



**CABA Intelligent Buildings Council (IBC)**  
**Draft Meeting Minutes**  
Wednesday, May 13, 2020  
12 NOON - 1:30 PM (ET) via Webinar

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**IBC Executive:**

IBC Chair, Trevor Nightingale (National Research Council)  
IBC Vice-Chair, Bob Allan (The Siemon Company)  
IBC Vice-Chair, Harsha Chandrashekar (Honeywell International Inc.)  
IBC Vice-Chair, Robert Lane (Robert H. Lane & Associates Inc.)  
IBC Vice-Chair, Terrence DeFranco (Iota Communications, Inc.)

**Present:**

2030 Districts Network, Jiri kopek  
ABB, Inc., Frank Taaning Grundholm  
ABB, Inc., John Leraci  
ABB, Inc., Julie Petrone  
ABB, Inc., Mohammad Sami Shaikh  
Acuity Brands, Inc., Chris Powell  
Acuity Brands, Inc., Tucker Boren  
Adaptive Networks, Inc., Michael Propp  
Albireo Energy, LLC, David Bell  
Albireo Energy, LLC, George West  
Albireo Energy, LLC, Jacob Hogan  
Albireo Energy, LLC, Jake Czerwin  
Albireo Energy, LLC, Jason Richards  
Albireo Energy, LLC, Mark Nemec  
Albireo Energy, LLC, Phil Rogers  
Albireo Energy, LLC, Roger Jones  
Albireo Energy, LLC, Tony Tarara  
Albireo Energy, LLC, Vince Koren  
Alea Labs, Inc, Hamid Farzaneh  
Alertus Technologies, Joe Nixon  
Artimar, Mauricio Jancic  
ASE Smart Energy, Antoine Karam  
Automated Logic, Mead Rusert  
Automated Logic, Troy Maeder  
AutomatedBuildings.com, Ken Sinclair

AVIXA, Rochelle Richardson  
BC Hydro, Graham Henderson  
Belden Inc., Ronald Tellas  
Belimo Americas, Salvatore Cataldi  
Berk-Tek, a Nexans Company, Susan Larson  
Bobrick Washroom Equipment, Inc., Peter Nadan  
BranchPattern, Inc., Ravi Maniktala  
BSRIA Inc., Lone Hansen  
CABA, Greg Walker  
CABA, Conrad McCallum  
CABA, Ron Zimmer  
Calderwood Automation, Jonathan Da Silva  
California Energy Commission, Jim McMahon  
Cambridge Consultants, Jacob Reeb  
Cisco Systems, Inc., Chad Jones  
Climatec LLC, Farhang Razzaghi  
CMG Consulting LLC, Andres Carvallo  
Cochrane Supply & Engineering, Nicole Conklin  
CommScope, Inc., Ronna Davis  
Communication Technology Services, LLC, Kate Sheehy  
Concordia University, Andreas Athienitis  
Consortium for Energy Efficiency (CEE), Patrick Casper  
Contact Dynamics, LLC, Paris Waddill  
CSA Group, Dwayne Torrey  
CSA Group, Laura Elan  
CSA Group, Lauro Pilla  
CSA Group, Parag Phalak  
CSA Group, Rodger Redd  
CSA Group, Sam Loggia  
Cyber Power Systems (USA), Inc., Dan Niewirowicz  
Dimension Data, Wolf Stinnes  
Diversified, Calagh Copland  
Eagle Technology, Inc., Harshad Shah  
Eaton Corporation, Umesh Patel  
ELECTRONICA ELEMEN, Patricio Dubini  
EPIC Semiconductors, Inc., Fabio Johas  
ERG Energy Efficiency, Mike Dabbene  
ESC Automation, Wes Elliott  
European Building Automation and Controls Association (eu.bac),  
Thomas Mueller  
Evergreen Consulting Group, Dan Kuhl  
exp. US Services, Inc., Chris Larry  
ExteNet Systems, Inc., Ron Scott  
Frost & Sullivan, Konkana Khaund  
Frost & Sullivan, Lauren Taylor  
Frost & Sullivan, Maurice Okawaki

