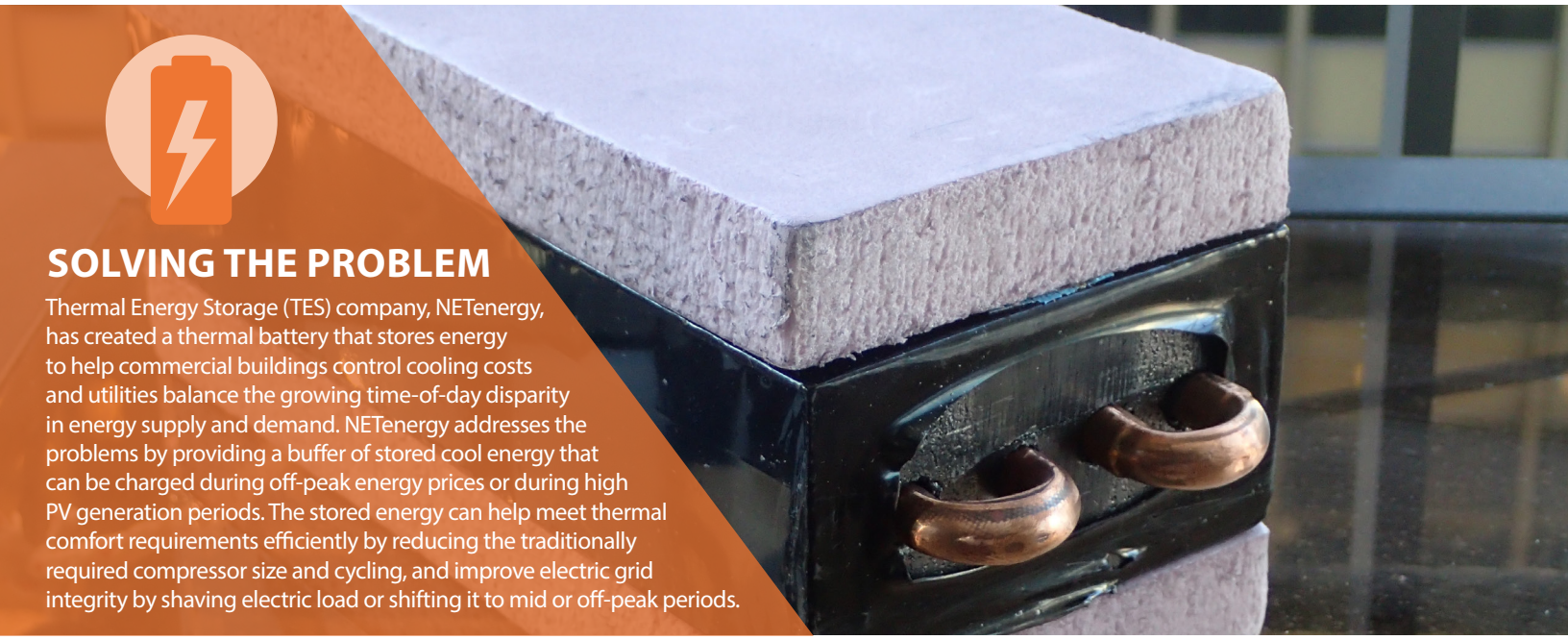
Innovation Incubator (IN^2)

WELLS FARGO

NETenergy



SOLVING THE PROBLEM

Thermal Energy Storage (TES) company, NETenergy, has created a thermal battery that stores energy to help commercial buildings control cooling costs and utilities balance the growing time-of-day disparity in energy supply and demand. NETenergy addresses the problems by providing a buffer of stored cool energy that can be charged during off-peak energy prices or during high PV generation periods. The stored energy can help meet thermal comfort requirements efficiently by reducing the traditionally required compressor size and cycling, and improve electric grid integrity by shaving electric load or shifting it to mid or off-peak periods.

THE IMPACT:

By utilizing NETenergy's thermal battery to store cold energy, it is estimated that building owners can save 30 percent or more on their energy usage and reduce carbon emissions by 50 percent. Additionally, this technology can save utilities from spending billions of dollars per year building and maintaining "peaker" power plants that are only used a few times per year.

HOW IN^2 IS HELPING:

NETenergy is in need of laboratory testing to validate performance and optimization based on temperatures, coolant types, flow rates, pressures, thermal profiles and specifications. NREL's experts and facilities will assist with system integration, design and control of NETenergy's thermal battery to existing building AC systems in an effort to build a prototype system for a commercial building.

TIER 1: Bench Scale
- Concept development stage
- Develop plans for prototyping & testing
- 3 – 5 years to market

TIER 2: Prototype
- **Available for testing & validation**
- **Plans for development of final product**
- **Less than 2 years to market**

TIER 3: Commercially Ready
- Models available in limited quantity
- Integrated demonstration
- Less than 18 months to market testing

ABOUT THE IN^2 PROGRAM

IN^2 is a technology incubator that fosters and accelerates early stage technology companies that provide scalable solutions to reduce the energy impact of buildings. Through a $30 million program funded by the Wells Fargo Foundation and co-administered by the U.S. Department of Energy's National Renewable Energy Laboratory (NREL), sustainable building technologies are able to evolve and develop, contributing to the overall goal of a Smart and Connected Community that uses energy, water and other resources efficiently, reducing the negative impact on the environment.

NREL
NATIONAL RENEWABLE ENERGY LABORATORY