

Qualifications Submittal



Certification # 3700

2609 N Forest Ridge Blvd #280
Hernando, FL 34442
352.327.9385 / 423.737.5085, www.ebcxservices.com



August 27th, 2018

EBCx Services is a professional services firm, specializing in optimizing the built environment of both new and existing buildings. We are certified by the National Environmental Balancing Bureau (NEBB) under the disciplines of Testing Adjusting and Balancing (TAB) of Environmental Systems, Technical Retro-Commissioning of Existing Building Systems, Technical Commissioning of Whole Building Systems and Building Enclosure Testing. Our goal is to provide the highest degree of comfort and safety for people that occupy buildings and facilities, while achieving the lowest possible energy cost.

EBCx Services brings value to customers through the unique ability of viewing situations through multiple lenses and experience...as a mechanical contractor, engineer, service and controls technician, tab specialist and energy auditor. Additionally, we understand the interrelationship of the building envelope and the HVAC system, which is critically important regarding Indoor Air Quality (IAQ), building comfort and energy costs.

EBCx Services is known for effectively identifying the root causes of problems associated with HVAC and control systems, and determining practical solutions. Our approach is that building problems are generally multifaceted, and require viewing situations through several lenses to identify and treat the root causes, not symptoms of problems.

EBCx Services uses the foundation of sound engineering practices combined with hands-on-field testing/analysis of components, equipment, subsystems and systems, to provide our customers with the highest level of comfort, safety and efficiency in their buildings.

Scott Gordon is the owner of EBCx Services, and has over 40 years of HVAC&R industry experience with a focus on optimizing the built environment. Scott has four decades of continuous education through real world experience coupled with specialized training and certifications in the areas of HVAC Contracting, Commissioning, Retro Commissioning, TAB, Building Enclosure Testing and Energy Assessments/Audits. Scott has broad experience in performing Energy Assessments/Audits (ASHRAE Level 1, 2, 3) and targeted energy assessments of complex HVAC&R systems.

Prior to starting EBCx Services in June 2016, Scott grew up in the HVAC&R contracting industry, learning the trade from his father Cal Gordon, founder of Tropic Air Conditioning in Miami, FL. From 1973 to 1988, Scott worked as an apprentice, technician and project manager at Tropic Air Conditioning. In 1981, he earned his Florida Class-A Air Conditioning Contractor license at the age of 21. Scott continued working in the family business until 2005, gaining decades of hands-on contracting experience.

From 2005 to 2016, Scott gained additional experience, training and certifications while working with large companies including Energy Systems Group (ESG), Johnson Controls and Atkins North America. During this time, Scott traveled across the country, performing energy audits, Cx, RCx and TAB. Scott continues to learn and share his knowledge with others through both formal and informal training of facility O&M staff, technicians, contractors and engineers.

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Scott Gordon holds the following industry certifications and licenses:

- Miami Dade County (Florida) Licensed Air Conditioning Journeyman, 1979
- Class “A” Certified Air Conditioning Contractor License (Florida), 1981
- EPA Refrigeration Transition and Recovery “Universal” Certification as require by OSHA 40 CFR Part 82, Subpart F. 1993
- Certificate Member (CM), Refrigeration Service Engineers Society (RSES), 1995
- Certified Test & Balance Professional (CTAB), Association of Energy Engineers, 2001
- Certified Indoor Air Quality Professional (CIAQP), Association of Energy Engineers, 2003
- National Environmental Balancing Bureau (NEBB), Certified Professional in HVAC Test and Balance, 2003
- National Environmental Balancing Bureau (NEBB), Certified Professional in HVAC Building Commissioning, 2004
- Certified Energy Manager (CEM), Association of Energy Engineers, 2007
- Certified Demand Side Manager (CDSM), Association of Energy Engineers, 2007
- National Environmental Balancing Bureau (NEBB), Certified Professional in Retro-Commissioning, 2007
- LEED AP O+M (Leadership in Energy and Environmental Design Accredited Professional), USGBC, 2009
- Certified Measurement & Verification Professional (CMVP), Association of Energy Engineers, 2011
- National Environmental Balancing Bureau (NEBB), Advanced Commissioning Certificates, 2014
 - Building Envelope
 - Plumbing Systems
 - Special Electrical Systems
 - Fire Protection Systems
- National Environmental Balancing Bureau (NEBB), Certified Professional in Building Enclosure Testing (BET), 2015

