SCOPES

of

ASHRAE

Technical Committees, Task Groups, Multidisciplinary Task Groups & Technical Resource Groups

Revised: 25-6-25

Historical

Revised 25-6-25	Revised Title 4.7
	Revised Scope TC 7.7
Revised 25-02-12	Revised Scope TC 9.7
Revised 24-12-13	Disbanded MTG.VIC
Merged 24--6-22	Merged TC 3.8 into 3.1
	Revised Scope TC 3.1
	Disband TRG9
	Revised Title and Scope TC 8.1
	Revised Title and Scope TC 8.2
	Reassigned TC 1.10 to TC 6.4
Added 24-1-24	Added MTG.GAI
Revised 23-2-8	Revised scope TC 1.13
	MTG.OBB upgraded to TC 7.10
Revised 22-8-2	Added TG9.SPACE
Revised 22-4-7	Disbanded MTG.HWBE
Merged 22-2-2	Merged TC 9.0 into 10.07
Revised 22-2-2	Revised title TC 9.8
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Added 21-6-21	Added TG2.RAST
	Added MTG.VIC
	Revised Scope TC 6.9
	Disband MTG.IAST
Revised 21-1-27	Revised title and scope TC 10.1
	Revised title and scope TC 10.2
	Merged TC 10.5 and TC 10.8 into TC 10.2
	Merged TC 10.3 and TC 10.1
Revised 20-7-22	Revised Scope TC 5.10
	Revised Scope TC 4.2
	Revised Scope TC 4.7
Modified 20-6-25	Modified scope for TC 3.2
	Modified scope for TC 7.3
	Modified scope for TC 8.10
	Modified scope for TC 9.4
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	Merged TC 7.8 into 7.3
	Merged TC 8.12 into 8.10
	Merged TC 9.4 into 9.8
Revised 20-1-31	Revised Scope TC 8.6
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Revised 19-6-25	Revised Scope TC 6.10
	Added MTG.CEA
	Added MTG.RAC
Revised 19-1-16	Disbanded MTG.BD
Revised 18-7-24	Upgraded TG2.HVAC to TC 2.10
	Added MTG.HWBE
	Revised scope TC4.7
	Revised scope TC 5.11
Revised 18-1-26	Revised title and scope TC 1.10
Revised 17-6-28	Disband MTG.ASEC
	Disband MTG.ISPAQE
	Disband MTG.O&MEE
	Disband TC 5.8
	Added MTG.EBO
	Revised title and scope TC 2.7
	Revised scope TC 2.8
	Revised title and scope TC 6.7
	Revised title and scope TC 9.2
Revised 17-2-3	Upgraded MTG.CCDG to TRG9
Revised 16-6-29	Added MTG.ACR
	Disbanded MTG.ET
	Changed Scope MTG.LowGWP
	Changed Scope MTG.BIM
Revised 16-1-27	Disband MTG.CCDG
	Revised title and scope TC 2.6
	Added MTG.OBB
	Added MTG.IAST
Revised 15-7-1	Added MTG.ASEC
	Added MTG. ISPAQE
	Revised Title and Scope TC 10.5
Revised 15-1-28	Upgraded TG1.OPT into 1.13
Revised 14-10-1	Disbanded MTG.HPAS
Revised 14-7-1	Added MTG.O&MEE
	Changed Title of MTG.EAS to MTG.HPAS
Revised 14-2-1	Added MTG.BD
	Disbanded MTG.EEC
	Changed title of TC 10.3
Revised 13-9-24	Added MTG.HCDG
Revised 13-6-22	Disband MTG.BPM
Revised 13-3-27	Editorial MTG.LowGWP
Revised 13-1-30	Disband TC 9.5
	Revised title for TC 9.9
	Dissolved TRG7.UFAD
	Revised title and scope TC 10.7

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MTG.EBO	Effective Building Operations
MTG.GAI	Generative Artificial Intelligence
MTG.HCDG	Hot Climate Design Guide
MTG.LowGWP	Lower Global Warming Potential Alternative Refrigerants
MTG.RAC	Refrigeration and Air Conditioning Plant Assessment Guide
MTG.RES	Resilience

Section 1.0-Fundamentals & General

Technical Committee 1.1, Thermodynamics and Psychrometrics

TC 1.1 is concerned with basic thermodynamic laws and property relationships, particularly as they are applied to processes involved in heating, ventilating, air conditioning, refrigeration, and related areas of environmental engineering. A second concern of the TC is the fundamental thermodynamic and transport relationships for air and water vapor mixtures, as used in the study, measurement, and calculation of psychrometric properties and processes.

Technical Committee 1.2, Instruments and Measurements

TC 1.2 is concerned with the principles of instrumentation and the concepts and techniques of basic measurements, especially for processes and properties associated with air conditioning, heating, refrigeration, and related areas of environmental engineering.

