

District Energy Space 2017



















Spotlighting Industry Growth

2017: More than 109 million square feet reported *Over 2.2 billion square feet reported since 1990*

District Energy Space 2017

Industry Growth around the World

Dedicated to the growth and utilization of district energy as a means to enhance energy efficiency, provide more sustainable, reliable and resilient energy infrastructure, and contribute to improving the global environment.



The publication of *District Energy Space* has become an annual tradition for the International District Energy Association since 1990. Compilations beyond North America were initiated in 2004.

This issue features a compilation of data provided by our members including the number of buildings and their area in square feet that have been committed or recommitted to district energy service in North America during calendar year 2017, or previously unreported for recent years.

Each year, IDEA asks all of its member systems to provide information on buildings that committed or recommitted to district energy service during the previous calendar year. To qualify for consideration in *District Energy Space*, a renewal must be a contracted building or space that had been scheduled to expire during the calendar year and was renewed under a contract with a duration of 10 years or more. Year-to-year rollover—simple continuation of service to existing buildings is not considered renewal.



Established in 1909, the International District Energy Association (IDEA) serves as a vital communications and information hub for the district energy industry, connecting industry professionals and advancing the technology around the world. With headquarters just outside of Boston, Mass., IDEA comprises over 2,200 district heating and cooling system executives, managers, engineers, consultants and equipment suppliers from 23 countries. IDEA supports the growth and utilization of district energy as a means to conserve fuel, increase energy efficiency and resilience, and reduce emissions.

For each building, *District Energy Space* provides the following information:

- Building name and/or type
- Service provider's name and location
- Building area served in square feet
- Services provided (space heating, domestic hot water, laundry, space cooling, ice-making, pool warming, etc.)



District Energy Space not only enables IDEA to document the year-to-year growth experienced by our member systems, but also can be a valuable marketing asset for your organization. During the IDEA 109th Annual Conference in Vancouver, BC, Canada, June 11-14, 2018, IDEA will recognize and present awards to those systems submitting the greatest amount of total square footage and

the greatest number of total buildings for 2017 for both North America and Beyond North America. All systems submitting growth data will receive an IDEA *Certificate of Participation*.

District Energy Space 2017 and previous issues are available in PDF format by downloading from IDEA's Web site, http://www.districtenergy.org/district-energy-space

Summary for 2017

North America

Our members reported that they committed or recommitted 190 customer buildings in North America totaling 50,028,785 square feet (sq ft) of building space to district energy service during 2017, or were previously unreported. That compares with 350 buildings and **57,810,954** sq ft during 2016.

The North America total of 50,028,785 sq ft added in 2017 to IDEA's running total of square footage of 751,664,024 sq ft committed to North American district energy systems since 1990, brings the current total for North America reported since 1990 to **801,692,809** sq ft.

Beyond North America

IDEA is also pleased to be able to report strong system growth from beyond North America, which we have tracked since 2004. An additional 243 buildings and 59,058,273 sq ft were reported for 2017. That compares with 425 buildings and 105,331,989 sq ft during 2016.

The Beyond North America total of 59,058,273 sg ft added in 2017 to IDEA's running total of square footage of 1,366,513,294 Beyond North America since 2004, brings the Beyond North America total reported since 2004 to 1,425,571,567 sq ft.

Totals: North America and Bevond North America

The combined building area reported added during 2017 in North America and Beyond North America is 108,318,059 sq ft. The total building area added, as reported to District Energy Space by our members since our tally began is 109,087,059 + 2,118,177,318 = 2,227,264,377 sq feet.

Stand Up and Be Recognized for 2018

Make plans now to photograph and enter your customer buildings that commit or recommit for your district energy service during calendar year 2018! The deadline for submittal of buildings for 2018 is Fri., April 5, 2019.

Continuing our tradition, during the IDEA 110th annual conference in Pittsburgh, Pennsylvania, June 24-27, 2019, IDEA will congratulate and present awards to those systems reporting the largest growth for calendar 2018 for both North America and Beyond North America. We look forward to seeing you there!

Category	North America	Beyond North America
Commercial-Mixed Use	17,223,208	2,514,903
Commercial-Office	13,199,737	4,205,726
Commercial-Retail/Manufacturing	127,050	211,665
Commercial-Other	951,490	561,273
Entertainment, Cultural or Sporting Center	1,429,252	860,650
Government	951,490	1,627,865
Hotel	2,001,736	417,127
Residential	5,526,985	44,841,549
School, Hospital or Institution	7,843,840	2,163,376
Other	870,425	1,654,140
Square Footage Reported 2017	50,028,785	59,058,273

^{*} All entries are newly signed, connected or renewed customers during calendar year 2017 (Renewal means contractually recommitted to a longterm service agreement of 10 years or greater.)