Education

- Miami Dade College, Air Conditioning Engineering Technology and General Business (1978-81)
- Air Conditioning Engineers Academy, 1981 (preparation- state of FL Contractors Exam)

Additional Training

- OSHA 30 Construction Safety Training
- NFPA 70E Arc Flash Safety Training
- Pacific NW National Lab, Control System Retuning Workshop
- Johnson Controls Central Plant Optimization Workshop
- Bell & Gossett Large Chilled Water System Design Seminar

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EBCx Services

Optimizing Buildings since 1981

- Multiple Johnson Controls, Metasys Training Seminars
- Multiple Trane Engineering Clinic Training Seminars
- Multiple Manufacturer training on chillers, boilers, pumps and VFDs
- Multiple RSES professional training seminars (controls, refrigeration, chillers, IAQ)
- Multiple AEE professional training seminars for CEM, CIAQP and CMVP certifications
- Multiple NEBB professional training seminars on Technical Cx, RCx and Building Envelope Testing
- Multiple ASHRAE professional development training seminars
- Train-the-Trainer 3-day Workshop, American Management Association (AMA)
- Dale Carnegie, Public Speaking
- Social Styles & Situational Leadership-Ken Blanchard
- 4 Ds of Execution

Professional Affiliations

ASHRAE, NEBB, RSES, AEE

- Member of the National Environmental Balancing Bureau's (NEBB) Building Systems Commissioning Technical Committee as both a Voting Member and Committee Secretary.
- Lead author for the NEBB Energy Calculation Handbook (published in 2015). The handbook describes the procedures to estimate energy savings, and includes a CD with an Excel based spreadsheet tool to perform energy calculations.
- Instructor for NEBB, teaching Retro Commissioning and procedures to perform energy audits for commercial and industrial facilities.
- Voting committee member and past Secretary of the American Society of Heating, Refrigeration and Air Conditioning Engineers (ASHRAE) Guideline 0.2 (published 10/15), The Process to Commissioning Existing Buildings and Assemblies.
- ASHRAE committee member (voting) for GPC 0.2, The Commissioning Process for Existing Buildings and Assemblies, and GPC 1.2, The Technical Requirements to Commission Existing HVAC&R Systems.
- RSES Greater Miami Chapter Past President (1996-98)
- Association of Energy Engineers (AEE) Member

Partial list of past project experience

Energy Assessments/Audits

- Norfolk Naval Base (15 buildings) / 2,800,000 Sq. Ft.
- Radford Ammunition Plant, Radford VA, facility wide steam distribution energy assessment
- Radford Ammunition Plant, Radford VA, Administration Building 220 / 95,600 Sq. Ft.
- Social Security Office Building (GSA), Birmingham AL / 507,200 Sq. Ft.
- TRI Cities Regional Airport Main Terminal, Tri-Cities TN / 77,000 Sq. Ft.
- Cannon Memorial Hospital, Linville, NC / 74,700 Sq. Ft.

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- Bradley Square Mall, Cleveland TN / 511,700 Sq. Ft.
- Eastman Chemical Corporate Office Building, Kingsport, TN / 263,373 Sq. Ft.
- Carter County Courthouse, Carter County TN / 34,800 Sq. Ft.
- Harlan Regional Hospital, Harlan KY / 165,600 Sq. Ft.
- ASHE Memorial Hospital, Jefferson NC, (3) buildings / 155,000 Sq. Ft.
- Saint Mary's Memorial Hospital, Jefferson City TN / 95,500 Sq. Ft.
- Unicoi County Memorial Hospital, Erwin, TN / 84,000 Sq. Ft.
- Tempur Pedic Manufacturing Plant, Duffield VA / 575,000 Sq. Ft.
- Ripley's Aquarium of the Smokies, Gatlinburg, TN / 115,000 Sq. Ft.
- Agnes Scott College Science Building, Decatur, GA / 78,400 Sq. Ft.
- 401 Office Building, Chattanooga, TN / 150,000 Sq. Ft.
- Trinity Hand Specialists, Johnson City, TN / 4,000 Sq. Ft.
- Health South Hospital, Kingsport, TN / 60,000 Sq. Ft.
- HCPI Office Building, Seattle, WA / 239,200 Sq. Ft.
- Hilton Orlando Bonnet Creek Convention Center, Orlando, FL / 355,000 Sq. Ft.
- Fort Benning Army Base, Columbus, GA / (30) buildings / 1,700,000 Sq. Ft. (Preliminary Assessment)

