

DOCKETED	
Docket Number:	22-RENEW-01
Project Title:	Reliability Reserve Incentive Programs
TN #:	271499
Document Title:	Sapphire Technologies, Inc. Comments - Comments from Sapphire Technologies re DEBA Program
Description:	N/A
Filer:	System
Organization:	Sapphire Technologies, Inc.
Submitter Role:	Other Interested Person
Submission Date:	7/16/2026 11:03:58 AM
Docketed Date:	7/16/2026

Comment Received From: Sapphire Technologies, Inc.
Submitted On: 7/16/2026
Docket Number: 22-RENEW-01

Comments from Sapphire Technologies re DEBA Program

Additional submitted attachment is included below.

California Energy Commission
Docket Unit

Re: Docket No. 22-RENEW-01

Comments on the Proposition 4 Distributed Electricity Backup Assets Grant Program Draft Solicitation

Sapphire Technologies appreciates the opportunity to comment on the draft solicitation for the Proposition 4 Distributed Electricity Backup Assets Grant Program.

Sapphire respectfully requests that the final solicitation expressly identify pressure reduction turbines, including turboexpander-generator systems, as eligible distributed generation technologies under Section II.B.2.c.

Pressure reduction is required throughout natural gas, steam, water, and other pressurized infrastructure. In conventional systems, valves reduce pressure to the level required downstream, dissipating the energy contained in the pressure differential. A pressure reduction turbine performs the required pressure reduction while converting a portion of that physical energy into electricity.

Pressure reduction turbines do not generate electricity by combusting fuel or converting its chemical energy. They recover physical energy from an existing pressure differential without incremental fuel consumption. This makes them consistent with DEBA's objective of deploying commercially available, zero-emission distributed energy resources that can provide incremental capacity and support grid reliability.

California's Self-Generation Incentive Program provides a direct precedent. The 2025 SGIP Handbook expressly includes pressure reduction turbines as eligible generation technologies and gives qualifying pressure reduction turbine projects first priority among generation projects in its lottery process. SGIP also requires applicants to document adequate pressure, temperature, and flow conditions and the proposed system's rated capacity.

Sapphire recommends adding the following language to Section II.B.2.c:

"Pressure reduction turbines, including turboexpander-generator systems, that generate electricity by recovering physical energy from an existing gas, steam, water, or other pressure differential without combustion or incremental fuel consumption."

Sapphire also recommends clarifying that pressure reduction turbines are not subject to the exclusion in Section II.B.3.e when they recover physical pressure energy without converting chemical fuel into electricity.

Pressure reduction turbine projects should remain subject to DEBA's existing commercial-readiness, dispatch, duration, interconnection, and measurement requirements. Applicants should be required to demonstrate:

- Adequate site-specific pressure and flow during applicable program hours;

- The project's gross and net electrical capacity, including auxiliary loads;
- The ability to provide nominated capacity for the required duration;
- Controls capable of responding under the selected performance pathway;
- A bypass or parallel regulation arrangement that maintains downstream service if the generating equipment is unavailable; and
- Metering and verification of electrical output.

Some pressure reduction turbines also create a low-temperature stream that can reduce facility cooling demand. Where that benefit produces a measurable and dispatchable reduction in electrical load, it may provide additional value under the program. However, the primary basis for eligibility should be the system's verified electrical generation and contribution to grid reliability.

Explicitly listing pressure reduction turbines would remove uncertainty for eligible applicants and ensure that a commercially available, zero-emission form of distributed generation receives appropriate consideration under DEBA. It would not require an exemption from the program's performance standards or the creation of a separate administrative pathway.

Sapphire respectfully requests that the Commission include pressure reduction turbines in the final solicitation's list of eligible distributed generation technologies.

Thank you for considering these comments.

Sincerely,

Jeff Earl

Vice President, Sapphire Technologies