Partnership Agreement

PACKAGED COMBINED HEAT AND POWER ACCELERATOR

The U.S. Department of Energy's (DOE) **Better Buildings Initiative** is a national initiative designed to improve the lives of the American people through public and private leadership in energy innovation to improve energy affordability, productivity, resilience, and security across homes, public and private buildings, and manufacturing facilities. A core element, **Better Buildings Accelerators**, demonstrate, catalyze and validate innovative approaches to increase investment in efficient energy technologies. Building upon the progress of the **Combined Heat and Power (CHP) for Resiliency Accelerator**, DOE is initiating the **Packaged CHP Accelerator** to verify improved project performance, cost, and installation practices across a variety of CHP packaged systems[1].

The overarching goal of the **Packaged CHP Accelerator** is to research and validate that total project costs and installation times for packaged CHP systems can be reduced by 20% or more, and that expected performance is achieved through the use of pre-engineered, technically validated systems that reduce risk for both the CHP user and supplier. The Accelerator will also identify packaged CHP R&D opportunities and validate new technologies such as Premium CHP[2] and grid-serving CHP systems that offer many of the ancillary services required by the Nation's evolving electricity grid while providing primary energy services to the host facility.

The **Packaged CHP Accelerator** will validate packaged CHP technologies appropriate for commercial, institutional, multi-family, light manufacturing and Federal (including military) facilities and bases. These markets represent about 70% of estimated U.S. CHP technical potential and have long been underdeveloped due to technical and market barriers. Because of similarities in size, operations, configurations, and energy usage, these applications are conducive to standardized, packaged CHP systems to meet the thermal[3] and electric requirements of their facilities. The development of packaged CHP systems can overcome numerous barriers by reducing design errors, limiting uncertainty about projected performance, shortening project install time, streamlining permitting, and reducing the overall cost of CHP installations.

DOE, with **Packaged CHP Accelerator** partners, will test a set of DOE-validated[4] packaged CHP systems engineered and/or installed by Accelerator CHP Supplier Partners (and contained in a national, web-based Catalog (hereafter *eCatalog*)). CHP Engagement Partners (utilities, federal agencies, states, municipalities, associations, etc.) commit to promoting the Packaged CHP systems (via the *eCatalog*) to their customers, affiliates or members. Together, the Accelerator partners will validate the installation, performance and economic and resiliency benefits of packaged CHP in specific CHP markets.

The goals and expected outcomes of the Packaged CHP Accelerator are to:

- Validate the installations and performance of packaged CHP systems nationally
- Analyze the project development time and costs of packaged CHP systems enabled through the *eCatalog*
- Evaluate the integration of new technologies with packaged CHP systems
- Identify R&D challenges and opportunities around packaged CHP and related technologies

CHP Engagement Partners Agree To:

CHP Engagement Partners include energy utilities, federal agencies, states, cities or other market entities committed to providing support for the Packaged CHP Accelerator and agree to:

- **Provide** feedback to DOE on the technical elements of packaged CHP systems within the *eCatalog*
- **Engage** potential CHP project candidates on applications of packaged CHP systems and use of the *eCatalog*
- **Provide** technical and programmatic support to promote packaged CHP to potential end-users
- **Coordinate** with CHP Supplier Partners to validate packaged CHP installation, cost and performance data
- **Document** and share lessons learned and best practices to aid in replicability to other Engagement Partners

CHP Supplier Partners Agree To:

CHP Supplier Partners develop and/or install packaged CHP systems and agree to:

- **Become** a qualified *eCatalog* CHP Packager or CHP Solution Provider[5]
- **Provide** feedback to DOE on the technical elements of the *eCatalog* development
- **Submit** packaged CHP systems for inclusion in the *eCatalog*
- **Provide** packaged CHP installation validation, which may include data on location, development time, performance and costs
- **Identify** potential R&D opportunities and emerging packaged CHP technologies and solutions, including microgrids and district energy opportunities

US Department of Energy Agrees To:

- **Develop** and provide support for a national, web-based *eCatalog* of DOE-validated CHP packaged systems
- **Provide** tools and resources to the Engagement Partner to assist in the development and installation of packaged CHP
- **Provide** technical assistance support to CHP Engagement Partners and facility owners/operators through the CHP Technical Assistance Partnerships (CHP TAPs)
- **Aggregate** and analyze installation, cost, and performance data to validate the benefits provided by packaged CHP systems
- **Collect** and share best practices and lessons learned in overcoming packaged CHP barriers and challenges
- **Facilitate** networking opportunities amongst the partners for peer-to-peer information exchange
- **Provide** national recognition to Partners commensurate with their result

Agreement:

My organization is committed to validating the performance of packaged combined heat and power systems through the Packaged CHP Accelerator, agrees to the terms outlined in this agreement and joins the Better Buildings Packaged CHP Accelerator as a Partner.

SENIOR EXECUTIVE OFFICER SIGNATURE | SENIOR EXECUTIVE PRINTED NAME | DATE

Choose Partner Type:

☐ Engagement Partner ☐ Supplier Partner

Point of Contact Information:

ORGANIZATION | ADDRESS

REPRESENTATIVE NAME | TITLE | PHONE NUMBER | EMAIL ADDRESS

General Terms:

- All parties concur that this agreement is wholly voluntary and may be terminated by any party at any time, and for any reason, with no penalty.
- Partner will not construe, claim, or imply that its participation in the Better Buildings Initiative constitutes Federal Government approval, acceptance, or endorsement of anything other than Partner's commitment to the initiative.
- Partner understands its participation in the Better Buildings Initiative does not constitute Federal Government endorsement of Partner.
- Partner understands that the activities it undertakes in connection with the Better Buildings Initiative are voluntary and not intended to provide services to the Federal Government. Partner will not submit a claim for compensation to any federal agency.
- The Better Buildings Initiative will honor all requests to keep the Partner's information and data confidential.

1. Packaged CHP is a pre-engineered, standardized, factory-assembled CHP system that, upon delivery to the end-user site, includes the CHP prime mover pre-packaged with generator, controls, and heat recovery system(s)
2. Premium (or Hybrid) CHP integrates CHP with other distributed resources such as solar PV and energy storage
3. CHP thermal output can be used for process heating, hot water, steam and/or cooling
4. Based on engineering-based validation methodology provided by DOE
5. The eCatalog includes guidance and requirements for companies with demonstrated capabilities and experience in packaging and/or installing CHP for becoming a packaged CHP Packager and CHP Solution Provider