FTDI Chip, James Adams  
Fullerton Engineering Consultants, Inc., Abraham Rokach, S.E., P.E.  
Functional Devices, Inc., Angie Jarvis  
GAVO COMMUNICATIONS, Jeffrey Gavin  
GENENTECH, David Smith  
Government of Alberta, Benigno Rojas-Moreno  
Growing Green Buildings, Kevin McPhee  
HGA Architects and Engineers, Brad Kult  
HiberSense, Inc., Bob Fields  
Home Innovation Research Labs, Elina Thapa  
Honeywell International Inc., Deepika Garg  
Honeywell International Inc., Kevin Graebel  
Honeywell International Inc., Paul Kavanagh  
Honeywell International Inc., Sathish Nanjapp  
IBI Group, Nathalie Waelbroeck  
I-CON Systems, Inc., Adam Kane  
iDeon Consulting, LLC, Randy Storch  
IMEG Corp., Jeff Carpenter  
Inmigrandi, Patricio Carranza  
Integrated Building Design Engineering, Gary Shamshoian  
Integrated Network Concepts, Anthony Veri  
Intelligent Building Consultants, Mathew Thekottil  
Intelligent Buildings, LLC, Tom Shircliff  
Iota Communications, Inc., Terrence DeFranco  
IRON DOG Inc., Gord Gamble  
Johnson Controls Inc., Ed Shail  
KCL Engineering, Kristopher Kunze  
Kele, Inc., Richard Campbell  
Ken Wacks Associates, Ken Wacks  
KMC Controls, Inc., Jason Mills  
L&T Technology Services Limited, Hari Natarajan  
Lawrence Berkeley National Laboratory (LBNL), Guanjing Lin  
LONG Building Technologies, Inc., Blake Standen  
LonMark International, Ron Bernstein  
LumenRadio, Maciej Oldziej  
LumiFi, Beatrice Witzgall  
Lutron Electronics Co., Inc., Matt Ochs  
Lutron Electronics Co., Inc., Yogi Gopalan  
Lynxspring, Inc., Marc Petock  
METZ CONNECT USA, Inc., Hugh Daly  
MHC Services LLC, Tom Durkin  
Modern Niagara Group Inc, Pranjal De  
National Association of Home Builders (NAHB), Anna Stern  
National Electrical Manufacturers Association (NEMA), Kirk Anderson  
National Research Council Canada (NRC), Brad Kelly  
National Research Council Canada (NRC), Guy Newsham

National Research Council Canada (NRC), Luc Pellerin  
National Research Council Canada (NRC), Marcel Lavoie  
National Research Council Canada (NRC), Trevor Nightingale  
NAVTAT Solutions, Krishnamoorthy Raman  
NYSERDA (New York State Energy Research and Development Authority),  
Marsha Walton  
Okos Smart Homes Inc., Boris Besner  
Pacific Building, Pavel Gorbunov  
Padi.io, Anto Budiardjo  
Panduit Corp., Mike Vermeer  
Red Link, Daniel Fearne  
Rheem Manufacturing Company, Dave Jordan  
Robert H. Lane & Associates Inc., Robert Lane  
SAEG PERU S.A., Fernando Katayama  
Schneider Electric, Brian Hanchey  
Schneider Electric, Hugo Lafontaine  
Schneider Electric, Kieran Mcloughlin  
Schneider Electric, Lachlan Coffey  
Schneider Electric, Sera Moffatt  
Seneca College of Applied Arts & Technology, Filimon Tsionas  
SES Consulting, Brad White  
Siemens Industry, Inc., Bonnie Brook  
Siemens Industry, Inc., David Bornside  
Siemens Industry, Inc., Dino Tomasi  
Siemens Industry, Inc., Dustin Branting  
Siemens Industry, Inc., Jeff Hodges  
Siemens Industry, Inc., Nicholas Catrone  
Siemens Industry, Inc., Richard Rivera  
Signify, Kelly Seeger  
Signify, Martin Mercier  
Signify, PeterFuhrmann  
Smaart House, Bijou Lulla  
Southwire Company, LLC, Jason Powell  
STME, Islam Shahin  
Superior Essex Inc., Amir Sekhvat  
Superior Essex Inc., Brian Ensign  
Sustainable Resources Management Inc., David Katz  
Switch Automation Inc., Peter Rake  
Syska Hennessy Group, Inc., Val Loh  
Tapa, Harry Smeenk  
Tapa, Journey Williams  
tekmar Control Systems Ltd., Frank DiBenedetto  
tekmar Control Systems Ltd., Jay Vath  
TelNet Management Consulting, Inc., Fawzi Behmann  
TELUS, Chris Pettypiece  
TELUS, Danny Sran

