrae-code-of-ethics.)

3. REVIEW OF AGENDA

No changes to the agenda were proposed.

4. MINUTES

MOTION #1

It was moved (DL) and seconded (YH) that,

(1) the minutes from the 2019 REF Annual Meeting be approved.

BACKGROUND: Minutes were distributed in a September 16th email from staff.

MOTION 1 PASSED: 4-0-2-5 (11), CNV

5. CHAIR'S REPORT – Rajendran

The primary purpose of the REF-CPCC fall meeting was to take the first steps towards forming the following new subcommittees for REF-CPCC by identifying subcommittee chairs and recruiting subcommittee members both from within REF-CPCC and from the list of interested parties that attended the REF- CPCC KC meeting and past meetings:

New REF-CPCC Subcommittee Structure:

1. Program - Chair: **Stephen Gill** – Members: Coulomb, Kazachki, Ravi, Miyara, Hwang
2. Research – Chair: **Yunho Hwang** – Members: **TBD**
3. HVAC – Chair: **Walid Chakroun**– Members: **TBD**
4. Cold Chain – Chair: **Dustin Lilya** – Members: **TBD**
5. R in ASHRAE – Chair: **Didier Coulomb** – Members: Rajan, Stephen
6. Refrigeration Technology Report – Chair: **Martin Dieryckx** – Members: Rajan
7. Award Subcs – Briley and Garland- Chair: **Ayman Eltalouny** – Members: **TBD**

MOTION #2

It was moved (YH) and seconded by (AE) that,

(2) New REF-CPCC Subcommittee Chairs be approved as listed above by REF-CPCC

BACKGROUND: REF-CPCC Subcommittee Chairs will now be approved by full REF-CPCC and not be appointed by REF-CPCC Chair.

MOTION 2 PASSED: 5-0-1-5 (11), CNV

1. New Subcommittees:

Now that ALL subcommittee Chair positions are filled, we will next ask each chair to finalize their scope statement and identify one or two objectives that they wish to accomplish this Society Year using the forms in **ATTACHMENT #1**.

Lastly, we will share these completed forms for each subcommittee with the REF-CPCC Interested Parties list and with the Section 10 TCs to see if we can recruit additional members from outside REF-CPCC to serve on these new subcommittees. In order to make participation easy and inclusive, ALL REF-CPCC subcommittees will meet via web meetings only and all subcommittee members will have a vote at the subcommittee level.

Subcommittee Chairs will then report in person to REF-CPCC on subcommittee activities at Society meetings. **If this approach is acceptable to TechC, we will need to work with TechC OPS to delete section E1.6 from the draft REF-CPCC MOP, which requires REF-CPCC subcommittees to meet at the Annual and Winter meeting.**

It is expected that this new subcommittee structure will also make it easier to identify and recruit Board elected members for REF-CPCC by creating a large pool of interested volunteers that vote and work at the subcommittee level only, but don't receive transportation reimbursement from ASHRAE since all REF-CPCC subcommittees meetings will be held via web meetings.

See **ATTACHMENT #1** for further information on each Subcommittee.

2. TC reorganization

Maston reported TAC is still working on their TC reorganization plan. Kansas City was the first meeting where the TC Chair Breakfast was held in one room on Sunday morning instead of splitting up by section.

Staff was asked to arrange for REF to speak to TC Chairs at the TC Breakfast in Orlando (**AI #3**). REF-CPCC representative will explain to TCs changes to REF subcommittee structure and invite interested TC members to join REF Subcommittees and to serve as liaison between REF-CPCC and their TC.

3. MTG RAC Plant Assessment Guide

REF-CPCC joined the new MTG.RAC Plant Assessment Guide and named Carlos Mitroga as voting member and Walid Chakroun as alternate. Both have since been added to the MTG.RAC roster and should be getting MTG meeting information.

6. ADJOURNMENT

MOTION #3

It was moved (YH) and seconded by (AE) that, the meeting adjourn

MOTION 3 PASSED: 6-0-1-4 (11), CNV

ATTACHMENT 1

Refrigeration Technology Committee for Comfort, Process and Cold-Chain (REF-CPCC)

Subcommittee Rosters & Descriptions

**Refrigeration Technology Committee for Comfort, Process, and Cold Chain
(REF-CPCC)**

Program Subcommittee			
Draft Scope:	REF-CPCC Program Subcommittee will develop technical programs of various types (Technical Paper Sessions, Conference Paper Sessions, Seminars, Debates, Forums, Panels, and workshops) for the REF-CPCC committee that can be presented at Society meetings or at other organizations conferences. The subcommittee will also work with other Society committees and other organizations to co-sponsor programs that jointly benefit both committees or organizations.		
Chair:	Steven Gill - ASHRAE@stephencgill.com – PH: 1949850651		
SY 19-20 Objectives:			
Objective #1	TBD		
Objective #2	TBD		
Subc. Members:			
Name	Email	Phone Number	Affiliation
Didier Coulomb	d.coulomb@iifiir.org	33142273235	IIFIIR
Dr. Georgi Kazachki	kazachki@comcast.net	(937)203-9226	Cryotherm
Gurunarayana Ravi	gurunarayana.ravi@lennoxind.com	(281)907-2901	Lennox Intl.
Prof. Akio Miyara	miyara@me.saga-u.ac.jp	81952288623	Saga Univ.

