

TECHBRIDGE + U.S. DEPARTMENT OF ENERGY

HELPING CLEANTECH STARTUPS SUCCEED

Starting in 2010, the U.S. Department of Energy sponsored a 3-year, \$1 million program for Fraunhofer TechBridge and partners to grow and support the energy innovation ecosystem in the Northeast US.

Throughout this program, TechBridge identified promising startup innovations for the clean energy industry, and employed Fraunhofer's industry-grade facilities and expertise to design and execute testing, validation, and demonstration projects for the most promising startups. This work helped startups develop their products for specific customer needs, directly facilitating follow-on funding and partnerships.

The U.S. Department of Energy partnered with TechBridge to use Fraunhofer CSE's resources in a unique accelerator model. Elements that make TechBridge unique include:

- World-renowned technical expertise
- Industry-grade facilities & real-world demonstration sites
- A direct line to industry
- Interdisciplinary projects
- Independent non-profit organization

By working with TechBridge, the participating startups received technical expertise and development assistance normally inaccessible from traditional accelerators. Examples include:

- Validating new technologies for the market
- Testing prototypes in real operational conditions
- Running pilot studies with real customers

TechBridge helped the U.S. Department of Energy achieve key goals, including:

- Stimulated private sector investment
- Job creation through the support of high-growth businesses
- Innovative energy technologies launched into market

**“Surgical...[with an] exquisite choice of technical projects and value added...
a tremendous accelerator.”**

– U.S. Department of Energy Program Review

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At no cost to them, 10 startups received TechBridge technology validation services through this program – including the two below. Together, this group of startups has gone on to generate significant follow-on funding, jobs, revenues, and products. To learn about the success of TechBridge-accelerated teams beyond the program, please visit the [TechBridge Impact Page](#).

| COMPANY | FirstFuel | NBD Nanotechnologies |
|--------------------|--|---|
| TECHNOLOGY | Data algorithm allowing a low-cost, streamlined, and semi-automated method for providing non-invasive building audits. | Mimicking the water-harvesting capabilities of the Namib Beetle, advanced super-hydrophobic surfaces allow enhanced condensation with potential applications in freshwater sourcing and efficient cooling. |
| PRE-TECHBRIDGE | Seed funding round, government grant, 1 product launched. | \$300K in grants and prizes. |
| BARRIER | Lacked a quantified customer value proposition and proof of algorithm accuracy relative to incumbent methods. | Lacked industrial operating knowledge and durability data to develop coating for specific energy-efficiency applications (e.g. in power plant condensers). |
| TECHBRIDGE PROJECT | Fraunhofer led project with National Grid to compare submeter level data with estimated disaggregation and published results. The First Fuel algorithm proved capable of accurately disaggregating more than a year's worth of utility-level energy consumption data in just 19 hours, quantifiably demonstrating FirstFuel's competitive advantage. | NBD Nano worked with Fraunhofer experts to identify five priority applications and characterize them according to environmental and cycling conditions, material characteristics needed, deposition factors, corrosion resistance, cleaning, competitive products, and customer need. Fraunhofer domain experts then conducted accelerated durability tests in the relevant conditions. |
| POST TECHBRIDGE | After 4 years: \$40 million in follow-on funding, doubled number of employees, 3 new products, partnerships with OPower and the General Services Administration, won DOD Project of the Year. | After 1 Year: Phase I and Phase II SBIR awards; \$6.5M in seed and series A funding. |