2025-11-06 TRACE-Ga Office Hours Transcript

Carla Heron 0:07
All right. We would like to welcome everybody to the session. Today's session will be the Technology for Recovery and Advanced Critical materials Extraction for Gallium. At this time, you will notice we are starting to record this session. The video recording and the transcript will be available on the opportunity page. The video will be available later today. We will clean up the transcript a little bit. It'll be up by early next week, if not tomorrow. Also, we will be capturing any questions that are presented during this via Slido and coordinating those for a final version of the answers. That will be coming out next week.

We are cognizant that the deadline to submit your applications is approaching fast. I will say this a few times during this, and it'll be a reminder during the slide presentation. The deadline to submit your application is Thursday, November 20th. That is 3:00 PM Eastern Time. It is Eastern because we use a tool called Submittable. The development team for Submittable is on the East Coast. If you experience any technical difficulties that require their intervention or assistance, we want them to be available to assist you and get that resolved as soon as possible. If you do experience any significant impacts that will delay your ability to apply, we ask that you advise us soonest.

For example, we have had applicants who were being impacted by a hurricane, by fires, or by other events. There was one situation where there was a fire in their building where everyone had to evacuate, and they did not get to hit submit. We were able to coordinate open a window up with the Submittable team to allow for a late application submission, but it does need to be coordinated as soon as possible. Depending on the situation, we will confer with DOE. This has been open for several weeks, and we have encouraged everyone not to wait until the last minute. That is an excellent example of why you do not wait until 2:55 PM to submit against a 3:00 PM deadline. Anyway, I will come back to this in a minute.

Again, welcome everybody. As you see, we do have a no AI bot zone going on for today's session for Technology for Recovery and Advanced Critical Materials

Extraction for Gallium. We ask that you do adhere to that. If we identify any AI tools being used, they will be removed from this session. This is a standard practice that we are employing with all of these webinars.

Today, just like they were for the Objective Strategic Session, the first webinar, will be submitted via Slido. Slido is an online portal. It allows you to crowdsource the popularity and interest in particular questions. So, we ask before you submit your question to review those that have already been posed by the other participants in this session. If there is a question of interest to you, either that is the same as what you are going to ask or something relevant to another area that you would like to hear an answer on, please give it an upvote. The questions with the most thumbs up will be the ones that are asked first when we get to the Q&A session. This is key if we do run out of time, which did happen during the first OSS as we did not get through all the questions. This way we are getting through the most, the questions of most interest to the attendees.

All questions will be answered, but perhaps not all will be answered today. We will coordinate any questions that we failed to get to during our time block. We will send those over to DOE and ask them to provide the responses. Those will be part of what we post as the FAQ's from this session and pertinent questions that need to be highlighted. We will also add to the main page FAQ's for this opportunity on the ENERGYWERX.org website.

Again, we ask that all questions be submitted through Slido and we will be monitoring them. We will be answering questions that are directly related to this opportunity. So please control and corral your interest in other areas. It will be focused solely on Trace-Gallium.

With that, we are going to start to move over into the main part of the presentation. I think most have been able to join. We anticipate a healthy size of an audience today. So for our TRACE-Gallium discussion today, we have 3 representatives, but in particular we have Devinn Lambert here. She is going to be providing an overview based on the slides and then she as well as Burt Thomas and perhaps Scott will be joining in to answer any of the questions that are posed.

Again, I ask that you ask your questions through Slido. We will be using the Teams chat to provide any links or specific information to you through the Teams chat, but please do not ask your questions through that.
Solet uss move on into the slide deck. So, Julia, if you will move to the next slide, I will hand the mic over to Devinn and let her provide an overview and the status of moving forward.