TELUS, David Kerruish  
TELUS, Vanessa Holmes  
The Cadillac Fairview Corporation Limited, Ali Sabouri  
The Cadillac Fairview Corporation Limited, Saeid Ansari  
The Cloud Studio, Ignacio Malvicino  
The S4 Group, Steve Jones  
The Siemon Company, Bob Allan  
Toronto-Dominion Bank, Jackie Henke  
Town of South Windsor, Clay Major  
U.S. General Services Administration (US GSA), Joe Eberly  
U.S. General Services Administration (US GSA), Mike Lowell  
University of Denmark, Yi Zong  
University of Maryland, Kunqi Zhang  
University of Maryland, Qingbin Cui  
U-tron Parking, Orit Buzin  
U-tron Parking, Yair Goldberg  
WatchNET, Alex Thomas  
Watts Water Technologies Inc., Nicolas Ganzon  
William L. Maiman Consulting, William Maiman  
WZMH Architects, Marjan Milani  
ZENESIS Group, Nathalie Waelbroeck  
ZENESIS Group, Raj Parikh  
ZENESIS Group, Ritesh Mehta

1. **Agenda** - Greg Walker (CABA)

Greg Walker (CABA) thanked everyone for attending, outlined the agenda and alerted everyone that the meeting was being recorded and will be made available to the industry.

2. **Call to Order, Welcome and Introduction** - Trevor Nightingale (National Research Council)

CABA Board member and IBC Chair, Trevor Nightingale (National Research Council) welcomed everyone and introduced: IBC Vice-Chair Bob Allan (The Siemon Company), IBC Vice-Chair Harsha Chandrashekar (Honeywell International Inc.), IBC Vice-Chair Robert Lane (Robert H. Lane & Associates Inc.), IBC Vice-Chair Terrence DeFranco (Iota Communications, Inc.), IBC White Paper Sub-Committee Chair Ken Wacks (Ken Wacks Associates) and the Keynote Speakers, Ken Sinclair (AutomatedBuildings.com), Marc Petock (Lynxspring, Inc.), Tom Shircliff (Intelligent Buildings, LLC) and Ron Tellas (Belden Inc.). Trevor also outlined the role of the IBC.

**3. Administrative** - Trevor Nightingale (National Research Council)

**3.1 Motion to approve Past IBC Minutes**

Trevor Nightingale (National Research Council) informed everyone that the meeting minutes from the February 19, 2020 IBC meeting were circulated and were posted on the CABA website in the IBC section: [www.caba.org/ibc](http://www.caba.org/ibc).

Motion to approve the February 19, 2020 IBC minutes was moved by Bob Allan (The Siemon Company) and the motion was seconded by David Katz (Sustainable Resources Management Inc.). Unopposed motion passed.

**4. “The Impacts of COVID-19 on Intelligent Buildings” (30 min)** - Ken Sinclair (AutomatedBuildings.com), Marc Petock (Lynxspring, Inc.), Tom Shircliff (Intelligent Buildings, LLC), Ron Tellas (Belden Inc.) (30 - 40min)



Ken Sinclair  
Founder/Publisher/Owner



Ron Tellas  
Technology and Applications  
Manager, Enterprise Networks  
**BELDEN**



Tom Shircliff  
Co-Founder and Principal  
Intelligent Buildings



Marc Petock  
Chief Marketing & Communications  
Officer



Abstract: This panel will share observations and predictions from key thought leaders on the impacts of Covid-19 on intelligent buildings. Ken Sinclair (AutomatedBuildings.com) will be moderating the panel and will discuss how being resilient and making people count will need to be part of our "global reboot". Marc Petock (Lynxspring, Inc.) will discuss the new realities that building owners, integrators, contractors and solution providers face. Tom Shircliff (Intelligent Buildings, LLC) will discuss the new challenges for building contractors and systems, leading to new risks for owners, managers and occupants. Ron Tellas (Belden Inc.) will discuss if the pandemic will serve as a change agent, transforming the way we use technology. [CLICK HERE](#) to access the recorded presentation and PowerPoint slides.

