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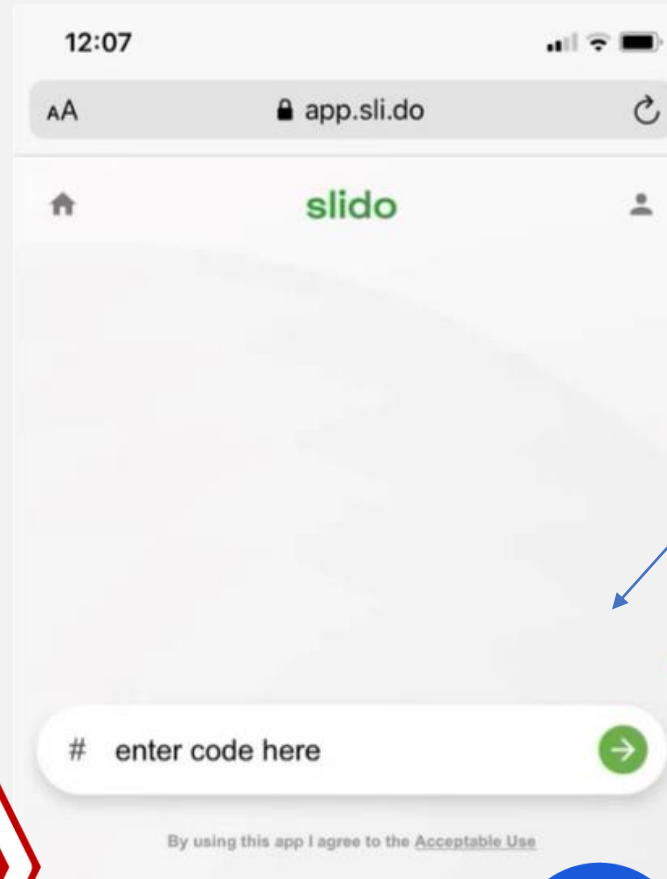
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# Technology for Recovery and Advanced Critical material Extraction – Gallium (TRACE - Ga)

## Office Hours

November 6, 2025



U.S. DEPARTMENT  
of ENERGY

Fossil Energy and  
Carbon Management



# Agenda & DOE Speaker

- TRACE-Ga overview and objectives
- Deep dive into application materials and requirements
- Q&A



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# TRACE-Ga Overview and Objectives



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# TRACE-Ga Overview

- **TRACE-Ga Goal:** Restart domestic primary gallium recovery for the first time in almost 40 years.
- **Focus:** Innovative technologies for gallium recovery from U.S. metal processing feedstocks.
- **Project End Goal:** Projects will test and validate prototype technologies with a goal of producing at least 50 kg of pure gallium from a single, successful 14-day campaign of continuous operation with a real-world metal industry processing stream.
- **Funding:** Up to \$5M federal, 20% non-federal cost share.
- **Number of Awards:** DOE anticipates awarding 1–3 projects, depending on merit.
  - DOE may select alternates if the number of projects meritorious for funding is greater than funds currently obligated to TRACE - Ga.

# Phases & High-Level Objectives

## Phase Requirements

|         | Feedstock                      | Amount<br>(Verified by<br>3rd Party) | Purity<br>(Verified by<br>3rd Party) | Length of<br>Campaign                       | Anticipated<br>Duration of<br>Phase  |
|---------|--------------------------------|--------------------------------------|--------------------------------------|---|--------------------------------------|
| Phase 1 | Actual metal processing stream | $\geq 100$ grams of Ga               | Any                                  | Not defined                                 | <i>Whenever complete</i> – 9 months  |
| Phase 2 | Actual metal processing stream | $\geq 50$ kilograms of Ga            | 4N (99.99%)                          | One 14-day campaign of continuous operation | <i>Whenever complete</i> – 24 months |



### Tips

#### Don't Forget:

- Flow diagrams, cost baselines, and cash flow projections.
- Standards, compliance reports, and other reports that are necessary for acquiring additional financing.



# Application Materials and Requirements



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# How to Apply Requirements

- **Cover Page:** 1 page summary.
- **Technical Volume:** Up to 10 pages.
  - Address review areas.
  - Previous data to demonstrate the novelty and technical readiness.
  - Proof or credible plan that technology and project can recover 50kg of Ga from single 14-day campaign.
- **Workplan:** Up to 5 pages.
  - Defines major tasks, milestones & budgets.
  - Monthly milestones, with a milestone each quarter as a major project milestone.
  - Demonstrates 20% cost share.
- **Letters of Support:** Ensure technology developer and industrial feedstock supplier are on the same page (no limit).
- **Resumes:** One for every key staff person. Only the first 2 pages of each resume will be reviewed.
- **PDF submission with naming conventions.**

# Technical Volume Template

## TRACE-Ga – [NAME OF PROJECT] – Technical Volume

### ***Technical Volume Summary***

- Text

### ***Key area 1: Project Approach and Workplan***

- Text

### ***Key area 2: Technology Description, Innovation, and Readiness***

- Text

### ***Key area 3: Technology integration, Market Opportunity and Commercialization potential***

- Text

### ***Key area 4: Team Qualifications and Resource Availability***

- Tables
- Text



## Tips

- You are encouraged to organize the technical volume as shown in the template.
- You CAN re-order if helpful for the narrative but should **ensure that the key area is defined**.
- The technical volume should include relevant supplemental information (e.g., data tables, patent claims, flowsheets, preliminary economic analysis studies) as part of the submission, including figure labels.