Technical Committee 1.3, Heat Transfer and Fluid Flow

TC 1.3 is concerned with the fundamental principles of the transport of energy, mass, and momentum, especially the study of and application to, physical processes in air conditioning, refrigeration, heating and related areas of environmental engineering.

Technical Committee 1.4, Control Theory and Application

TC 1.4 is concerned with control theory, systems, and components (excluding refrigerant flow controls), for heating, ventilating, air conditioning and refrigeration uses.

Technical Committee 1.5, Emerging Computing Applications

TC 1.5 is concerned with determination of computer applications to the design and optimization of refrigeration, heating, and air-conditioning systems, equipment and components thereof; and with programs for all such uses.

Technical Committee 1.6, Terminology

TC 1.6 is concerned with terminology, nomenclature, definitions, abbreviations, symbols and SI and IP units used in the used in the fields of heating, ventilating, air conditioning, water heating and refrigeration.

Technical Committee 1.7, Business, Management & General Legal Education

TC 1.7 is concerned with business, management and general legal matters, which touch and concern the HVACR industry and its members.

Technical Committee 1.8, Mechanical Systems Insulation

TC 1.8 is concerned with the application and performance of thermal and acoustical insulation systems used on pipes, tanks, equipment and ducts.

Technical Committee 1.9, Electrical Systems

TC 1.9 is concerned with electrical systems insofar as they interact with the HVAC & R built environment.

Technical Committee 1.11, Electric Motors and Motor Control

TC 1.11 is concerned with electric motors (including hermetic) used in heating, ventilating, air-conditioning and refrigeration systems and the protection and control of such motors.

Technical Committee 1.12, Moisture Management in Buildings

TC 1.12 is concerned with the interaction between the weather, the building envelope, its systems and its occupants which either lead to moisture accumulation or which prevent it. The committee performs cross-cutting research, and collects and distributes information to help the public and the professions avoid problems associated with excessive moisture. These efforts are coordinated with other technical committees, industries and professions which are responsible for individual systems, building components and public health and safety.

Technical Committee 1.13, Optimization

TC 1.13 is concerned with identifying, developing, and disseminating optimization techniques that enhance the performance of HVAC&R components, systems, and building systems that are not application or tool specific. The committee is focused on the fundamentals of optimization techniques including mathematical formulation, constraints handling, multi-objective optimization, approximation techniques, and robust optimization. These fundamentals are the foundation of data-driven, machine learning (ML), and artificial intelligence (AI) methods.

Section 2.0 – Environmental Quality

Technical Committee 2.1, Physiology and Human Environment

TC 2.1 is concerned with the interactions of human physiology and psychology with the built environment, and their impacts on comfort, health, well-being and performance.

Technical Committee 2.2, Plant and Animal Environment

TC 2.2 is concerned with the relationships of environmental conditions, as altered by air-conditioning, refrigeration, heating and ventilating systems, to the growth, health, and reproduction of plants and animals.

Technical Committee 2.3, Gaseous Air Contaminants and Gas Contaminant Removal Equipment

TC 2.3 is concerned with the nature of trace gaseous contaminants; the measurement of their properties; their effects on living things and materials; the means of removing unwanted gaseous contaminants from gases; and the effectiveness, energy usage, and economy of such purification equipment.

For both ordinary and extraordinary situations (including hostile acts), TC 2.3 is concerned with the effects of gaseous contaminants on the quality of air supplied to and exhausted from enclosed spaces and with the sources of gaseous contaminant pollution within such spaces.

The TC scope covers all aspects of odor technology, including odors, which are produced by volatile particulate contaminants, but excludes purely physiological or psychological aspects of gaseous contaminants such as toxicology and odor perception.

Technical Committee 2.4, Particulate Air Contaminants and Particulate Contaminant Removal Equipment

TC 2.4 is concerned with the nature of particulate contaminants, both solid and liquid; the measurement of their properties; their effects on living things and materials; both solid and liquid; the means of removing unwanted particulate contaminants from gases; and the evaluation of the effectiveness, energy usage, and economy of such purification equipment. The TC is concerned with the effects of particulate contaminants on the quality of air supplied to and exhaust from enclosed spaces, and with the sources of particulate contaminant pollution within such spaces. The scope of TC 2.4 does not include purely physiological or toxicological aspects of particulate pollution, which are the province of TC 2.1 and TC 2.2.

Technical Committee 2.5, Global Climate Change

TC 2.5 is concerned with the impact that activities of the HVAC&R industry may have on the global environment, including climate change and stratospheric ozone depletion. This TC enhances ASHRAE member awareness of these impacts and coordinates activities and planning for the Society to address these issues. This includes identifying factors within the scope of the HVAC&R industry, which may impact favorably and unfavorably, the global environment and the role that ASHRAE serves.