**5. Research Update** - Trevor Nightingale (National Research Council), Greg Walker (CABA)

**5.1 2019 IBC Landmark Research “Evidence for Building Retrofits that Improve Organizational Productivity (Phase 2)”** - Trevor Nightingale (National Research Council)



## Evidence for Building Retrofits that Improve Organizational Productivity

LANDMARK RESEARCH PROJECT

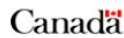


The CABA Board of Directors selected “Evidence for Building Retrofits that Improve Organizational Productivity (Phase 2)” as the 2019 IBC Landmark Research Project. Trevor Nightingale (National Research Council) gave a brief overview of the project. Due to the importance of this research, the CABA Board of Directors unanimously decided that the full research would be made freely available to the entire industry once it is completed. [CLICK HERE](#) to download the full Phase 1 research report and presentation.

This is a **\$200K, fully-funded research** project with generous support from CABA, the National Research Council (NRC) and 14 other CABA organizations. CABA is currently seeking organizations that may be interested in providing anonymized building and human resource data for this research. Do you know of a building(s) that might qualify for this research? There is no cost involved. **We need this building and human resource data within 3 months, or the research project will be cancelled.**

Contact Greg Walker, CABA Research Director, at [walker@caba.org](mailto:walker@caba.org), if you know of a building that might qualify for the research. [CLICK HERE](#) for more information.

Fifteen (15) CABA members have already joined this research project:



## 5.2 2020 IBC Landmark Research “Intelligent Building Energy Management Systems” - Greg Walker (CABA)



Greg Walker (CABA) gave a brief overview of this 2020 IBC Landmark Research Project, “Intelligent Building Energy Management Systems”. CABA and the IBC are still actively seeking funders for this research. Only the funders will receive the full \$130,000 of research. To receive this research and become a funder, please contact Greg Walker (CABA) at [walker@caba.org](mailto:walker@caba.org). [CLICK HERE](#) for the full research prospectus and webinar recording explaining the project.

Fifteen (15) CABA members have already agreed to help fund this research project:



## 6. White Paper Sub-Committee Update - Ken Wacks (Ken Wacks Associates)

An overview was given of the IBC White Paper review process, completed IBC White Papers and papers in progress. IBC White Papers are secondary literature review articles that are approximately 10-20 pages in length. These papers are written and distributed free of charge to inform the industry. In order for the papers to be approved by the IBC White Paper Sub-Committee (WPSC), they must have significant technical material of relevance to IBC members - they must not contain marketing material or promote an agenda.



Any CABA member can and is encouraged to bring forward a one (1) paragraph White Paper proposal to the WPSC. If needed, CABA will secure a writer and/or a working group for the paper. All completed and approved IBC White Papers are placed in the CABA Public Library, Members Library, CABA NewsBrief, CABA Twitter Feed, CABA LinkedIn Group and promoted at industry events. To view the IBC White Paper terms of reference, previous IBC White Papers and additional information, please go to: [www.caba.org/ibc](http://www.caba.org/ibc). All completed CABA White Papers, and those under development, can be found at: [www.caba.org/whitepapers](http://www.caba.org/whitepapers).

IBC White Paper Sub-Committee:

Ken Wacks Associates, Kenneth Wacks  
Consultant, Brittany Hack  
Consultant, Steve Samson  
Frost & Sullivan, Dilip Sarangan  
Intelligent Buildings Europe, Nikiforos Panorios  
National Research Council Canada (NRC), Heather Knudsen  
Public Services and Procurement Canada, Marek Dziedzic  
Siemens Industry, Inc., Raphael Imhof  
Sustainable Resources Management Inc., David Katz

If you or someone that you know would like to join one (1) or more of the following White Paper working groups, please contact Greg Walker (CABA) at [walker@caba.org](mailto:walker@caba.org).

**6.1 Recently Completed:**

**“The Evolution of Integrating LiFi Technology into Smart Lighting and Control Systems for the Intelligent Building”**

Ken Wacks (Ken Wacks Associates) gave an overview of this paper.

Working Group

Wharton County Junior College (Chair)  
Acuity Brands, Inc.  
ArcoLogix LLC  
SnapAV  
Ken Wacks Associates  
National Electrical Manufacturers Association  
Telecommunications Industry Association (TIA)

**6.2 In Progress:**

**“Energy Metering and Power Quality Metering in North America”**

Ken Wacks (Ken Wacks Associates) gave an overview of this paper.

