URBAN ELECTRIC POWER

NaatBatt 2019 Member Update

ABOUT UEP

- Urban Electric Power (UEP) was spun out of the City University of New York (CUNY) in 2012 with an exclusive license to commercialize **zinc anode battery** technology
- $45M in total funding includes public and private investment
- Safe**,** earth-abundant, inexpensive battery materials with performance well-suited for solar + storage and resiliency applications

PRODUCT CERTIFICATIONS

- ✓ Safe, non-hazardous materials similar to those in traditional primary alkaline cells
- ✓ Received UL 1973 certification for cylindrical cell
- ✓ Categorized as similar to lead-acid for flammability per DNV-GL labs testing

UEP Cell Flammability Testing

Before

After

MANUFACTURING SCALE UP

- Fully operational manufacturing and testing facilities at the NY Center for Innovation in Pearl River, NY
- Over 60,000 cylindrical cells manufactured in 2018
- Growth plan to scale up to 1,000 cells per day (~250,000 per year)

POWER BACKUP PRODUCT

- Power Assurance system designed for residential and commercial backup applications
- Two backup power systems installed in Connecticut
  - IT firm (112kWh/8kW)
  - CT residence (56kWh/8kW)
- Assembled by UEP, installed by local electrical contractors

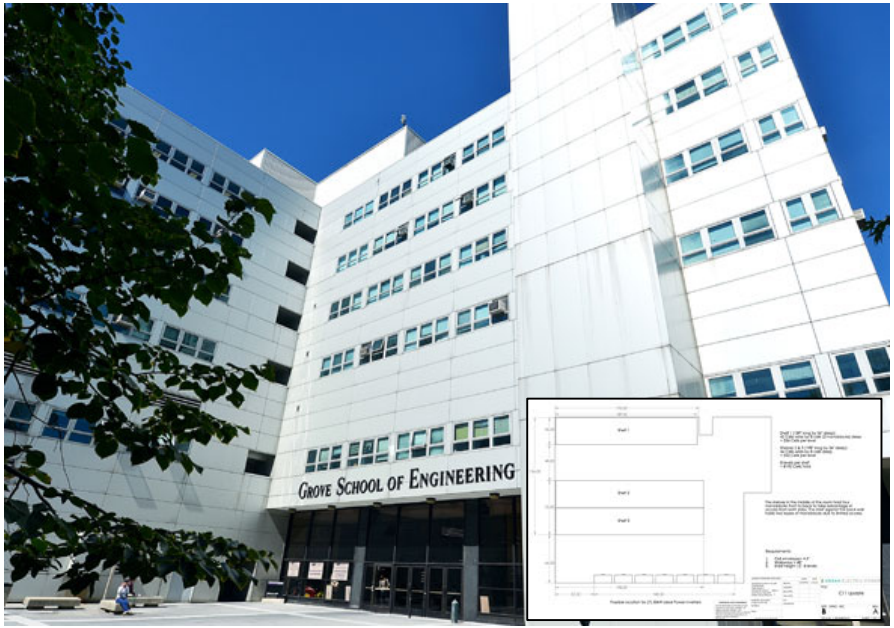
Power Assurance demonstration system at UEP headquarters

JOINT VENTURE PARTNERSHIP

- Advancing JV partnership with Godrej & Boyce (G&B) an Indian industrial firm
- UEP batteries being tested in various use cases and product formations (right) including home backup and solar + storage
- Indian total secondary battery market is ~$4.5 billion, growing to $13B by 2022
- Systems to be deployed at customer sites across India throughout 2019

PROJECT PROFILE: CITY COLLEGE

- 200kW/800 kWh grid-tied
- Supports peak load management and demand response activities
- Large demonstration project to support UEP's commercial scale product
- Support from NYSERDA and Sandia National Laboratories



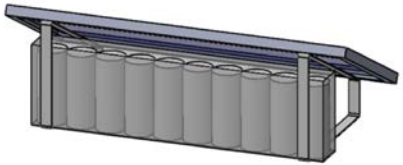
Sandia National Laboratories

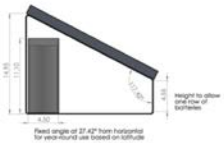
CUNY The City University of New York

NEW YORK STATE OF OPPORTUNITY. NYSERDA

PROJECT PROFILE: NM STATE

- Distributed storage research in extreme conditions
- Provides off-grid power for remote homes without grid access
- Replicable model with use cases across the globe
- Prototype under development at New Mexico State University, supported by Sandia National Laboratories





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NM STATE UNIVERSITY

LOOKING AHEAD

- Enhance cell performance and product features
- Engage domestic and international partners for system deployments
- Install demonstration projects for key market segments and use cases
- Expand sales and marketing efforts to increase commercial sales