Technical Committee 2.6, Sound and Vibration

TC 2.6 is concerned with the fundamental scientific and engineering principles of sound and vibration, particularly as applied to the design and performance of the built environment.

Technical Committee 2.7, Seismic, Wind and Flood Resistant Design

Technical Committee 2.7 is concerned with fundamental scientific and engineering design principles for the resilient design of HVACR equipment and building mechanical/electrical/plumbing service systems for resistance to natural hazards including seismic, wind and flooding.

Technical Committee 2.8, Building Environmental Impacts and Sustainability

Technical Committee 2.8 is concerned with the environmental, social and economic impacts of buildings, including effects on ecosystem sustainability and the well-being of building occupants. The committee works to enhance awareness of these issues and the resiliency needed to adapt to a changing climate. Building impacts of concern include, but are not limited to, environmental impacts of energy and water production, conversion, delivery and use; availability of energy resources; pollution of air, water, and soil; and encroachment on sensitive habitats.

Technical Committee 2.9, Ultraviolet Air and Surface Treatment

TC 2.9 is concerned with all aspects of equipment and systems that utilize ultraviolet radiation to destroy or deactivate chemical and/or biological air and surface contaminants in HVAC systems and indoor spaces, including, but not limited to, effectiveness, safety, maintenance and economics.

Technical Committee 2.10, Resilience and Security

TC 2.10 is concerned with fundamental scientific and engineering design principles for the resilience of the built environments subjected to extraordinary events including mitigating consequential damages, remediation, and recovery.

Task Group 2, Indoor Air Quality Monitoring Devices

TG2 is concerned with indoor air quality monitors that present data in buildings relevant to IAQ performance. This TG will develop guidelines as to the proper design of an IAQ monitoring strategy. Also performance characteristics among devices can vary. This TG will also determine required performance characteristics for these devices to be used in buildings.

Task Group 2, Reactive Air and Surface Disinfection

TG2 is concerned with advancing the knowledge, effectiveness, and safety of Reactive Air and Surface Treatment and associated technologies for air cleaning and surface disinfection. This TG will be responsible for Photocatalytic Oxidation, Ionization, Hydrogen Peroxide, and other associated or new technologies not specifically covered by another TC. In particular, devices using only ultraviolet radiation to destroy or inactivate biological air and surface contaminants in HVAC systems and indoor spaces are not included.

Section 3.0–Materials and Processes

Technical Committee 3.1, Refrigerants and Secondary Coolants

TC 3.1 is concerned with all properties, and functions, of refrigerants and secondary coolants, including commercial and experimental materials. It is also concerned with service practices to maintain tight systems, handle leak detection and minimize refrigerant emissions.

Technical Committee 3.2, Refrigerant System Chemistry and Contaminant Control

TC 3.2 is concerned with all chemical reactions and contaminant control inside refrigerant systems. The primary focus includes effects of temperature, pressure and materials on chemical reaction rates. It also includes sources, generation, as well as control of water and other contaminants. Materials of interest include refrigerants, lubricants, additives, manufacturing chemicals and materials of construction. Scope includes identifying and quantifying contaminants that affect properties and performance of system components such as filters and driers. It is also concerned with contaminants during recovering, recycling and reclaiming refrigerants.

Technical Committee 3.4, Lubrication

TC 3.4 is concerned with all functions and interactions of lubrication in a refrigerant system, including physical and thermodynamic properties of refrigerant-lubricant systems, all issues relating to the circulation of lubricants in a refrigerant system, and other lubrication concerns.

Technical Committee 3.6, Water Treatment

TC 3.6 is concerned with water treatment for building water systems including scale, corrosion and microbiological control (except sewage drainage systems) and the impacts of water treatment on building operations, maintenance, sustainability, energy efficiency, human health, and water resource conservation.

Section 4.0 – Load Calculations and Energy Requirements

Technical Committee 4.1, Load Calculation Data and Procedures

TC 4.1 is concerned with the identification and compilation of engineering data and the development of procedures for calculating heating, cooling, refrigeration and ventilating loads of structures.

Technical Committee 4.2, Climatic Information

TC 4.2 identifies, researches, analyzes, and disseminates climatic data for design of sustainable built environments.

Technical Committee 4.3, Ventilation Requirements and Infiltration

TC 4.3 is concerned with ventilation requirements and the analysis of infiltration, airflow around buildings, exhaust, and the re-entry of exhaust, including their integration interactions with indoor air quality and energy calculations for buildings and HVAC system design and operation performance and energy consumption.

Technical Committee 4.4, Building Materials and Building Envelope Performance

TC 4.4 is concerned with the requirements and overall performance of the building envelope as it relates to: 1) heat, air and moisture related properties of building materials 2) fundamental heat, air and moisture transport processes of assemblies; 3) interactions with interior conditions and HVAC systems. In addition, TC 4.4 is concerned with the properties of materials used in mechanical systems to control heat and moisture flows.