Commercial-Mixed Use

Texas Mutual Insurance
 Austin, TX
 Austin Energy
 283,000 sq ft—space cooling

Gilbert Building
 St. Paul, MN
 District Energy St. Paul
 35,000 sq ft—space heating



District Energy St. Paul—Gilbert Building

Treasure Island Center St. Paul, MN District Energy St. Paul 390,000 sq ft—space heating



District Energy St. Paul—Treasure Island Center

Wells Fargo Place
 St. Paul, MN
 District Energy St. Paul
 620,000 sq ft—space heating,
 space cooling



District Energy St. Paul—Wells Fargo Place

428 Minnesota Street

St. Paul, MN
District Energy St. Paul
47,080 sq ft—space heating,
space cooling



District Energy St. Paul—428 Minnesota Street

• 600 W. Chicago Avenue Chicago, IL

Enwave Chicago 1,621,745 sq ft—space cooling

404 W. Harrison Street
 Chicago, IL
 Enwave Chicago
 2,700,000 sq ft—space cooling



Enwave Chicago—404 W. Harrison

200 World Trade Center (Merchandise Mart)

Chicago, IL Enwave Chicago 3,460,000 sq ft—space cooling

Office Building

Toronto, ON, Canada Enwave Energy Corporation 1,407,099 sq ft—space cooling

Retail Building

Toronto, ON, Canada Enwave Energy Corporation 851,000 sq ft—space heating, space cooling, domestic hot water

 Office, Retail and Residential Building

Toronto, ON, Canada Enwave Energy Corporation 3,017,118 sq ft—space heating, space cooling, domestic hot water Retail Building

Toronto, ON, Canada Enwave Energy Corporation 1,736,408 sq ft—space cooling

Office Building

Toronto, ON, Canada Enwave Energy Corporation 758,528 sq ft— space cooling

3 Civic Plaza

Surrey, BC, Canada Surrey City Energy 169,740 sq ft—space heating, domestic hot water, process, kitchen

 Wayne Densch Center for Student Athlete Leadership (LEED® Gold)

Orlando, FL University of Central Florida 21,420 sq ft—space heating, space cooling, domestic hot water, kitchen



University of Central Florida—Wayne Densch Center for Student Athlete Leadership

 Resource Management Warehouse

Orlando, FL University of Central Florida 9,992 sq ft—space heating, space cooling, domestic hot water, kitchen

Engineering II

Orlando, FL University of Central Florida 108,078 sq ft—space heating, space cooling, domestic hot water, kitchen

WTC Tower 3

New York City, NY Con Edison Co. of New York 2,167,000 sq ft—space heating, domestic hot water, kitchen

Commercial-Office

■ 112 Properties

St. Paul, MN District Energy St. Paul 7,800 sq ft—space heating

Osborne Properties

St. Paul, MN District Energy St. Paul 278,388—space heating, space cooling

■ Exchange Building

St. Paul, MN District Energy St. Paul 60,775—space cooling



District Energy St. Paul—Exchange Building

■ 350 N. Orleans Street

Chicago, IL Enwave Chicago 1,243,000 sq ft—space cooling

■ 200 E. Randolph Street

Chicago, IL Enwave Chicago 2,529,269 sq ft—space cooling

■ 120 S. LaSalle Street

Chicago, IL Enwave Chicago 1,108,680 sq ft—space cooling

■ 33 N. LaSalle Street

Chicago, IL Enwave Chicago 405,000 sq ft—space cooling

■ 325 N. Wells Street

Chicago, IL Enwave Chicago 154,112 sq ft—space cooling

221 N. LaSalle Street

Chicago, IL
Enwave Chicago
416,224 sq ft—space cooling

Commercial-Office cont.

Office Building
 Toronto, ON, Canada
 Enwave Energy Corporation
 957,902 sq ft—space cooling

Office Building
 Toronto, ON, Canada
 Enwave Energy Corporation

961,557 sq ft—space cooling

Office Building

Toronto, ON, Canada

domestic hot water

Office Building
 Toronto, ON, Canada
 Enwave Energy Corporation
 152,000 sq ft—space heating,

Enwave Energy Corporation

204,217 sq ft—space heating

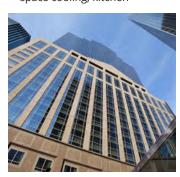
Office Building
 Toronto, ON, Canada
 Enwave Energy Corporation
 319,449 sq ft—space heating,
 space cooling, domestic hot water

Office Building
 Toronto, ON, Canada
 Enwave Energy Corporation
 716,432 sq ft—space cooling

Office Building
 Toronto, ON, Canada
 Enwave Energy Corporation
 368,023 sq ft—space cooling

Office Building
 Toronto, ON, Canada
 Enwave Energy Corporation
 763,000 sq ft—space heating,
 space cooling

Plaza 7 Complex, 45 South 7th Street Minneapolis, MN NRG Minneapolis 315,000 sq ft—space heating, space cooling, kitchen



NRG Minneapolis—Plaza 7 Complex, 45 South 7th Street

■ Traitel Building

Santa Clara, CA Stanford University 49,176 sq ft—space heating, space cooling, domestic hot water, humidification, kitchen, refrigeration



Stanford University—Traitel Building

Kingscote Gardens
 Santa Clara, CA
 Stanford University
 19,839 sq ft—space heating,
 space cooling, domestic hot water, humidification, kitchen, refrigeration



Stanford University—Kingscote Gardens

 Facilities Support Building— Print Shop
 Orlando, FL

University of Central Florida 1,869 sq ft—space heating, space cooling, domestic hot water, kitchen

309
Orlando, FL
University of Central Florida
1,025 sq ft—space heating,
space cooling, domestic hot
water, kitchen

Biological Sciences—Room

Commercial—Retail/ Manufacturing

Burger Study
 Indianapolis, IN
 Citizens Thermal Energy
 30,000 sq ft—space cooling