Lambert, Devinn 6:29
Thank you so much, Carla. Thank you everyone for carving up the time today. Again, my name is Devinn Lambert. I work for the Mineral Production and Processing Technology team within the Office of Fossil Energy and Carbon Management within the US Department of Energy.
I'm going to spend some time going over core information and then Burt Thomas, Scott Montross and I will answer the questions that you have. Again, we will seek to answer as many of these questions as we can today and we encourage you to upvote the most important questions. I think we can advance one, maybe even 2 slides. Yep, let us go one more, and a third, please. Thank you.

So, at this point, everyone should be familiar with TRACE-Gallium. But again, what we are looking is to mature novel technologies such that at the end of phase two of the project, they are capable of producing at least 50 kilograms of pure Gallium from a single 14-day continuous operation from a real-world metal industry processing stream. The funding for this opportunity is up to 5 million per project with a 20% non-federal cost share required.

Again, awardees are responsible for providing a 20% non-federal cost share to match their federal share. We anticipate making one to three awards. To underscore what is most important to us, we aim to reactivate the domestic production of gallium and advancing these novel technologies. So, we may select alternates if there are more meritorious projects than the funding currently obligated. Next slide, please.

A key component of trace is that each project will proceed through two phases, and this table summarizes those phase requirements. The in applications we expect each phase to end with the production of gallium.
From the actual metal processing stream in Phase 1, we are looking for 100 grams of

gallium to be produced at any purity level in a campaign that campaign style that best fits the applicant and the project at its stage. At the end of Phase 2, we expect projects to produce no less than 50 kilograms of gallium at 4 N purity, again from a single 14-day campaign of continued operation with the metal processing stream. We received a question on this and so I want to underscore if you are capable of producing 50 kilograms of gallium within a single day of operation that would satisfy that Phase 2 requirement.

The PIA is about rapid prototyping. For the end of Phase 1, we anticipate that being nine months, and we anticipate Phase 2 taking about 24 months, but there is no need for you to take that time. If you can do it faster, you can move faster.
If we can go to the next slide please, and one more. Thank you.

The application itself is comprised of several components. There is a Cover Page template, a Technical Volume that's up to 10 pages. In this Technical Volume, you're addressing the review areas, you're submitting data to demonstrate the novelty and technical readiness of your project. You are demonstrating that you have a path to recover that 50 kilogram gallium milestone. That is all covered in the technical volume. In the Work Plan template, which is up to 5 pages, you're defining your major tasks, your milestones and your budgets. We are looking for monthly milestones with a milestone at each quarter identified as a major project milestone in the work plan. This is one of the places where you are demonstrating your 20% cost share of your project.

The application requires you to have letters of support to make sure that the partners required for your project success are aligned with what you're intending to do, and the final item is resumes for every key person in your project.
We are only going to read the first 2 pages of every resume, so you can submit a resume that is 10 pages long. We will only look at the first 2 pages. If we can go to the next slide, please.

In the Objective Strategic Session, we covered in detail the application requirements and so if you're looking for a refresher, I recommend going back to that posted video. What I wanted to cover as in interest for no one being caught off guard when we get close to that submission deadline. There are templates for these application

contents. The Cover Page has a template, the Work Plan has a template as well as the Technical Volume.

For the Technical Volume itself, you are encouraged to organize the Technical Volume as shown in the template. You should ensure the key area sections are defined and include the content we request within that section.
Just want to really underscore the review criteria for this opportunity are aligned with the key areas of the Technical Volume and the Work Plan. So, it's in your interest to ensure the key areas are of each section are defined.
Go to the next page, please.

Here are the review criteria. We will be reviewing based off of a project plan to achieve TRACE objectives. We will be evaluating that you have developed and de-risked novel gallium recovery technology. We will be looking into that you have developed a business plan that supports further scale up and commercialization of the recovery technology. We will be looking into whether you have acquired access to or if you have a credible plan to access the industrial partner and the metal industry processing streams, the proper facilities and equipment needed to validate the technology under operational conditions. This is the review criteria.