Technical Committee 4.5, Fenestration

TC 4.5 is concerned with the identification and evaluation of all physical properties of (1) glasses and other glazing materials, (2) shading and shielding materials and devices, and (3) control devices and strategies which influence the radiant, conduction, and convection transfer of both heat and light through fenestration systems. It is also concerned with the development of procedures for calculating and measuring solar heat gain, daylight admission, and heat transfer through fenestration systems.

Technical Committee 4.7, Building Energy Modeling

TC 4.7 identifies, evaluates, develops, and recommends procedures for calculating energy performance for the built environment.

Technical Committee 4.10, Indoor Environmental Modeling

TC 4.10 is concerned with developing, evaluating and recommending procedures for predicting indoor environmental conditions including thermal, acoustical, illumination, and air quality for new or existing buildings.

Technical Resource Group TRG4, Indoor Air Quality Procedure Development

TRG 4 is concerned with developing specific guidance to allow users to apply the IAQP method as defined under ASHRAE Standard 62.1. Committee results will be presented to the 62.1 Committee as submissions for inclusion in appendices of the Standard.

Section 5.0 – Ventilation and Air Distribution

Technical Committee 5.1 Fans

TC 5.1 is concerned with the selection, application and testing-for-rating of fans, including recommended installation practices and field test procedures.

Technical Committee 5.2, Duct Design

TC 5.2 is concerned with the design, characteristics and construction of all types of ductwork for the handling of air and other gases, but does not include chimneys.

Technical Committee 5.3, Room Air Distribution

TC 5.3 is concerned with the distribution, diffusion and conditioning of air within rooms and similarly treated spaces. It includes consideration of the principles of air distribution, air diffusion and performance characteristics of all types of air terminal devices, fan coils, chilled beams and high/low pressure assemblies (boxes) or components, including associated or related accessories for both supply and extract air

Technical Committee 5.4, Industrial Process Air Cleaning (Air Pollution Control)

TC 5.4 is concerned with the removal of particulate matter and gaseous emissions from industrial processes and operations.

Technical Committee 5.5, Air-to-Air Energy Recovery

TC 5.5 is concerned with air-to-air heat exchangers, their application and cost benefit relationship. It includes consideration of the needs and procedures for standard-ization and testing, rating and terminology applicable to air-to-air energy recovery.

Technical Committee 5.6, Control of Fire and Smoke

TC 5.6 is concerned with the design and application of systems and components for the protection of life and property from fire and smoke in buildings.

Technical Committee 5.7, Evaporative Cooling

TC 5.7 is concerned with contact type heat transfer surfaces and equipment for evaporative air-cooling. It includes application to residential, commercial and industrial cooling requirements.

Technical Committee 5.9, Enclosed Vehicular Facilities

TC 5.9 is concerned with existing technology and design requirements for enclosed transportation facilities. Enclosed vehicular facilities encompass the subway portion of rapid transit systems, vehicular tunnels, rail tunnels, enclosed bus ways, bus terminals and parking garages.

Technical Committee 5.10, Kitchen Ventilation

TC 5.10 is concerned with the design, construction, installation, commissioning, and sustainable operation of code-compliant kitchens.

Technical Committee 5.11, Humidifying Equipment

Technical Committee 5.11 is concerned with equipment for raising the humidity of air in residential, and commercial, and industrial spaces; its application and control; effect of humidity on structures, content, processes, materials, and occupants; and testing and standards defining environmental and physiological requirements.

Section 6.0 – Heating Equipment, Heating and Cooling Systems and Applications

Technical Committee 6.1, Hydronic and Steam Equipment and Systems

TC 6.1 is concerned with all aspects of hydronic and steam systems. This includes the application of boilers, chillers, terminal units, and all accessories and controls making up the total system as well as the design of the integrated system. In addition to comfort applications of both heating and cooling, snow melting systems are included. Cooperation with other TCs is recognized in areas such as control, noise and vibration, refrigeration, pumps and hydronic and service water piping.

Technical Committee 6.2, District Energy

TC 6.2 is concerned with district energy technology and integrated systems that provide one or more forms of thermal energy or a combination of thermal energy and electric power from a central plant(s) to meet the heating, cooling, or combined thermal energy and power needs of end-users in two or more structures. The TC collects and disseminates information on regional resource planning including the

design, performance, economic analysis, operation and maintenance of central plants, distribution networks, and consumer limited to materials, construction methods, heat transfer, fluid flow, and measurement. The scope of the TC includes the development and assessment of associated technologies for energy use sections. Coordination occurs with other TCs responsible for components or sub-systems of district energy systems.

Technical Committee 6.3, Central Forced Air Heating and Cooling Systems

TC 6.3 is concerned with those central forced air systems used for residential and light commercial building comfort heating and cooling. Responsibility covers the design and performance of the entire system, including equipment, controls, ducts and the interactions of the system with building heating and cooling loads.