Molex Copper Flex Products
 St. Paul, MN
 District Energy St. Paul
 53,500 sq ft—space heating,
 space cooling

Pollo Tropical
 Orlando, FL
 University of Central Florida
 3,550 sq ft—district heating,
 district cooling, domestic hot water, kitchen

Target Store
 New York City, NY
 Con Edison Co. of New York
 40,600 sq ft—space heating,
 domestic hot water

Target Store New York City, NY Con Edison Co. of New York 42,000 sq ft—space heating, domestic hot water

Commercial-Other

Office Building (Data Center)
 Toronto, ON, Canada
 Enwave Energy Corporation
 275,000 sq ft—space cooling

Office Building (Data Center)
 Toronto, ON, Canada
 Enwave Energy Corporation
 225,000 sq ft—space cooling

Frontier Communications
 Rochester, NY
 Rochester District Heating
 92,433 sq ft—space heating



Rochester District Heating—Frontier Communications

Joslyn Museum
 Omaha, NE
 NRG Omaha
 107,000 sq ft—space heating, space cooling

Kiewitt University
 Omaha, NE
 NRG Omaha
 60,000 sq ft—space heating,
 space cooling

 District Energy Plant IV (LEED® Gold)
 Orlando, FL
 University of Central Florida 9,830 sq ft—space heating, space cooling, domestic hot water, kitchen

Ferrell Commons
 Orlando, FL
 University of Central Florida
 3,200 sq ft—space heating,
 space cooling, domestic hot water, kitchen

Entertainment, Cultural or Sporting Center

Helen Hayes Theater New York City, NY Con Edison Co. of New York 23,000 sq ft—space heating

 Saint Paul RiverCentre (LEED® EB)
 St. Paul, MN
 District Energy St. Paul 312,000 sq ft—space heating, space cooling



District Energy St. Paul—Saint Paul RiverCentre

Xcel Energy Center (LEED® EB)
 St. Paul, MN
 District Energy St. Paul
 650,000 sq ft—space heating,
 space cooling

Entertainment, Cultural or Sporting Center cont.

Office Building

Toronto, ON, Canada **Enwave Energy Corporation** 54,000 sq ft—space heating

■ Century Square—Retail

College Station, TX Texas A&M University 348,460 sq ft—electricity

■ Women's Softball Stadium (LEED® Gold)

Columbia, MO University of Missouri 27,112 sq ft—space heating, space cooling



University of Missouri—Women's Softball Stadium

Arena Auditorium Addition Phase II

Laramie, WY University of Wyoming 14,680 sq ft—space heating, domestic hot water, kitchen, refrigeration



University of Wyoming—Arena Auditorium Addition Phase II

Government

Warren Burger Federal **Building**

St. Paul, MN District Energy St. Paul 450,000 sq ft—space heating, space cooling



District Energy St. Paul—Warren Burger Federal Building

Golden Rule Building

St. Paul, MN District Energy St. Paul 334,490 sq ft—space heating, space cooling



District Energy St. Paul—Golden Rule Building

Legend Technical Services

St. Paul, MN District Energy St. Paul 12,000 sq ft—space heating

Public Safety Building

Rochester, NY Rochester District Heating 155,000 sq ft—space heating



Rochester District Heating—Public Safety Building

Hotel

■ Downtown Austin Marriott

Austin, TX **Austin Energy** 499,000 Sq ft—space cooling

Plaza 7 Complex, 45 South 7th Street

Minneapolis, MN NRG Minneapolis 555,000 sq ft—space heating, space cooling, kitchen

■ 168 N. Michigan Avenue

Chicago, IL **Enwave Chicago** 104,000 sq ft—space cooling

■ 171 W. Randolph Street

Chicago, IL **Enwave Chicago** 315,000 sq ft—space cooling

Marriott Hotel

Omaha, NE NRG Omaha 304,000 sq ft—space heating, space cooling, kitchen

Century Square Hotel

College Station, TX Texas A&M University 224,736 sq ft—electricity

Residential

520 Park Avenue

New York City, NY Con Edison Co. of New York 240,000 sq ft—space heating, domestic hot water

■ Woolworth Building

New York City, NY Con Edison Co. of New York 161,000 sq ft—space heating, domestic hot water

Lowertown Commons

St. Paul, MN District Energy St. Paul 118,530 sq ft—space heating, space cooling



District Energy St. Paul—Lowertown Commons

Heritage House

St. Paul, MN District Energy St. Paul 65,000 sq ft—space heating



District Energy St. Paul—Heritage House

Pioneer Apartments

St. Paul, MN District Energy St. Paul 166,367 sq ft—space heating, space cooling

■ 333 W. Hubbard Street

Chicago, IL Enwave Chicago 375,000 sq ft—district cooling

■ 630 N. State Street

Chicago, IL **Enwave Chicago** 393,488 sq ft—district cooling

Office and Residential Building

Toronto, ON, Canada **Enwave Energy Corporation** 32,000 q ft—space heating, domestic hot water

Office Building

Toronto, ON, Canada **Enwave Energy Corporation** 220,000 sq ft—space heating, domestic hot water

Onni-Riva 3

Richmond, BC, Canada Lulu Island Energy Company 155,829 sq ft—space heating, domestic hot water



Lulu Island Energy Company, Oval Village District Energy Utility—Onni-Riva 3

Residential cont

Aspac, 2 River Green (Lot 9) Richmond, BC, Canada Lulu Island Energy Company 323,111 sq ft—space heating, domestic hot water



