

**UNITED STATES OF AMERICA
BEFORE THE
FEDERAL ENERGY REGULATORY COMMISSION**

**Building for the Future Through Electric)
Regional Transmission Planning and Cost)
Allocation and Generator Interconnection)**

Docket No. RM21-17-000

**INITIAL COMMENTS OF
QCoefficient, Inc.
Buildings as Batteries®**

SUMMARY OF POSITION

QCoefficient, Inc. has developed a sophisticated SaaS technology that stores energy in the drywall and concrete of large commercial buildings – *Buildings as Batteries®*. The technology features DOE’s flagship building energy modeling platform – EnergyPlus – in its first commercial application to optimizing daily building operations.

This synergistic technology integrates large commercial building operations with grid operations and markets using cybersecure software. It creates an equivalent to 0.75 MW of battery drawdown capacity for each million square feet of large, LEED Certified commercial office space capacity.

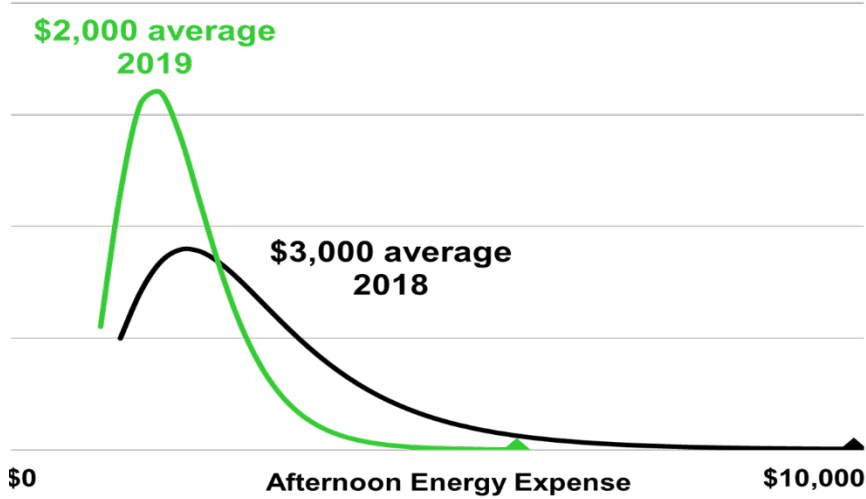
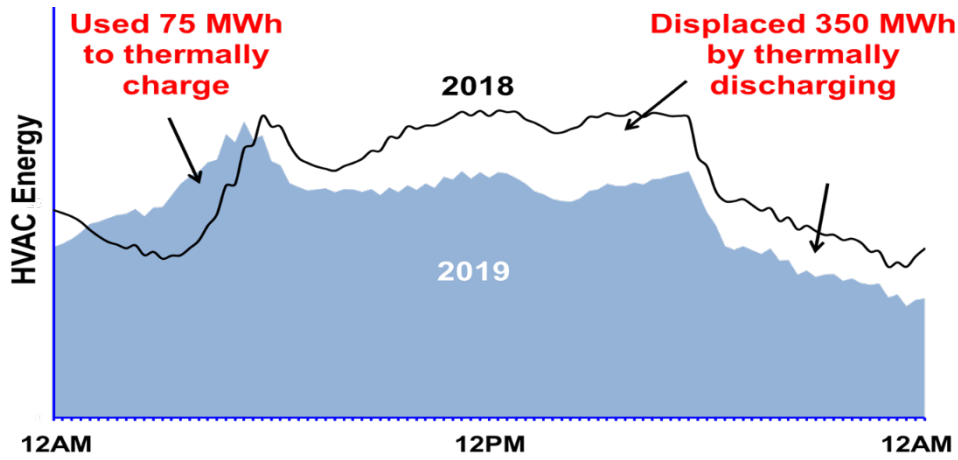
In 2019, before the covid pandemic caused havoc throughout the commercial office industry, QCoefficient successfully deployed this technology at the global headquarters of a prominent financial institution located near Times Square in New York City. The building operations flexibility created by QCo’s technology generated verified savings of 20 percent in HVAC electric energy and 30 percent in HVAC electric energy expense, largely by reducing and shifting electric demand out of peak hours.