Technical Committee 6.4, Combined Heat and Power Systems

TC 6.4 is concerned with combined heat and power (CHP) systems, their cycles and components including heat recovery, combustion turbine inlet cooling (CTIC), energy conversion and system integration. The systems provide both electrical/mechanical power and cooling/heating thermal energy and are also known as cogeneration systems; trigeneration systems; and combined cooling heating and power systems.

Technical Committee 6.5, Radiant Heating and Cooling

TC 6.5 is concerned with all types of sensible radiant space heating and cooling systems. Typical applications are high or medium-temperature radiant elements, spot, or total area radiant heating panels or thermally active slabs for heating and cooling.

Technical Committee 6.6, Service Water Heating Systems

TC 6.6 is concerned with two general areas: (1) service water requirements, and (2) design of the system for heating and distributing service hot water. The heating system design requires knowledge of storage capacities, heat recovery systems, etc. Note: Responsibility for the design of service water piping has not yet been assigned.

Technical Committee 6.7, Solar and Other Renewable Energies

Technical Committee 6.7 is concerned with all equipment, processes and systems which collect, convert, store and utilize solar energy or other renewable energy sources. Overlap with other TCs is recognized where specific systems are included to utilize or distribute energy as heat or electricity.

Technical Committee 6.8, Geothermal Heat Pump and Energy Recovery Applications

TC 6.8 is concerned with all equipment and systems which collect, store and utilize geothermal energy or fluids for the purpose of heating and cooling, and with the development and application of heat pump systems and heat recovery by refrigeration cycles including system design, operation, and performance (product design of unitary heat pumps and equipment components is excluded).

Technical Committee 6.9, Thermal Storage

TC 6.9 is concerned with the storage of thermal energy for use in cooling, heating and/or refrigeration applications and with charging or discharging this energy at a controlled rate. The TC collects and disseminates information on thermal energy storage configurations, processes, materials, containers, components, systems and costs as well as analytical methods for evaluating, predicting, commissioning and optimizing the various benefits of thermal energy storage systems on-site and beyond

Technical Committee 6.10, Fuels and Combustion

TC 6.10 is concerned with the properties of conventional, alternative and waste product fuels and the characteristics important to their utilization for heating, refrigeration and air conditioning. These characteristics are the combustion process, including combustion air supply and venting combustion products, emissions from the combustion of fuels, and the operation of fuel-burning equipment.

Section 7.0 – Building Performance

Technical Committee 7.1, Integrated Building Design

TC 7.1 is concerned with facilitating interaction among all building disciplines, from earliest concept development throughout the building lifecycle, in order to achieve integration of design efforts and operation of the total building.

Technical Committee 7.2, HVAC&R Construction & Design Build Technologies

TC 7.2 is concerned with enhancing the collaboration of Contractors and Design Build Firms with the entire ASHRAE membership to ensure that the relevant research, publications, and educational materials promote the design, construction, and operation of resource efficient buildings.

Technical Committee 7.3, Operation, Maintenance and Cost Management

TC 7.3 is concerned with the operation, maintenance, and cost management of buildings and the use of life cycle cost analysis techniques for decision-making when considering investments in building performance.

Technical Committee 7.4, Exergy Analysis for Sustainable Buildings (EXER)

TC 7.4 is concerned with all exergy aspects of energy and power utilization of systems and equipment for comfort and service, assessment of their impact on the environment, and development of analysis techniques, methodologies and solutions for environmentally safer, sustainable low-exergy buildings

Technical Committee 7.5, Smart Building Systems

TC 7.5 is concerned with the performance and interactions of smart building systems (SBS), the impact of smart building systems on the total building performance, methods for achieving more intelligent control and operation of building processes, including supervisory control strategies and the optimization of dynamic building components and systems, interactions of smart buildings with utilities, and documentation of the benefits of smart buildings and smart building systems as they relate to energy consumption, cost of operation, maintenance, occupant comfort, building commissioning, operations, and impact of the SBS on utilities and natural resources.

Technical Committee 7.6, Building Energy Performance

TC 7.6 is concerned with the estimation, measurement, analysis, benchmarking, and management of whole building and building systems energy and water performance. This includes performance and resource management of new and existing buildings.

Technical Committee 7.7, Testing and Balancing

TC 7.7 is concerned with field testing, adjusting, and balancing and adjusting of heating, ventilating, air-conditioning systems, and other environmental systems including the devices necessary in control or measurement of those systems, and including the identification, organization and development of procedures for performing these tasks to ensure optimum system performance within the limitations of the equipment, design, and installation.

Technical Committee 7.8, Owning and Operating Costs

TC 7.8 is concerned with owning and operating costs, principally the understanding of comparative owning and operating costs and economic analysis techniques, relating to HVAC&R systems.