Lulu Island Energy Company—Oval Village District Energy Utility—2 River Green



Lulu Island Energy Company—Oval Village District Energy Utility—Energy Transfer Station

■ 88 Elm Street

Rochester, NY Rochester District Heating 80,271 sq ft—space heating, domestic hot water



Rochester District Heating—88 Elm Street

■ 50 Chestnut Street Rochester, NY Rochester District Heating

164,043 sq ft—space heating, domestic hot water



Rochester District Heating-50 Chestnut Street

Alliance Building

Rochester, NY Rochester District Heating 167,000 sq ft—space heating, domestic hot water



Rochester District Heating—Alliance Building

3 Civic Plaza

Surrey, BC, Canada Surrey City Energy 310,545 sq ft—space heating, domestic hot water, process, kitchen

Park Avenue, Phase 2

Surrey, BC, Canada Surrey City Energy 345,890 sq ft—space heating, domestic hot water, process, kitchen

Century Square-Apartment College Station, TX

Texas A&M University 240,000 sq ft-electricity

Park West

College Station, TX Texas A&M University 1,453,951 sq ft—electricity

Honors Hall

Lubbock, TX Texas Tech University— Operations Division CHACP 50,389 sq ft—space heating, space cooling, domestic hot water, kitchen, refrigeration



Texas Tech University—Honors Hall

■ Peter Lougheed Hall

Edmonton, AB, Canada University of Alberta 87,414 sq ft—space heating, space cooling, domestic hot water, humidification, kitchen



University of Alberta—Peter Lougheed Hall

■ Brock Commons—Totem Infill (LEED® Gold)

Vancouver, BC, Canada University of British Columbia 101,303 sq ft—space heating, domestic hot water



University of British Columbia—Totel Infill

■ Brock Commons—Tallwood House (LEED® Gold)

Vancouver, BC, Canada University of British Columbia 163,658 sq ft—space heating, domestic hot water, kitchen



University of British Columbia—Tallwood House

■ Central (University Boulevard Site B) (LEED® Gold)

Vancouver, BC, Canada University of British Columbia 98,886 sq ft—space heating, domestic hot water, kitchen



University of British Columbia—Central (University Boulevard Site B)

■ Bluford Residence Hall and **Restaurants at Southwest**

Columbia, MO University of Missouri 113,310 sq ft—space heating, space cooling, humidification, kitchen



University of Missouri—Bluford Residence Hall and Restaurants at Southwest

School, Hospital, Institution

- Riverside Center School
 New York City, NY
 Con Edison Co. of New York
 100,000 sq ft—space heating,
 domestic hot water
- 222 East 41 Street—NYU Medical

New York City, NY Con Edison Co. of New York 390,973 sq ft—space heating, domestic hot water, humidification, kitchen

John Nasseff Medical Center
 St. Paul, MN
 District Energy St. Paul
 34,700 sq ft—space heating



District Energy St. Paul — John Nasseff Medical Center

Gillette Children's Specialty Healthcare

St. Paul, MN District Energy St. Paul 79,000 sq ft—space heating

- Bethesda Hospital
 St. Paul, MN
 District Energy St. Paul
 310,980 sq ft—space heating
- St. Joseph's Hospital
 St. Paul, MN
 District Energy St. Paul
 422,285 sq ft—space heating



District Energy St. Paul—St. Joseph's Hospital

7 W. Madison Street
 Chicago, IL
 Enwave Chicago
 105,300 sq ft—space cooling

 Office Building Toronto, ON, Canada
 Enwaye Energy Company

Enwave Energy Company 132,000 sq ft—space heating

Hospital

Toronto, ON, Canada Enwave Energy Company 2,100,000 sq ft—space cooling

 Case Western Reserve University—Biomedical Research Building

Cleveland, OH Medical Center Company 265,533 sq ft—space heating, space cooling

Harris County Forensic Science Building

Houston, TX Thermal Energy Corporation 200,000 sq ft—space heating, space cooling

 Houston Independent School District—DeBakey High School for Health Professionals Houston, TX

Thermal Energy Corporation

195,000 sq ft—space cooling

- Houston Community
 College-HCC Coleman
 College for Health Sciences
 Houston, TX
 Thermal Energy Corporation
 246,000 sq ft—space heating,
 space cooling
- Houston Methodist Hospital North Campus Expansion Houston, TX
 Thermal Energy Corporation 1,150,000 sq ft—space heating, space cooling
- Texas Children's Hospital-Pavilion for Women Expansion

Houston, TX Thermal Energy Corporation 646,000 sq ft—space heating, space cooling

 Texas A&M Veterinary Medical Diagnostic Laboratory (TVMDL)

College Station, TX Texas A&M University 94,936 sq ft—space heating

Human Clinical Research Building

College Station, TX Texas A&M University 22,052 sq ft—space heating, space cooling

- Wildlife, Fisheries &
 Ecological Sciences Building
 College Station, TX
 Texas A&M University
 79,000 sq ft—space heating,
 space cooling
- Aramark Student Training & Recreation Complex (ASTARC) Philadelphia, PA Temple University 110,719 sq ft—space heating, space cooling, domestic hot water, humidification



Temple University—Aramark Student Training & Recreation Complex (ASTARC)

Biosciences Research Laboratory (BSRL)

