



# OPPORTUNITY FOR COMMERCIALIZATION PARTNERS

## Compact Augmented Permeation System (CAPS)

Savannah River National Laboratory

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### Opportunity Overview

Battelle Savannah River Alliance (BSRA), as the manager and operator of Savannah River National Laboratory (SRNL) for the Department of Energy under Prime Contract No. 89303321CEM000080, is seeking strategic and innovative commercialization partners to license, scale, and deploy its **Compact Augmented Permeation System (CAPS)**—a patented, modular technology (US 12,084,238 B2) for increasing gas permeation from sealed systems while maintaining containment integrity.

**CAPS** was developed to meet active, near-term operational needs in the nuclear sector, where sealed systems generate potentially harmful gases during storage, transport, and handling and where direct venting is either constrained or prohibited. Importantly, this demand exists today—**CAPS** addresses an immediate, real-world requirement in nuclear operations, not a hypothetical future use case.

At the same time, **CAPS** was architected as a non-nuclear-specific solution, enabling direct expansion into chemical transport and storage, industrial containment, and other regulated commercial markets that face similar gas-management challenges at a far larger scale.

BSRA is positioning **CAPS** as both:

- a deployable nuclear solution with immediate customer demand, and
- a platform technology capable of sustained commercial growth beyond the nuclear sector.

### Technology Description

**CAPS** is a self-contained, attachable module designed to increase gas permeation from sealed or semi-sealed enclosures without compromising containment of non-gaseous materials.

**CAPS** comprises:

- A gas-permeable membrane establishing a controlled containment boundary
- Configurable membrane materials, surface areas, and geometries to tune gas transport rates
- Fully passive operation, requiring no power, controls, or moving parts

Unlike conventional vents or relief mechanisms, **CAPS** enables continuous, predictable gas transport via permeation, ensuring that liquids, solids, aerosols, and contaminants remain contained while gases are safely managed.

The CAPS design supports:

- Long-duration storage and transport
- Safety-critical and contamination-sensitive environments
- Modular integration, retrofit, or embedded deployment

### Immediate Demand: Nuclear Field Requirements

**CAPS** is not an exploratory technology awaiting a market—it was developed in response to current needs and *has been approved by regulators* for use on some radioactive materials packages. In the nuclear field:

- Gas generation in sealed systems is a well-known, recurring safety concern
- Direct venting is often unacceptable due to safety, contamination, and regulatory constraints
- Systems must perform reliably over extended durations with minimal intervention

**CAPS** directly addresses these requirements by providing: passive gas management without openings or valves; preservation of containment boundaries; and reduced operational and compliance risk. As a result, **CAPS** has immediate applicability within nuclear storage, packaging, and transport workflows, creating a credible anchor market; a clear early revenue pathway; and operational validation under the most demanding safety conditions. This near-term nuclear demand de-risks commercialization and provides a strong foundation for expansion into adjacent markets.

### Scalability: Nuclear → Chemical Transport & Storage

**CAPS** was intentionally engineered to nuclear-grade performance expectations, where failure tolerance is extremely low. That rigor enables a direct and defensible transition into **chemical transport and storage markets**, which face similar—but higher-volume—constraints. **CAPS** bridges these markets because it:

- Is not dependent on nuclear-specific materials or processes
- Scales through membrane selection and module configuration
- Integrates into existing containers and systems

### Intellectual Property & Commercial Pathways

- **CAPS** is protected by U.S. patent rights owned by BSRA
- BSRA / SRNL is offering:
  - License Agreement: exclusive or non-exclusive (a minimum requirement)
  - Field-of-use-specific rights
  - Technical assistance opportunities
  - Cooperative development agreements (CRADA\*) to support the production of **CAPS** for partner systems and certification requirements

\*Execution of a CRADA is subject to DOE review and subject to change depending on the information provided by partner(s).

## Ideal Partner Profile

BSRA is announcing this formal Opportunity to commercial companies that can meet the immediate nuclear sector’s requirements and have the vision to scale into the chemical sector. SRNL seeks partners with:

- Product engineering and manufacturing capability
- Access to nuclear, chemical, or industrial markets
- Ability to scale, certify, and deploy safety-critical products
- Long-term platform vision aligned with **CAPS** expansion

Selected commercialization partners will be expected to co-invest in the development, manufacture, and deployment of **CAPS**, with a desire on meeting the U.S. nuclear sector requirements.

This Opportunity is made without prejudice to any form of agreement, collaborative arrangement, alliance, number of entities, or partnering mechanism.

**Companies interested in pursuing this Commercialization Opportunity should submit a letter of interest (LOI) to the undersigned on or before 11:59p.m. EST on March 31, 2026.**

## Commercial Opportunity Timeline

Issue – Call for Commercialization Partners	February 18, 2026
<b>Letter of Interest Submission Deadline</b>	<b>March 31, 2026</b>
Full Proposal / Commercial Business Plan due SRNL	April 17, 2026
Selection and Announcement of Partner(s)	May 15, 2026
Fully Executed Agreement between BSRA and Partner(s)	July 31, 2026

## Letter of Interest (LOI)

The Opportunity review panel will select one or more qualified commercial partners—the LOI being the first step in that process.

A LOI must include the following information:

1. A description of your company and its mission and vision.
2. An explanation of the company’s interest in CAPS technology and its relevance to the company’s goals and existing product offerings.
3. Demonstrated experience in developing, manufacturing, and marketing a technology in one or more technology areas relevant to CAPS.
4. Demonstrated significant financial backing and investment interest.

5. A brief description of the company's financial and human resources available for commercializing this technology.
6. A brief description of the company's relevant facilities / capabilities required for manufacturing and scale up of the technology.
7. An outline of how the company will provide a cost match for the transfer of manufacturing and certification processes, if desired.
8. A brief description of the company's commercialization strategy.
9. A description of your company's proposed customer set and end users.
10. A list of questions that you may have that you would like to have answered prior to the deadline for submitting a full proposal / business plan. *Note:* answers to these questions will be provided to all interested parties to ensure the fair and equitable sharing of information regarding this opportunity.

### Preferred Partner Attributes

- Demonstrated experience in commercializing related technologies.
- U.S. manufacturing presence with relevant manufacturing capabilities, along with an explicit commitment from the company to substantially manufacture in the U.S.
- An established QA program or a strategy and timeline for obtaining such a program.

### First Deadline and Point of Contact

**To be considered responsive, an LOI must be received by 11:59p.m. EST on March 31, 2026.**

Please do not include information that your company considers proprietary or business sensitive. BSRA / SRNL will provide a non-disclosure agreement (NDA) if it becomes evident that one is required to proceed with the next steps in this process. Note that NDAs with non-U.S. companies will require additional time to process due to export control requirements and other necessary reviews. Following your submission, you will be contacted by SRNL with additional information regarding the next steps in the process. We look forward to your ideas on how we can work together to rapidly advance CAPS for commercial deployment.

### SRNL Contact – Technology Partnership Office

#### ***Shelley Couturier***

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