Technical Committee 7.9, Building Commissioning

TC 7.9 is concerned with methods of developing and executing the commissioning process as required to provide HVAC and related systems which conform to design intent and project requirements.

Technical Committee 7.10, Occupant Behavior in Buildings

Technical Committee 7.10, is concerned with understanding the building occupant's behavior and interactions with building energy and control systems; including the development, study, and validation of building modes of operation, operation methods, and measurement and control tools; to positively impact occupant indoor environmental quality, health, productivity, and building energy consumption.

Section 8.0–Air-Conditioning and Refrigeration System Components

Technical Committee 8.1, Compressor Technology

TC 8.1 is concerned with the design, performance, features, operating characteristics, and standards of all types of compressors for use with refrigerants.

Technical Committee 8.2, Vapor Compression Cooling and Heat Pump Chillers

TC 8.2 is concerned with cooling and heat pump chillers that involves centrifugal or positive displacement compressors, including those with heat exchangers, drivers, controls, split evaporators and condensers, and other accessories

Technical Committee 8.3, Absorption and Heat Operated Machines

TC 8.3 is concerned with the design, performance and application of equipment energized by a heat source and using a thermodynamic cycle to provide an air-conditioning, refrigerating or heating function; with the properties of absorbent solutions or special working fluids used in these cycles; and with components of the cycle requiring specific design characteristics.

Technical Committee 8.4, Air-to-Refrigerant Heat Transfer Equipment

TC 8.4 is concerned with design, performance, and application of heat transfer equipment in which a refrigerant, including water or brine, is used to transfer heat with air. The processes of concern to the committee include both sensible heat transfer and combined sensible and latent heat transfer.

Technical Committee 8.5, Liquid-to-Refrigerant Heat Exchangers

TC 8.5 is concerned with the thermal and mechanical design, performance, and application of devices for accomplishing heat transfer between refrigerants (including secondary refrigerants) and liquids. Such devices include liquid cooled refrigerant condensers and refrigerant evaporators for cooling liquids.

Technical Committee 8.6, Cooling Towers and Evaporative Condensers

Technical Committee TC 8.6 is concerned with open and closed circuit cooling towers, evaporative condensers, adiabatic condensers and fluid coolers, spray ponds, and other types of contact type liquid-to-air heat rejection equipment along with their application and impact on complete HVAC, Industrial, and Refrigeration systems, including the associated energy and water usage as well as water treatment requirements.

Technical Committee 8.7, Variable Refrigerant Flow (VRF)

TC 8.7 is concerned with the design, performance, and application of variable refrigerant flow systems into commercial HVAC systems

Technical Committee 8.8, Refrigerant Systems Controls and Accessories

TC 8.8 is concerned with refrigerant flow controls and other refrigerant control devices, including relief devices, check valves, condenser water regulators and oil separators.

Technical Committee 8.10, Mechanical and Desiccant Dehumidification Equipment, Heat Pipes and Components

TC 8.10 is principally concerned with mechanical and solid/liquid desiccant dehumidification equipment and heat pipes and their design performance, applications engineering, related load calculations, commissioning, operation, and maintenance. The committee is also concerned with the integration of desiccant equipment and components into other systems and with fundamental abstracts of heat and mass-transfer as they relate to desiccant materials and compounds.

Technical Committee 8.11, Unitary and Room air Conditioners & Heat Pumps

TC 8.11 is concerned with products for use in comfort cooling and/or heating systems. The factory engineered vapor compression systems include: (1) unitary equipment which generally requires the field engineering of the product mounting and ducting, piping and electrical connections, (2) room air conditioners such as window mounted units and ductless split systems and (3) packaged terminal equipment. Specifically excluded are unitary combustion engine driven systems.

Section 9.0–Building Applications

Technical Committee 9.1 Large Building Air-Conditioning Systems

TC 9.1 is concerned with the general design concepts of the HVAC systems that are utilized for the conditioning of large buildings, including the integration of components into centralized and decentralized systems.

Technical Committee 9.2, Industrial Air Conditioning and Ventilation

Technical Committee 9.2 is concerned the environment that supports reliable operation of manufacturing and industrial processes and equipment, and strives to ensure the safety of personnel working in industrial facilities. It provides guidance and recommendations regarding the design, installation, operation and maintenance of heating, air conditioning, supply and exhaust ventilation, pressurization and air filtration systems where harmful chemical, physical, nuclear, biological contaminants or hazardous atmospheres have an increased potential to exist.

Technical Committee 9.3, Transportation Air Conditioning

TC 9.3 is concerned with providing technical information regarding transportation air conditioning applications, including aerospace, rail, surface vehicles, and ships.

Technical Committee 9.6, Healthcare Facilities

TC 9.6 is concerned with the application of ventilating, air-conditioning, refrigeration, life safety, and energy conservation systems to healthcare (hospital, outpatient, long-term care) facilities.