Tucson, AZ University of Arizona 150,200 sq ft—space heating, space cooling, domestic hot water, humidification



University of Arizona—Biosciences Research Laboratory (BSRL)

 C.A.T.S. (Commitment to an Athlete's Total Success)
 Academic Center

Tucson, AZ University of Arizona 17,587 sq ft—space heating, space cooling, domestic hot water



University of Arizona — C.A.T.S. Academic Center

- CREOL (College of Optics and Photonics)-3rd Floor Fit-out Orlando, FL University of Central Florida 2,746 sq ft—space heating, space cooling, domestic hot water, kitchen
- Band Practice Facility
 Orlando, FL
 University of Central Florida
 4,055 sq ft—space heating,
 space cooling, domestic hot water, kitchen
- Student Health Center Expansion

Orlando, FL University of Central Florida 19,845 sq ft—space heating, space cooling, domestic hot water, kitchen



University of Central Florida—Student Health

Education Building

Orlando, FL University of Central Florida 121,750 sq ft—space heating, space cooling, domestic hot water, kitchen

 Integrated Bioprocessing Research Laboratory (IBRL) (LEED® Silver)

Champaign, IL University of Illinois 48,513 sq ft—space heating, space cooling, domestic hot water



University of Illinois—Integrated Bioprocessing Research Laboratory (IBRL)

School, Hospital, Institution cont.

Main Energy Plant
 Minneapolis, MN
 University of Minnesota
 64,555 sq ft—space heating,
 space cooling, domestic hot water, process



University of Minnesota—Main Energy Plant

■ Tate Laboratory of Physics Minneapolis, MN University of Minnesota 28,880 sq ft—space heating, space cooling, domestic hot water, process



University of Minnesota—Tate Laboratory of Physics

 Patient Centered Care Learning Center Columbia. MO

University of Missouri 97,567 sq ft—space heating, space cooling, humidification



University of Missouri—Patient Centered Care Learning Center

STEM Building Phase One (of Two)

Burlington, VT University of Vermont 117,690 sq ft—space heating, space cooling



University of Vermont—STEM Building Phase One

Central Campus Residence
 Hall East and West
 Burlington, VT
 University of Vermont
 210,904 sq ft—space heating,
 space cooling, kitchen



University of Vermont—Central Campus Residence Hall East and West

Central Chiller Plant Expansion

Burlington, VT University of Vermont 7,293 sq ft—space heating, space cooling, refrigeration



University of Vermont—Central Chiller Plant Expansion (courtesy J. Michael Worthington, Jr. Photography)

Dillard and Gooch Dormitories Charlottesville, VA University of Virginia

University of Virginia 135,669 sq ft—space cooling



University of Virginia—Dillard and Gooch Dormitories

- Sprigg Lane Dormitories
 Charlottesville, VA
 University of Virginia
 61,151 sq ft—space cooling
- Educational Resource Center Charlottesville, VA University of Virginia 59,472 sq ft—space heating, space cooling, domestic hot water



University of Virginia—Educational Resource Center

 Hotel B Washington Hall Charlottesville, VA University of Virginia 3,140 sq ft—space heating



University of Virginia—Hotel B Washington

 Newcomb Road Chiller Plant Charlottesville, VA University of Virginia 8,345 sq ft—space heating



University of Virginia—Newcomb Road Chiller

Other

- Office Building
 Toronto, ON, Canada
 Enwave Energy Corporation
 372,000 sq ft—space cooling
- Cain Parking Garage
 College Station, TX
 Texas A&M University
 498.425 sq ft—electricity

Beyond North America

Commercial-Mixed Use

 Darwish Bin Ahmed & Sons Company LLC

Dubai, UAE
Emirates District Cooling
(Emicool) LLC
135,202 sq ft—space cooling



Emicool—Darwish Bin Ahmed & Sons Company LLC

Al Tawfeeq for Development LLC

Dubai, UAE
Emirates District Cooling
(Emicool) LLC
289,013 sq ft—space cooling



Emicool—Al Tawfeeq for Development LLC

Ahmad Suhail Butij Mohammad
 Dubai, UAE
 Emirates District Cooling
 (Emicool) LLC

86,928 sq ft—space cooling

Kai Tak Cruise Terminal
 Hong Kong, China
 Hong Kong District Cooling Ltd
 2,003,760 sq ft—space cooling



Hong Kong District Cooling Ltd—Kai Tak Cruise Terminal

Commercial-Office

Schon Investments Limited
 Dubai, UAE
 Emirates District Cooling
 (Emicool) LLC
 638,395 sq ft—space cooling



Emicool—Schon Investments Limited

Innovation Hub Dubai, UAE

Empower- Emirates Central Cooling Systems Corporation 2,634,450 sq ft—space cooling



Empower—Innovation Hub

Additional Building at Tecom Site A

Dubai, UAE Empower—Emirates Central Cooling Systems Corporation 297,500 sq ft—space cooling