Recognizing the leadership of the Federal Energy Regulatory Commission and its staff in grid integration policies, we ask that the FERC take account of the significant contribution provided by flexible load to electric system planning and operations. QCoefficient is currently demonstrating the flexibility provided through the use of the thermal mass of major buildings as a low cost and effective way to enhance the grid and reduce carbon emissions to contribute to challenges related to regional planning of grids. A New York City demonstration – sponsored by the Solar Energy Technology Office of the U.S. Department of Energy – shows that flexible building load paired with distributed photovoltaics – deployed at scale in NYC – can significantly reduce T&D capital budgets and security-constrained unit commitment of local NYC baseload generating plants (and associated emissions).

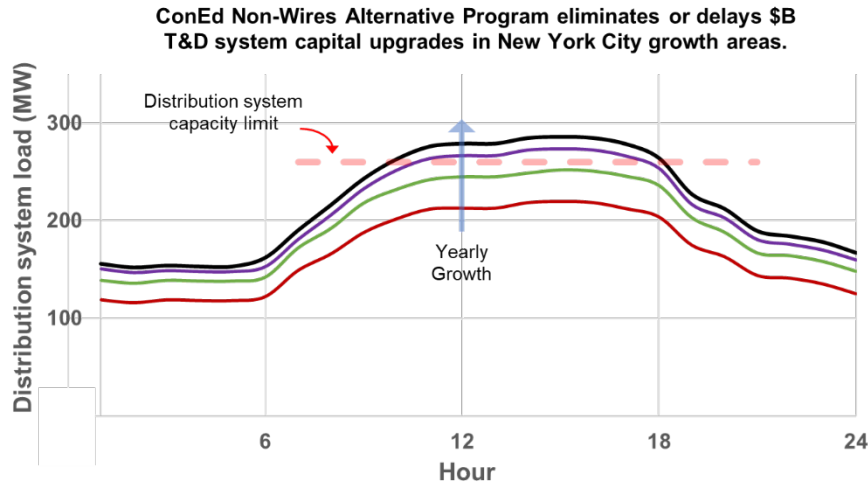
The building management firm responsible for the 2019 deployment had begun working with QCo on applying this flexible load and building-grid technology to ten million square feet of Class A building space in Manhattan. The covid pandemic created chaos that stopped the normal operations in that office space. The industry and we are still working to recover from that trauma.

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NYC: reduced energy 20%, peak 30%, carbon 20%+



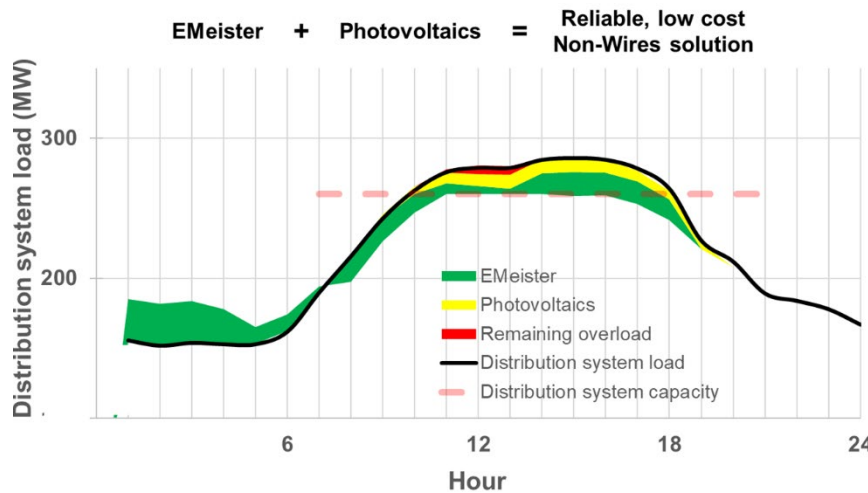
Project Results: ConEd Non-Wires Alternative Program



Non-Wires Alternative Program: created to defer distribution system capex in local NYC growth areas. In these uncertain times, deferring is valuable.

In 2018 QCo proposed EMeister to ConEd as a Non-Wires solution. In 2019 QCo proved EMeister – in the prominent NYC headquarters of one of the largest financial institutions in the world.

This project scales that performance to coordinate a portfolio of commercial buildings; and adds a strategic role for collocated PV. Why Non-Wires? Distribution system capacity is dictated by HVAC ... on the hottest and sunniest days and hours of the summer ... that is, Non-Wires plays to EMeister and PV strengths.



Important ... EMeister unloaded the substation as a byproduct of reducing commercial building electric expense ... and, by definition, ConEd distribution system peak loads occurs on days when PV performs best.

Equally important ... NY is developing PV regardless – this app simply adds a financial incentive to locate the PV in NYC.

We would be happy to provide additional information about this project at your request.

Respectfully submitted,

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