Technical Committee 9.7, Educational Facilities

TC 9.7 is concerned with the application of ventilating, air-conditioning, refrigeration, life safety, and energy conservation systems for educational facilities, including early childhood education through higher education facilities.

Technical Committee 9.8, Specialized Building Air-Conditioning Applications

TC 9.8 is concerned with the application of heating, ventilating, air-conditioning, refrigeration, humidity control, and energy conservation systems to large buildings. Specific areas of primary responsibility and expertise to include applications for the following types of large commercial and public buildings: domiciliary, hospitality, retail, assembly, natatoriums, atria, warehouses, transportation centers, museums, archives, galleries, libraries, and justice facilities.

Technical Committee 9.9, Mission Critical Facilities, Data Centers, Technology Spaces and Electronic Equipment

TC 9.9 is concerned with all aspects of mission critical facilities, technology spaces, and electronic equipment/systems. This includes data centers, computer rooms/closets, server rooms, raised floor environments, high-density loads, emergency network operations centers, telecom facilities, communications rooms/closets, and electronic equipment rooms/closets.

Technical Committee 9.10, Laboratory Systems

TC 9.10 is concerned with HVAC components for laboratory systems and their use therein. These components include but are not limited to air intakes, supply air conditioning systems, air distribution methods, laboratory fume hoods, biological safety cabinets, exhaust systems and exhaust discharge. The technical committee will address the unique requirements of all types of laboratories. These laboratories include but are not limited to nuclear, pharmaceutical/medical, general chemistry, and teaching. Additional TC 9.10 concerns are; (1) the reduction of energy usage in laboratory systems, (2) the monitoring of government regulations affecting laboratory operation.

Technical Committee 9.11, Clean Spaces

TC 9.11 is concerned with air conditioning systems for cleanrooms and spaces, including process, product and facility air conditioning and related process ventilation for Research and Development, manufacturing, assembly, test and clean medical areas. This includes electronic, microelectronic, pharmaceutical and aerospace facilities and operating rooms.

Technical Committee 9.12, Tall Buildings

TC 9.12 is concerned with the function, operation, energy and human safety for buildings in excess of 300 feet in height. Also included is the determination of requirements related to hydraulics, airflow, infiltration, thermal insulation, water vapor retarders, environmental control, fire and smoke control and maintenance.

Technical Committee 9.13, SPACE (Extraterrestrial and Deep Space Environmental Control Systems)

TC 9.13 is concerned with environmental control systems and components, as well as their function and ability to establish and maintain habitable levels of indoor environmental quality, located in and servicing enclosed spaces at deep space and extraterrestrial locations. The committee will also address environmental control system safety, operation and maintenance, refrigerant usage, and performance in conditions different from Earth and Earth's atmosphere.

Section 10.0–Refrigeration Systems

Technical Committee 10.1, Industrial Refrigeration and Piping

TC 10.1 is concerned with customized refrigeration designs using standard or modified equipment and as well as with the safety, design and insulation of primary and secondary refrigerant piping.

Technical Committee 10.2, Refrigeration Applications

TC 10.2 is concerned with the application of refrigeration systems for precooling, processing, manufacturing and storage of foods, beverages and other products, including the understanding and procedures for calculating design and hourly refrigeration loads, as well as system energy usage. This TC includes the application of equipment and systems for ice manufacturing and ice storage, as well as ice skating and curling rinks. This scope excludes walk-in freezers and coolers <3000 sq. ft. and ice making systems less than five tons of ice per day

Technical Committee 10.6, Transport Refrigeration

TC 10.6 is concerned with the application of standard and special refrigeration equipment to all air, land, and sea transportation systems.

Technical Committee 10.7, Commercial Food and Beverage Refrigeration Equipment

TC 10.7 is concerned with the application and performance of equipment and systems for the refrigeration of food and beverages in commercial operations. This includes commercial equipment such as refrigerated merchandisers and storage cases, walk-in freezers and coolers (<3,000 sq. ft>), beverage vendors and dispensers, commercial ice makers, and water coolers.

Section MTG – Multidisciplinary Task Groups

Multidisciplinary Task Group, Air Change Rate

MTG.ACR will coordinate TC/TG/TRG/SSPC technical activities to help evaluate the technical basis and adoption of airflow rate specifications in terms of Air Change Rate (ACR) or Air Changes per Hour (ACH) for spaces such as cleanrooms, laboratories, patient rooms, operating rooms, and other similar spaces. Responsibilities include the development of research projects, development and presentation of technical programs for all types of spaces which currently require ACR specifications, and a special publication detailing aspect of the ACR philosophy and practice. The work of this MTG will potentially impact design guidelines, ASHRAE Handbook, and related ASHRAE standards. This MTG intends to involve other national and international groups and organizations in these efforts

Multidisciplinary Task Group, Building EQ

MTG.BEQ will be responsible for the technical development, business development, planning, training, and marketing of programs for the Building EQ enterprise. Responsibilities include suggestions for research, development, and presentation of technical programs of all types on Building EQ and special publications detailing aspects of the Building EQ program.