 Additional Building at DIFC Dubai. UAE

Empower—Emirates Central Cooling Systems Corporation 351,750 sq ft—space cooling

Al Asmakh Tower

Doha, Qatar Qatar Cool 283,631 sq ft—space cooling



Qatar Cool—Al Asmakh Tower

Commercial—Retail/ Manufacturing

UniGulf Air-Conditioning Industries LLC

Dubai, UAE
Emirates District Cooling
(Emicool) LLC
10,624 sq ft—space cooling



Emicool—UniGulf Air-Conditioning Industries

Voltrans Transportation Systems

Dubai, UAE Emirates District Cooling (Emicool) LLC 42,905 sq ft—space cooling

 Abdulrahim Ahmad Abdullah Dubai, UAE Emirates District Cooling

Emirates District Cooling (Emicool) LLC 454,408 sq ft—space cooling

 Reliance Impex General Trading LLC

Dubai, UAE
Emirates District Cooling
(Emicool) LLC
3,540 sq ft—space cooling

Ching Long Shopping Centre

Hong Kong, China Hong Kong District Cooling Co Ltd 100,188 sq ft—space cooling



Hong Kong District Cooling Co Ltd—Ching Long Shopping Centre

Commercial-Other

Leader Sport Trading
 Dubai, UAE
 Emirates District Cooling
 (Emicool) LLC
 81,776 sq ft—space cooling

Emirates Flight Catering Co. LLC

Dubai, UAE Emirates District Cooling (Emicool) LLC 41,222 sq ft—space cooling

Ummsaid Bakery Dubai Branch

Dubai, UAE Emirates District Cooling (Emicool) LLC 24,789 sq ft—space cooling

Advanced Laundry LLC Dubai, UAE

Emirates District Cooling (Emicool) LLC 25,315 sq ft—space cooling

Uniestate Properties LLC
 Dubai, UAE
 Emirates District Cooling
 (Emicool) LLC
 98,813 sq ft—space cooling

Zabeel Catering Services LLC

Dubai, UAE Emirates District Cooling (Emicool) LLC 17,108—space cooling

Kai Tak MTR Station

Hong Kong District Cooling Co Ltd

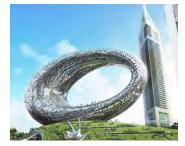
272,250 sq ft—space cooling



Hong Kong District Cooling Co Ltd—Kai Tak MTR Station

Entertainment, Cultural or Sporting Center

Museum of the Future
 Dubai, UAE
 Empower—Emirates Central
 Cooling Systems Corporation
 860,650 sq ft—space cooling



Empower—Museum of the Future

Government

■ Islamic Affairs & Charitable
Activities Department
Dubai, UAE
Emirates District Cooling
(Emicool) LLC
7,482 sq ft—space cooling



Emirates District Cooling (Emicool) LLC— Islamic Affairs & Charitable Activities Department

 Islamic Affairs & Charitable Activities Department

Dubai, UAE
Emirates District Cooling
(Emicool) LLC
7,504 sq ft—space cooling

 Islamic Affairs & Charitable Activities Department Dubai, UAE Emirates District Cooling (Emicool) LLC
 14,989 sq ft—space cooling

 Trade and Industry Tower (HKGBC BEAM Plus Platinum [provisional] and LEED® Platinum)

Hong Kong, China Hong Kong District Cooling Co Ltd 715,800 sq ft—space cooling



Hong Kong District Cooling Co Ltd—Trade and Industry Tower

 Electrical and Mechanical Services Department Headquarters, HKSAR Government

Hong Kong, China Hong Kong District Cooling Co Ltd 882,090 sq ft—space cooling



Hong Kong District Cooling Co Ltd—Electrical and Mechanical Services Department Headquarters, HKSAR Government

Hotel

Plaza Rayhaan Tower
 Doha, Qatar
 Qatar Cool
 417,127 sq ft—space cooling

Residential

Sol Star Trading FZCO
 Dubai, UAE
 Emirates District Cooling
 (Emicool) LLC
 121,113 sq ft—space cooling

Saleh Bin Lahej Real Estate
 Dubai, UAE
 Emirates District Cooling
 (Emicool) LLC
 101,721 sq ft—space cooling



Emicool—Saleh Bin Lahej Real Estate

 Royal Centurion Real Estate Dev. LLC
 Dubai, UAE
 Emirates District Cooling

(Emicool) LLC 233,414 sq ft—space cooling



Emicool—Royal Centurion Real Estate Dev. LLC

Properties Investments LLC
 Dubai, UAE
 Emirates District Cooling
 (Emicool) LLC
 741,189 sq ft—space cooling



Emicool—Properties Investments LLC

M.E. Development LLC
 Dubai, UAE
 Emirates District Cooling
 (Emicool) LLC
 247,097 sq ft—space cooling

■ Taif Al Madina Contracting LLC

Dubai, UAE

Emirates District Cooling (Emicool) LLC

119,139 sq ft—space cooling

Range 3 Investments Ltd.
 Dubai, UAE
 Emirates District Cooling
 (Emicool) LLC
 460,480 sq ft—space cooling



Emicool—Range 3 Investments Ltd.

National Properties
 Dubai, UAE
 Emirates District Cooling
 (Emicool) LLC
 245,686 sq ft—space cooling



Emicool—National Properties

Jumeirah Village Triangle
 Dubai, UAE
 Empower—Emirates Central
 Cooling Systems Corporation
 297,500 sq ft—space cooling



Empower—Jumeirah Village Triangle Master

Additional Building at Dubiotech

> Dubai, UAE Empower—Emirates Central Cooling Systems Corporation 1,772,050 sq ft—space cooling

 Additional Building at Dubai Land Residence Complex

Dubai, UAE Empower—Emirates Central Cooling Systems Corporation 3,651,200 sq ft—space cooling

 Additional Building at JBR— One JBR

Dubai, UAE Empower—Emirates Central Cooling Systems Corporation 297,500 sq ft—space cooling



Empower—One JBR

Residential cont.