Retro Commissioning (includes ASHRAE Level 1 or 2 Energy Assessments):

- Hawkins County Regional Hospital, Rogersville, TN / 60,000 Sq. Ft. (CHW System Investigation)
- Fort Benning Army Base, (8) buildings / 950,000 Sq. Ft.
- FDA Building 21 & 22, White Oak MD / 500,000 Sq. Ft. (BAS and AHU Investigation)
- Moody AFB, (8) buildings / 202,630 Sq. Ft.
- Davis Monthan AFB, (8) buildings / 265,340 Sq. Ft.
- Holloman AFB, (12) buildings / 523,700 Sq. Ft.
- Tyndall AFB, (9) buildings / 269,280 Sq. Ft.
- Shaw AFB, (9) buildings / 498,910 Sq. Ft.
- Rock Island Arsenal (1) building / 202,000 Sq. Ft.
- HP Manufacturing and Offices, Boise Idaho / 900,000 Sq. Ft.
- US Cellular Offices, Knoxville, TN / 90,000 Sq. Ft.
- Le Conte Medical, Sevierville, TN / 117,500 Sq. Ft.
- Wellmont Hospital Outpatient Center, Kingsport TN
- Brickell Biscayne Condominium, Miami FL
- Carriage Club Condominium, Miami Beach FL

Commissioning:

- Swiss Caps Pharmaceutical, Miami FL (includes TAB)
- Technicaps Manufacturing, Miami FL (includes TAB)



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- USCG Opa Locka Airbase, Miami, FL (includes TAB)
- NOAA Ice Storage Plant, Miami, FL (includes TAB)
- Holston Valley Medical Center D-Tower Expansion, Kingsport, TN
- Clark County Detention Center, Las Vegas, NV (includes TAB Verification)
- Science Hill High School HVAC Renovation, Johnson City, TN

Mechanical and Control System Retrofits (includes TAB for each project):

- Atrium Office Park, Miami, FL / replace (27) rooftop package units
- Brickell Townhouse Condominium, Miami, FL / replace 500-ton chiller and cooling tower
- Brickell Bay Condominium, Miami, FL / replace 600-ton cooling tower
- South Point Tower Condominium, Miami Beach, FL / convert condenser water system from constant flow to variable flow
- South Point Tower Condominium, Miami Beach, FL / install TMS DDC system
- Yacht Harbor Condominium, Coconut Grove, FL / replace 500-ton cooling tower
- Yacht Harbor Condominium, Coconut Grove, FL / convert condenser water system from constant flow to variable flow
- Brickell Biscayne Condominium, Miami, FL / replace 150-ton chiller and MUA unit, pumps and replace chilled water piping in equipment room
- Brickell Biscayne Condominium, Miami, FL / install new JCI DDC system
- Biscayne Cove Towers, Adventure, FL / replace (4) 400-ton cooling towers on two 30 story high-rise condominiums
- Catamal Realty Office Building, Coral Gables, FL / replace (4) 50-ton water cooled package units and cooling tower / pumps
- Catamal Realty Office Building, Coral Gables, FL / install new JCI DDC system
- Cocowalk Shopping Center, Coconut Grove, FL / replace 400-ton cooling tower
- Cocowalk Shopping Center, Coconut Grove, FL / replace condenser water piping
- Liberty Market, Miami, FL / replace 300-ton chiller and rebuild existing cooling tower
- Marian Towers Condominium, Miami, FL / replace 400-ton cooling tower
- Marian Towers Condominium, Miami, FL / replace 175-ton water cooled MUA unit
- Miami Springs Baptist Church, Miami Springs, FL / replace 150-ton chiller and cooling tower
- National Oceanic and Atmospheric Administration (NOAA), Key Biscayne FL / install 1,500-ton hour Thermal Energy Storage System
- National Oceanic and Atmospheric Administration (NOAA), Key Biscayne FL / install JCI DDC system for entire HVAC system, including Demand Controlled Ventilation (DCV) on AHUs
- Park Towers Apartments, Miami, FL / replace 300-ton cooling tower
- Park Towers Apartments, Miami, FL / replace condenser water risers in existing building
- Commodore Club East and West Towers, Key Biscayne FL / replace condenser water risers in existing condominium
- Sunset Professional Building, South Miami, FL / replace 150-ton chiller