Multidisciplinary Task Group, Building Information Modeling

MTG.BIM will coordinate the activities of multiple TC/TG in the area of standards and approaches to support the implementation of BIM within ASHRAE products and within the industry workplace and will generate ASHRAE research. MTG-BIM will also represent ASHRAE interests within the BIM marketplace outside of ASHRAE and provide a conduit for funneling information about the BIM industry to ASHRAE members.

Multidisciplinary Task Group, Controlled Environment Agriculture

MTG.CEA will coordinate TC/TG/TRG technical activities related to the design of indoor plant production facilities and their HVAC&R systems. The priority of the MTG will be coordinating communication and opportunities between and through each of the involved committees to align and provide an ASHRAE society stance and direction for the development of plant production facilities. There is an ASABE standard in development, X653, which focuses on environmental conditions for indoor plant production facilities. This ASHRAE MTG will help guide designers, engineers and owners on how to best design and select the HVAC&R systems and equipment given the conditions in that standard. The MTG would ensure that aspects related to energy efficiency, efficacy, and selection of optimum HVAC&R systems are well understood within ASHRAE.

Multidisciplinary Task Group, Cybersecurity for HVAC Systems and Related Infrastructure

MTG.CYB includes areas of Cybersecurity relevant to HVAC and related systems, infrastructure, and interfaces, including industry standards, advocacy and education. The scope includes the entire lifecycle of buildings, including building planning, design, construction and operation. The MTG will be active in Program to fulfill advocacy and education. The MTG would contribute to the Handbook by coordinating information in the section on cybersecurity. The MTG would also be active in Publications by production of guideline documents to assist ASHRAE members in implementing and developing cybersecurity designs and practices.

Multidisciplinary Task Group, Effective Building Operations

MTG.EBO will coordinate the activities of multiple TC/TG/TRG and other stakeholders in the area of training and tools to support the operation of buildings to enhance the indoor environment and use energy effectively. Responsibility will include suggestions for research as well as development of technical programs and special publications on effective building operation for energy management.
The initial MTG roster includes Voting Representatives and Alternates for TCs 1.4 (Control Theory and Application), 7.3 (Operation and Maintenance Management) 7.8 (Owning and Operating Costs) and GPC 1.3 (Building Operation and Maintenance Training for the HVAC&R Commissioning Process)

Other TCs GPCs, and SPCs may also now wish to participate in this MTG with a Voting Representative and Alternate(s) given its scope and charge.

Multidisciplinary Task Group, Generative Artificial Intelligence

MTG.GAI will coordinate TC/TG/TRG technical activities to help support the adoption of generative AI by compiling technology adoption resources, best practice development guidelines and undertaking research projects to benefit ASHRAE members and for society operations and members services.

Multidisciplinary Task Group, Hot Climate Design Guide

MTG.HCDG will coordinate TC/TG/TRG technical Activities to help support the development of the technical basis and adoption of the Hot Climate Design Guide. Responsibilities include suggestions for Research, Development and Presentations and special publications detailing aspects of the Hot Climate Design Guide.

Multidisciplinary Task Group, Lower Global Warming Potential Alternative Refrigerants

MTG.LowGWP will coordinate TC/TG/TRG technical activities to help transition the HVAC&R industry to sustainable lower Global Warming Potential (GWP) alternative refrigerants. The MTG will further request participation from US EPA and AHRI. The MTG responsibilities include research, development and presentation of technical programs of all types on alternative lower GWP refrigerants, suggestions for Life Cycle Climate Performance (LCCP) systems evaluation for different applications, development of lower GWP solutions for different applications, and a special publication detailing aspects of LCCP applied to the HVAC&R fields.

Multidisciplinary Task Group, Refrigeration and Air Conditioning Plant Assessment Guide

MTG.RAC will coordinate and oversee the creation of an ASHRAE/UNEP Guide for Refrigeration and Air-Conditioning (RAC) Plant Assessments. The Guide aims to be an international reference for the safe and sustainable operation and maintenance of air-conditioning and refrigeration plants, with special focus on developing markets. The Guide is to form the basis of tools that will verify compliance to recommended practices that can be verified through a point-based qualification or verification scheme. The work will be a cooperative effort with United Nations Environment due to the critical need for such guidance in the developing world with availability of UNEP funding to offset authoring expenses.

Multidisciplinary Task Group, Resilience

MTG.RES will coordinate TC/TG/TRC activities related to resilience including promoting the ASHRAE definition of "resilience", finalizing a roadmap for ASHRAE to follow, prioritizing activities, and providing guidance to functional groups regarding developing their resilience plans. The MTG will develop documents as necessary to formalize resilience concepts and procedures.