 Additional Building at Jumeirah Lake Tower Dubai, UAE Empower—Emirates Central

Cooling Systems Corporation 3,953,950 sq ft—space cooling

 Additional Building at Palm **Jumeirah Crescent** Dubai, UAE Empower—Emirates Central Cooling Systems Corporation 175,000 sq ft—space cooling



Empower—Palm Jumeirah Crescent

 Additional Building at Palm Jumeirah Trunk

Dubai, UAE Empower—Emirates Central Cooling Systems Corporation 185,000 sq ft—space cooling



Empower—Palm Jumeirah Trunk

Additional Building at Sheikh Zayed Road—Aykon Towers Dubai, UAE Empower—Emirates Central Cooling Systems Corporation

4,326,700 sq ft—space cooling



Empower—Aykon Damac Tower

Additional Building at Tecom Site C

Dubai, UAE Empower—Emirates Central Cooling Systems Corporation 687,750 sq ft—space cooling

Al Nour Tower

Doha, Qatar Qatar Cool 275,558 sq feet—space cooling



Qatar Cool—Al Nour Tower

Al Thuraya Tower

Doha, Qatar Qatar Cool 499,450 sq feet—space cooling



Qatar Cool—Al Thuraya Tower

■ Parcel 10B Doha, Qatar Qatar Cool 423,714 sq feet—space cooling



Qatar Cool—Parcel 10B

Parcel 14B Doha, Qatar Qatar Cool 426,620 sq feet—space cooling



Qatar Cool—Parcel 14B

■ Parcel 16A Doha, Qatar Qatar Cool 423,380 sq feet—space cooling



Qatar Cool—Parcel 16A

■ Viva Bahriya-07 Doha, Qatar Qatar Cool 339,830 sq feet—space cooling



Qatar Cool—Viva Bahriya-07

■ Viva Bahriya-09 Doha, Qatar Qatar Cool 317,904 sq feet—space cooling



Qatar Cool—Viva Bahriya-09

■ La Plage Villa West Doha, Qatar **Qatar Cool** 16,598 sq feet—space cooling



Qatar Cool—La Plage Villa West-39

Residential cont.

Qatar Cool—La Plage Villa West-40

La Plage Villa Centrale Doha, Qatar Qatar Cool 43,874 sq feet—space cooling



Qatar Cool—La Plage Villa Centrale 10



Qatar Cool—La Plage Villa Centrale 11



Qatar Cool—La Plage Villa Centrale 16



Qatar Cool—La Plage Villa Centrale 18



Qatar Cool—La Plage Villa Centrale 36



Qatar Cool—La Plage Villa Centrale 37

La Plage Villa East

Doha, Qatar Qatar Cool 15,134 sq feet—space cooling



Qatar Cool-La Plage Villa East 10



Qatar Cool—La Plage Villa East 17

■ Bahri Villa North

Doha, Qatar Qatar Cool 32,038 sq feet—space cooling



Qatar Cool—Bahri Villa North 24



Qatar Cool—Bahri Villa North 37



Qatar Cool—Bahri Villa North 40



Qatar Cool—Bahri Villa North 55-60

■ Bahri Villa South

Doha, Qatar Qatar Cool 8,138 sq feet—space cooling



Qatar Cool—Bahri Villa South 43

■ Viva Bahriya-12

Doha, Qatar Qatar Cool 242,696 sq feet—space cooling

■ Viva Bahriya-13

Doha, Qatar Qatar Cool 242,696 sq feet—space cooling

■ Viva Bahriya-14

Doha, Qatar Qatar Cool 227,508 sq feet—space cooling

■ Viva Bahriya-15

Doha, Qatar Qatar Cool 228,584 sq feet—space cooling

Abraj Quartier-07

Doha, Qatar Qatar Cool 567,037 sq feet—space cooling

■ Fanar Fayrouz-12

Doha, Qatar Qatar Cool 11,659 sq feet—space cooling

School, Hospital, Institution

Emirates REIT (CEIC) Limited Dubai, UAE Emirates District Cooling (Emicool) LLC 140,209 sq ft—space cooling

Rami Mohammed / Read Mohd

Dubai, UAE Emirates District Cooling (Emicool) LLC 24,518 sq ft—space cooling



Emicool—Rami Mohammed / Read Mohd

P.L.K. Stanley Ho Sau Nan Primary School

Hong Kong, China Hong Kong District Cooling Ltd 121,431 sq ft—space cooling



Hong Kong District Cooling Ltd—P.L.K. Stanley Ho Sau Nan Primary School

SKH Holy Cross Primary School

Hong Kong, China Hong Kong District Cooling Ltd 121,431 sq ft—space cooling



Hong Kong District Cooling Ltd—SKH Holy Cross Primary School

School, Hospital, Institution

Hong Kong Children's Hospital

Hong Kong, China Hong Kong District Cooling Ltd 1,796,850 sq ft—space cooling



Hong Kong District Cooling Ltd — Hong Kong Children's Hospital (photo courtesy Wikipedia user Prosperity Horizons [CC BY-SA 4.0 license]).