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- University of Miami, Wellness Center, Coral Gables, FL / install chilled water MUA unit and exhaust system for natatorium (TAB by others)
- University of Miami Parkinson Building, Miami, FL / replace 200-ton chiller, install constant volume boxes for laboratory area (TAB by others)
- US Coast Guard Air Base, Miami, FL / replace 200-ton chiller and cooling tower, pumps and re-pipe equipment room
- Swiss Caps USA Pharmaceutical Manufacturing Plant, Miami, FL / install (3) 150-ton water cooled screw chillers, cooling towers, pumps, air handlers, energy recovery system for clean rooms and JCI DDC system
- Swiss Caps USA Pharmaceutical Manufacturing Plant, Miami, FL / install stainless steel process piping for glycerin, sorbitol and diaphragm pumps
- Technicaps Manufacturing Plant, Miami, FL / install 150-ton chiller, heat recovery and AHUs for process and comfort cooling
- Technicaps Manufacturing Plant, Miami, FL / install JCI DDC system
- 12000 Office Building, Miami, FL / replace (2) 200-ton cooling towers
- Northside Shopping Center, Miami, FL / replace 600-ton cooling tower and condenser water pumps
- Tri Summit Bank, Bristol VA / replace 120-ton chiller, cooling tower, boiler and pumps. Install Honeywell DDC system (Manager for HVAC-Inc., performed TAB)
- Holston Valley Medical Center, Kingsport TN / install 1,500-ton chiller and York controls (Manager for ESG, performed TAB)

TAB only projects

- United States Coast Guard Radio Control Building, Miami Beach, FL
- Kendall Ice Arena, hydronic testing of ice rink, Miami FL
- Gables International Plaza renovations, Coral Gables, FL
- Brickell Bay Office Tower tenant airside, Miami, FL
- 848 Brickell renovations, Miami, FL
- Bayside Marketplace chiller testing of common area, Miami, FL
- East Ridge Retirement renovations, Miami, FL
- Galloway 64 Office Plaza, Miami, FL
- Miami Hand Center retrofit, Miami, FL
- 9795 Office Building retrofit, Miami, FL
- Sunset Professional Building retrofit, South Miami, FL
- Larkin Community Hospital chiller testing, South Miami, FL
- Holiday Inn Lejeune RD chiller testing, Coral Gables, FL
- Holiday Inn South Dixie Hwy chiller testing, Coral Gables, FL
- South West Virginia Mental Health Admin Building Retrofit, Marion, VA

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- Century Link Computer Room, Kingsport, TN
- Laughlin Hospital chilled water flow testing, Greenville, TN
- Karlan Mansion, Ewing, VA
- USDA George Washington Carver Building central plant and airside testing, Beltsville MD
- Mountain Home V.A. Nuclear Medicine, Johnson City TN
- Mountain Home V.A. Linear Accelerator Room, Johnson City, TN
- Bethesda Elementary Gymnasium, Williamson County, TN
- Robertson County Detention Center RTU testing, Robertson County, TN
- Knox County Old Courthouse central plant testing, Knoxville, TN
- Knox Central, Knoxville, TN
- Knox County Health Department, Knoxville, TN