Working Group

EZ Meter Technologies (Chair)  
ARC Advisory Group

ArcoLogix LLC  
Asian Institute of Intelligent Buildings (AIIB)  
Axis Lighting Inc.  
Brainwave Research Corp.  
CMG Consulting LLC  
Compass Intelligence, LLC  
Convergint Technologies Ltd  
CopperTree Analytics Inc.  
Current, powered by GE  
Cyber Power Systems, Inc.  
Domotz  
Enercare Connections Inc.  
Honeywell International Inc.  
Ken Wacks Associates  
Public Services and Procurement Canada  
Renesas Electronics America Inc.  
Robert H. Lane & Associates Inc.  
Schneider Electric  
Sustainable Resources Management Inc.  
Triacta Power Solutions LP  
Zinwave

**“Multi-MHz Wireless Power Transfer and Its Commercial Applications”**

Ken Wacks (Ken Wacks Associates) gave an overview of this paper.

Working Group

University of Michigan-Shanghai Jiao Tong University Joint Institute (Chair)  
Princeton University (Chair)  
AirFuel Alliance  
Ken Wacks Associates

**“Impacts of Automated Shading in Building Projects”**

Ken Wacks (Ken Wacks Associates) gave an overview of this paper.

Working Group

TRC Energy Services (Chair)  
Axis Lighting Inc.  
Draper, Inc.  
Ecotay Inc.  
Ken Wacks Associates  
Lawrence Berkeley National Laboratory (LBNL)  
Lutron Electronics Co., Inc.  
Mecho  
NYSERDA (New York State Energy Research and Development Authority)  
PLC-Multipoint, Inc.  
Screen Innovations  
Somfy Systems, Inc.  
Sustainable Resources Management Inc.

Vistar Energy Consulting  
Window Products Management

**7. New Business** - Trevor Nightingale (National Research Council)

**7.1 Growth Opportunity Trends and Diagnostic Session with Frost & Sullivan**

Lauren Taylor (Frost & Sullivan) presented a new CABA Member benefit, provided by Frost & Sullivan. A continuous flow of aligned growth opportunities for companies operating in the built environment is essential. Find out how your organization compares to others in the industry by taking advantage of this complimentary “members-only” opportunity from research firm Frost & Sullivan. As part of this benefit, CABA held a webinar led by F&S that discussed trends driving growth and innovation for the built environment, with a focus on those supporting rebound and re-entry strategy, and delivering to the future workplace. The presentation was followed with a live growth diagnostic completed by all attendees that enable participants to gain visibility into the strength of their organization's growth pipeline. If you would like to take advantage of this opportunity contact CABA at [caba@caba.org](mailto:caba@caba.org).

**7.2 Cyber Security 4 Building Management Systems Conference (virtual online), June 23-24, 2020**

Greg Walker (CABA) mentioned that Ron Zimmer (CABA) presented at this virtual conference. Some of the key topics discussed include maturity, supply chain, asset inventory, changing culture, integrating cybersecurity by design, vulnerability assessments, IoT security, IT/OT convergence and threat remediation.

**7.3 Other new IBC business?**

Trevor Nightingale (National Research Council) made a call for new business such as: future IBC Guest/Keynote presentation topics and speakers, new IBC White Papers, new research projects and meeting ideas, etc. He also indicated that the next IBC meeting will be held August 2020 with details to be forwarded in the near future.

**8. Adjournment** (1:30 PM ET) - Trevor Nightingale (National Research Council)

[Next IBC Meeting, August 2020](#)

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CABA IBC meetings are open to CABA Members and invited guests, and everyone is encouraged to participate. [CLICK HERE](#) for more info on the IBC, past minutes, participants and terms of reference. Any CABA Member that attended as a guest will be added to the IBC, unless they notify the CABA office by June 15, 2020 that their name should not be added. Non-CABA members that attended this meeting as a guest, should contact Greg Walker, CABA Research Director, to indicate if they wish to join the IBC or CABA. [CLICK HERE](#) for more information on the 25 CABA Benefits.

Regards,

Greg Walker  
CABA Research Director  
Continental Automated Buildings Association (CABA)  
Email: [walker@caba.org](mailto:walker@caba.org)  
Phone: 613.686.1814 x227  
Website: <http://www.caba.org>

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