# Review Criteria

FECM will determine whether the **applicant** has sufficiently:

1. Developed a project plan to achieve TRACE-Ga objectives,
2. Developed and de-risked novel Ga recovery technology,
3. Developed a business plan that supports further scale-up and commercialization of the Ga recovery technology, and
4. Acquired access to (or has a credible plan to access) the industrial partner, the metal industry processing stream, and proper facilities and equipment needed to validate the technology under operational conditions.



## Tip

Also note how these align with the workplan and technical volume templates.



# Eligibility Requirements

- **Evidence** of success for **recovering gallium from feedstock** representative of the proposed metal industry process stream.
- A **letter of support from the industrial partner** for the metal processing stream, and any other company, agency, or other party that has ownership/rights to any proposed feedstock materials or technology, where applicable.
- Description of the **potential for scale-up** at the initial metal industry processing stream and **market adoption beyond the initial metal industry** processing stream source.

# Eligibility FAQs:

## ***How can National Laboratories and other Federal Funded Research and Development Centers (FFRDCs) participate in the project?***

FFRDCs (e.g. DOE/National Nuclear Security Administration national laboratories) may participate as a sub-recipient; however, DOE will not directly fund National Labs/FFRDCs under this program. Selectees will receive full funding through one agreement with ENWX. Selectees are solely responsible for funding and executing necessary agreements with sub-recipients. ENERGYWERX and DOE will not be involved in nor assist in these activities. FFRDC effort, in aggregate, shall not exceed 10% of total federal share of the project.

## ***Can FFRDCs serve as the industrial partner that provides the metal processing stream?***

No. The metal processing stream must come from real industrial operations.

## ***Are Canadian companies eligible to participate? Can technology developer participate from outside the US, such as Australia? If Canadian companies are not permitted to participate directly, can they participate via a registered US subsidiary?***

Applicants must be organized, chartered, or incorporated (other otherwise formed) under the laws of a particular state or territory of the United States, have majority domestic ownership and control, and have a physical place of business in the United States. Applicants must certify that they are not owned by, controlled by, or subject to the jurisdiction or direction of a government of a Country of Risk and meet the eligibility requirements for this project. DOE defines Country of Risk to include China, Russia, North Korea, and Iran. This list is subject to change.

# Cost Share Requirements

- At least 20% non-federal cost share required for each phase of the project.
- Sources: personnel costs, fringe costs, supply and equipment costs, indirect costs, and other direct costs.
- Not allowed cost share: Other federal funds, foregone profit, pre-award costs.
- These are noted in *at least* the Workplan and Team Qualifications and Availability tables of the Technical Volume.
- FECM will fund 80% of total project costs or \$5 million, whichever is less.

## Cost Share Examples

|                  | DOE Budget Share | Applicant Budget ( $\geq 20\%$ ) | Total Project Budget |
|------------------|------------------|----------------------------------|----------------------|
| <b>Example 1</b> | \$5M             | \$1.25M                          | \$6.25M              |
| <b>Example 2</b> | \$4M             | \$1M                             | \$5M                 |
| <b>Example 3</b> | \$5M             | \$3M                             | \$8M                 |
| <b>Example 4</b> | \$2.5M           | \$0.625M                         | \$3.125M             |



# Timeline

|                                   |                               |
|-----------------------------------|-------------------------------|
| <b>Open:</b>                      | September 15, 2025            |
| <b>Strategic Session Webinar:</b> | September 30, 2025            |
| <b>Office Hours:</b>              | Today, November 6, 2025       |
| <b>Submission Deadline:</b>       | November 20, 2025, at 3 PM ET |
| <b>Notification of selectees:</b> | Early 2026                    |
| <b>Phase 1:</b>                   | ~9 months                     |
| <b>Phase 2:</b>                   | ~24 months                    |

# General FAQs:

## ***Do processing streams associated with the production of metal oxides qualify?***

Applicants are encouraged to clearly describe how their proposed feedstock and process align within the definition of metal processing stream.

## ***Is it a 14-day continuous or 50kg in a 14-day window?***

For Phase 2, the performer tests and validates the Phase 2 prototype, with the industrial partner on their actual (non-simulated) metal industry process stream(s) for recovery of Ga. To validate production at 1 MT per year scale, the prototype must produce at least 50 kg of 4N Ga from a single, successful 14-day campaign of continuous operation with the actual (non-simulated) metal industry process stream. Phase 2 performers must produce 50kg within a single continuous campaign that is no more than 14 days in length.

# General FAQs:

***Does the metal production stream have to be ongoing or can it be a historically accumulated pile?***

The TRACE - Ga projects are designed to stimulate domestic gallium production by recovering gallium as a byproduct from metal processing using innovative technologies. Therefore, the feedstock must definitively be derived from metal processing, and applicants are responsible for providing clear evidence of this. This includes feedstocks from currently producing operations or existing accumulations of by-products or waste materials that originated from metal processing. FECM will assess the justification that the feedstock is indeed a metal processing feedstock, alongside the technology's potential for seamless integration into the industrial partner's ongoing operations, as outlined in the review criteria. A key eligibility requirement is a description of the potential for scale-up at the original metal industry processing stream and subsequent market adoption beyond that initial source.



# General FAQs:

***If there is a Gov. shutdown, would that affect the deadline for submitting proposals?***

We encourage everyone to assume that our timelines are going to stay in place. DOE will adhere to any new guidance that it receives. ENERGYWERX, as an independent non-federal entity, will continue to engage and communicate updates to you.

# Questions & Answer



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# Thank You

