

PEROVSKITE PV ACCELERATOR FOR COMMERCIALIZING TECHNOLOGIES (PACT)

Perovskite PV technologies promise to be a high performance and low cost photovoltaic energy. PACT is an independent validation center that will develop methods to objectively evaluate the performance and reliability for improved understanding of and confidence in fielded performance and failure modes of perovskite PV technologies.

TEAM

Led by Sandia National Laboratories (Sandia), our diverse team blends the independence and technical expertise of three national laboratories (Sandia, National Renewable Energy Laboratory (NREL) and Los Alamos National Laboratory (LANL)) with the practical and business experience of a commercial PV test lab (CFV Labs), a global engineering, construction and consulting firm (Black & Veatch) and a technical advisor to the utility sector (EPRI).

PARTNERSHIPS

The PACT center will partner with perovskite module manufacturers and university researchers to test their modules.

The output of the PACT center will include publicly available test protocols for performance and reliability of perovskite PV technology, performance data from fielded research and industry modules and systems, industry outreach including bankability services, workshops, webinars, and publications describing performance, reliability, and bankability results.

PACT will offer customized bankability road mapping services as well as full bankability assessments to US companies that meet the qualifications and acceptance criteria that the center develops.

Entities interested in partnering with the PACT center should contact Joshua Stein (jsstein@sandia.gov).

OBJECTIVES

The PACT center is developing protocols to:

- Quantify module performance and accurately measure and predict energy yield and power loss.
- Identify early failures (5-10 years) and predict degradation rates from accelerated testing.
- Monitor outdoor performance of perovskite PV prototypes (and eventually commercialized) modules.
- Offer bankability services to US perovskite PV companies in order to help them scale up from R&D cells to high volume module manufacturing.



Visit <https://www.sandia.gov/pvpact/> for more information and additional resources.

PACT is funded through the Department of Energy, Solar Energy Technologies Office.

Sandia National Laboratories is a multimission laboratory managed and operated by National Technology & Engineering Solutions of Sandia, LLC, a wholly owned subsidiary of Honeywell International Inc., for the U.S. Department of Energy's National Nuclear Security Administration under contract DE-NA0003525.