**Refrigeration Technology Committee for Comfort, Process, and Cold Chain
(REF-CPCC)**

R in ASHRAE Subcommittee			
Draft Scope:	REF-CPCC R in ASHRAE Subcommittee will be responsible for maintaining the “R in ASHRAE” web page on the ASHRAE website and with developing new content for this webpage on a regular basis.		
Chair:	Didier Coulomb – d.coulomb@iifiir.org – Ph. 33142273235		
SY 19-20 Objectives:			
Objective #1	Identifying ASHRAE technical committees involved in refrigeration issues and their activities		
Objective #2	Create links between these activities and Subcommittee activities		
Subc. Members:			
Name	Email	Phone Number	Affiliation
Didier Coulomb Chair	d.coulomb@iifiir.org	33142273235	Intl. Institute of Refrigeration
Rajan Rajendran	Rajan.Rajendran@emerson.com	(937) 726-0620	Emerson

REFRIGERATION COMMITTEE 2019-2020 MBOs

Rajan Rajendran, Chair

Date: 8/6/2019

MBO #	MBO	Status	Date Due	Assigned To	Applicable initiative #	MBO Comments	Strategic Direction Specific Comments	Fiscal Impact
1	Reorganize subcommittee structure within REF	<u>New</u>	January 2020	Rajan R; Yunho Hwang; Bill W	3	1. Program subcommittee; 2. Research subcommittee; 3. HVAC subcommittee; 4. Cold Chain subcommittee; 5. R in ASHRAE Subcommittee; 6. Refrigeration Technology Report Subcommittee	#3a, b, c	None
2	Appoint a voting Representative and Alternate member to the new MTG.RAC - RAC Plant Assessment Guide	<u>New</u>	January 2020	Rajan R; Yunho Hwang	3	Join the MTG and participate to add value to ASHRAE	#3a, b, c	None
3	Take ownership of the new "R" in ASHRAE webpage for further implementation and on-going maintenance. Promote the new REF committee organization and name throughout society; put together the plan for a bi-annual report on refrigeration technology (last year's MBO)	<u>New</u>	October 2019	RAC Chair and Vice Chair Yunho Hwang; Michael Vaughn; Martin D;	2 & 3	Establish a subcommittee and work closely with ASHRAE staff to continue highlighting the R in ASHRAE; expand and add new content as relevant; at mid-year, revisit the website and looking for ways to improve; develop a plan and start implementation of the bi-annual Refrigeration Technology report	#2c; #3a, b, c	None
4	Update REF MOP and Reference Manual and secure TechC approval on update to REF MOP.	<u>New</u>	October 2019	Rajan R; Michael V	3	Have a draft ready for Tech Council approval in Fall 2019 meeting	#3a, b, c	None
5	Work with partnership organizations to identify and implement collaboration opportunities to promote HVAC&R	<u>New</u>	June 2020	Dieter C; Ayman E	1 & 2	Starting with list of interested parties, IOR, and working with the (to be established) Research subcommittee, identify suggested research topics focused on refrigeration technology and pass on to new RAP for consideration.	#1a, #1b, #2b	None
6	Better coordinate and communicate REF activities and information transfer to ASHRAE Chapter Refrigeration Committees, possibly in coordination with and support from Section 10 TCs.	<u>New</u>	June 2020	TBD	#3 & #4	Prepare short report after each Society meeting that goes to all Chapter Refrigeration Committee Chairs and highlights things such as upcoming Winter meeting Refrigeration program track, upcoming refrigeration conferences, and ASHRAE research in development, underway, or completed related to refrigeration	#3a & #3b	None
7	Create working group within REF to help develop a proposed 1st draft of work plan between ASHRAE & IAR for inclusion in new ASHRAE/IAR MOU prior to the MOU being finalized by ASHRAE and IAR	<u>New</u>	June 2020	TBD	#2	Utilize technical experts within network of REF members and interested ASHRAE members that work for IAR and serve on SSPCs 15 & 34 to develop a draft work plan prior to the MOU being finalized.	#2b	None

REFRIGERATION COMMITTEE 2019-2020 MBOs

Rajan Rajendran, Chair

Date: 8/6/2019

Goals and Initiatives for 2019-2024 Society Strategic Plan

Initiatives:

- #1 Resilient Building and Communities
- #2 Indoor Environmental Quality
- #3 Organizational Streamlining
- #4 Improve Chapter Engagement, Capacity and support

Goals:

Goal 1: Position ASHRAE as an Essential Knowledge Resource for a Sustainable, High-Performance Built Environment

#1a Position ASHRAE as an Essential Knowledge Resource for a Sustainable, High-Performance Built Environment

#1b Expand capabilities globally to create, aggregate and disseminate essential information and knowledge focusing on emerging market trends and transformative approaches

Goal 2: Maximize Member Value and Engagement

#2a Infuse enthusiasm, vitality and diversity throughout ASHRAE events and services

#2b Expand the impact of collaboration and partnerships with industry organizations, universities and government agencies

#2c Leverage technology to increase member engagement, awareness and value

Goal 3: Optimize ASHRAE's Organizational Structure to Maximize Performance

#3a Prototype and launch new approaches that will increase ASHRAE's relevance and speed to market for key offerings

#3b Optimize ASHRAE's organizational systems and structures to increase capacity, efficiency and effectiveness

#3c Cultivate industry and member philanthropy to extend ASHRAE's impact and reach