Presentations

- Mechanical Contractors Association of South FL (MCASF) “Introduction of Energy Auditing for HVAC Professionals” Miami, FL. November 29, 2017
- Mechanical Contractors Association of South FL (MCASF) “Energy Auditing for HVAC Professionals” Miami, FL. February 22, 2018
- National Environmental Balancing Bureau (NEBB) “Retro Commissioning Training Seminar”. Portland/June 2013, Atlanta/April 2014, DC/June 2014, Honolulu/April 2015, Gaithersburg/September 2016
- National Environmental Balancing Bureau (NEBB) “Commissioning Technician Training Seminar”. Dallas, TX, April 2017
- ICMA Conference, Case Study of Energy Audit at Tri Cities Regional Airport, October 2015 in Seattle
- Society of Military Engineers Mid-Atlantic Regional Joint Engineer Training Symposium, “Retro Commissioning” Chantilly, VA, November 2014
- Johnson Controls “Developing Energy Projects-Asia Rotation Program” Milwaukee / March 2013
- Johnson Controls Service Sales University (SSU), “Energy” / six presentations over 2011-2013
- GreenBiz Webcast “Ongoing Commissioning”, November 2013 (co-presented)
- Johnson Controls, Energy Bootcamp for Service Sales, Los Angeles / April 2010
- Association of Energy Engineers (AEE) “Effective Energy Management Controls”, Knoxville / June 2013
- Refrigeration Service Engineers Society (RSES) “Energy Conservation for HVAC System Optimization”, Boston/June 2009, Chicago/March 2010
- South Florida Contractors, “Energy Conservation for HVAC Professionals”, Miami / September 2010

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- South Florida Building Engineers, “Air Conditioning for the Maintenance Professional”, Miami / April 2007
- National Association of Power Engineers (NAPE), “Energy Conservation for HVAC System Operation, Maintenance and Optimization”, Fort Lauderdale / May 2006
- National Association of Power Engineers (NAPE), “Indoor Air Quality and HVAC System Interaction”, Fort Lauderdale / September 2005

Publications

- ASHRAE Guideline 0.2 “The Process to Commissioning Existing Buildings and Assemblies”, (co-authored as a voting member of the committee). Published October 2015.
- ASHRAE Guideline 1.2 “The Process to Commission Existing HVAC&R Systems”, (co-authored as a voting member of the committee). Expected publish date is late 2017.
- NEBB/ANSI S120 Technical Retro-Commissioning (RCx) of Existing Buildings Procedural Standard, (co-authored as a voting member of the committee). This Standard was developed as an ANSI document, and approved by ANSI in December 2016.
- NEBB/ANSI S110 Whole Building Technical Commissioning of New Construction Procedural Standard, (co-authored as a voting member of the committee). This Standard was developed as an ANSI document, and approved by ANSI in February 2018.
- NEBB Handbook for Energy & Water Calculations, (co-authored as a special project of the Building Systems Commissioning Technical Committee). Published October 2015.
- ASHRAE Journal, “Technical vs. Process Commissioning, Ongoing Commissioning”, November 2014, pgs. 26-35, (co-authored).
- ASHRAE Journal, “Technical vs. Process Commissioning, Measurement and Verification”, August 2014, pgs. 32-37, (co-authored).
- Canadian Journal of Green Building & Design, “Retro Commissioning Optimizes Building Systems to Meet Operational Requirements” September-October 2011, pgs. 48-50.
- HPAC Magazine, “Targeting Energy Savings with RCx”, February 2012.
- RSES Journal, “Commissioning Existing HVAC Systems”, January 2008.
- RSES Journal, “IAQ, Retuning Commercial Buildings”, February 2012.
- RSES Journal, “Technical Retro-Commissioning”, April 2017.
- RSES Journal, “TAB for the HVAC&R Professional”, September 2017.
- RSES Journal, “Energy Audits”, February 2018.
- HVACR Business, “Improve Building Performance through Retro Commissioning”, February 2007.
- Condo Management Magazine, “Energy Conservation for HVAC Systems” May 1998.





Awards

- Contracting Business Magazine, 2001 Design Build Award for New Construction, Swiss Caps Pharmaceutical Plant, Miami, FL
- Contracting Business Magazine, 2003 Design Build Award for Retrofit, Second Place, NOAA Ice Storage Plant, Miami, FL
- Johnson Controls, Outstanding Achievement Team Member Award, for obtaining LEED Existing Building Operations & Maintenance Certification at Miller Park in Milwaukee, WI (2013). First stadium to achieve LEED Certification with a retractable roof.



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