Other (Labor Accommodations)

Hot Pack Packaging Industries
 Dubai, UAE
 Emirates District Cooling
 (Emicool) LLC
 36,568 sq ft—space cooling



Emicool—Hot Pack Packaging Industries

- Loyal Building Contracting Dubai, UAE
 Emirates District Cooling (Emicool) LLC
 29,569 sq ft—space cooling
- Group of Companies & Elect.
 of Abdulgalil
 Dubai, UAE
 Emirates District Cooling
 (Emicool) LLC
 49,349 sq ft—space cooling

- Apparel LLC
 Dubai, UAE
 Emirates District Cooling
 (Emicool) LLC
 55,514 sq ft—space cooling
- Blue Rhine Gen. Trading LLC Dubai, UAE
 Emirates District Cooling (Emicool) LLC
 39,634 sq ft—space cooling
- Binsanad
 Dubai, UAE
 Emirates District Cooling
 (Emicool) LLC

68,330 sq ft—space cooling

Ahmad Hamad Ahmad

- Integrated Tubulars &
 Oilfield Supplies FZCO
 Dubai, UAE
 Emirates District Cooling
 (Emicool) LLC
 79,384 sq ft—space cooling
- Al Wali Trading Co. LLC
 Dubai, UAE
 Emirates District Cooling
 (Emicool) LLC
 39,489 sq ft—space cooling
- Zest Interior Decoration LLC Dubai, UAE
 Emirates District Cooling (Emicool) LLC
 42,959 sq ft—space cooling
- Al Avon Contracting LLC
 Dubai, UAE
 Emirates District Cooling
 (Emicool) LLC
 42,997 sq ft—space cooling
- Pioneer Star Cleaning Services LLC
 Dubai, UAE
 Emirates District Cooling (Emicool) LLC
 40,565 sq ft—space cooling
- Sol Fire Trading FZCO
 Dubai, UAE
 Emirates District Cooling
 (Emicool) LLC
 70,006 sq ft—space cooling

Shaika Hessa Maktoum Juma Al Maktoum Dubai IIAF

Dubai, UAE Emirates District Cooling (Emicool) LLC 76,003 sq ft—space cooling

Al Itihad Air Ducts Pipes Fab LLC

Dubai, UAE
Emirates District Cooling
(Emicool) LLC
106,469 sq ft—space cooling

- Terrazo Dubai Co. LLC
 Dubai, UAE
 Emirates District Cooling
 (Emicool) LLC
 81,143 sq ft—space cooling
- Royal Mega Interior Decoration Dubai, UAE
 Emirates District Cooling (Emicool) LLC
 79,215 sq ft—space cooling
- North Ocean Contracting LLC Dubai, UAE
 Emirates District Cooling (Emicool) LLC
 41,114 sq ft—space cooling
- Galadari Investments LLC
 Dubai, UAE
 Emirates District Cooling
 (Emicool) LLC
 47,327 sq ft—space cooling
- Al Marfa Pearl for Development & Investment LLC Dubai, UAE

Emirates District Cooling (Emicool) LLC 107,116 sq ft—space cooling

Khaled Mohammad Ali
 Dubai, UAE
 Emirates District Cooling
 (Emicool) LLC

105,303 sq ft—space cooling

JS Lootah Properties LLC
 Dubai, UAE
 Emirates District Cooling
 (Emicool) LLC
 57,332 sq ft—space cooling

Voltrans Transportation Systems

Dubai, UAE Emirates District Cooling (Emicool) LLC 55,825 sq ft—space cooling

Wonder Bus Tours LLC Dubai, UAE Emirates District Cooling (Emicool) LLC 80,031 sq ft—space cooling

China State Construction Engineering

Dubai, UAE
Emirates District Cooling
(Emicool) LLC
62,105 sq ft—space cooling

Raphael Khlat Middle East FZ LLC

Dubai, UAE Emirates District Cooling (Emicool) LLC 53,889 sq ft—space cooling

Al Rakla General Contracting LLC

Dubai, UAE Emirates District Cooling (Emicool) LLC 24,512 sq ft—space cooling

Mr. Jasem Mohammad Yousuf Dubai, UAE Emirates District Cooling (Emicool) LLC 76,392 sq ft—space cooling

District Energy Space 2017

Plan to submit your calendar 2018 growth data.

Make plans now to photograph and enter your customer buildings that commit or recommit for your district energy service during 2018!

The deadline for submittal of system growth data for calendar 2018 is Fri., April 5, 2019.

Continuing our tradition, during the IDEA 110th Annual Conference in Pittsburgh, Pennsylvania, June 24-27, 2019, IDEA will congratulate and present awards to those systems reporting the largest growth for calendar 2018 for both North America and Beyond North America. We look forward to seeing you there!

To enter data for newly committed, recommitted or connected customers for calendar 2018, please download and complete the appropriate **North America** or **Beyond North America** Excel® template found at:

- Submission Form North America https://tinyurl.com/2018-DESpace-NA
- Submission Form Beyond North America https://tinyurl.com/2018-DESpace-BNA

Please use the form as provided and fill in all appropriate cells to facilitate our compilation of the data.

Submit the final document to Len Phillips at len.idea@districtenergy.org. We encourage you to send as many building photographs as possible, and label them clearly with your company name and identifying title such as: "My Organization Name-Smith Office Building".

For more information and to access past issues of *District Energy Space*, visit: https://www.districtenergy.org/resources/publications/district-energy-space



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