We also have eligibility requirements and to be eligible for this opportunity, we do need to see evidence of success for recovering the gallium from a proposed metal industry processing stream. We are going to be looking for a letter of support from the industrial partner for the metal processing stream. If you are that same entity, then I think making that abundantly clear. Applicants must submit a letter of support that identifies the prime as the industrial partner as well. The final element is description for potential scale up at the initial metal and industry processing stream and market adoption beyond the initial metal industry processing stream source.
Next slide, please.

We did receive some questions on eligibility. There were many questions about how can national laboratories or other federally funded research and development centers. These are known as FFRDCS. How can they participate?
FFRDCS may participate as a subrecipient. Selectees will receive full funding through one agreement with ENERGYWERX, and so it is going to be the selectee's sole

responsibility for funding and executing the necessary agreement with any subrecipient they may have.

There's a question on if FFRDCS can serve as the industrial partner. The answer here is no. The metal processing stream must come from real industrial operations.

We have received several questions about companies from other countries participating. Let me just read this question in full and then the answer. **Are Canadian companies eligible to participate? Can technology developers participate from outside the US, such as Australia? If Canadian companies are not permitted to participate directly, can they participate via a US registered subsidiary?** For this opportunity, applicants must be organized, chartered, or incorporated or otherwise formed under the laws of a particular state or territory of the United States. They must have domestic, must have majority domestic ownership and control, and they must have a physical place of business in the United States. As part of the application, 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 that they 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.

On the next slide, we will cover cost share requirements. This is an area we often receive questions on and so we have tried to overcommunicate that at least 20% non-federal cost share is required for the project, and it is required for each phase of the project.

Cost share is the portion of the cost of the project not borne by the federal government, and so your sources of cost share can include internal capital, private loans, and funds from state and local programs.
You are not allowed to use as cost share other sources of federal funds, foregone profits or pre award costs. You are going to report your cost share in at least the Work Plan and the team qualifications and abilities tables in the Technical Volume. That second area that I described was outlined one. You can see it if you look at the templates but also was described in the Objective Strategic Session.

DOE will reimburse 80% of eligible project costs up to a $5,000,000 cap. For those that have tuned in before, this is going to be repetitive, but it is very important to ensure for your application success that this is done correctly. So FECM will fund 80% of the total project cost or 5 million, whichever is less. In example one we see the total project cost being 6.25 million.

In this example, DOE is going to fund 80% of that, which is the Max 5 million and then the applicant is providing 1.25 million in cost share.

In example 2, the total project cost on the right is 5 million. DOE is going to fund 80% of total project costs, which is 4 million, and the applicant provides this remaining 20% cost share of 1,000,000.

In example 3, you see a project budget of 8 million DOE is going to be funded at the Max of 5 million and in this instant the applicant must go above the 20% minimum to cover the remaining total project costs.

The total project budget should reflect your project's need.

So, example 4 is illustrating a total smaller project budget and therefore a smaller DOE and applicant budget, but still at that 80/20 ratio at a minimum.

This is last slide for me in terms of timeline. The submission deadline is just two weeks away. Two weeks from now, the application period closes. This opportunity is hosted through our partnership intermediary ENERGYWERX and that is an independent nonfederal entity. You should anticipate that during a federal shutdown, they are going to continue communicating with you as they have over these few weeks. Please continue to submit questions and engage with ENERGYWERX. We encourage everyone to assume the posture that everything proceeds as planned, including submission deadline on November 20th at 3:00 PM ET. We will adhere to any new guidance that we have received, and we will continue to communicate updates to you through ENERGYWERX. With that, we will now answer your questions.

Carla Heron 20:30
Thank you, Devinn. Julia, go ahead.

Julia Prudhoe 20:30
We do have a couple more general FAQs. Do you want to hold them to the FAQ section?

Lambert, Devinn 20:37
Thank you. I'll take them. For the general frequently asked questions.
To ensure clarity, I'm going to read the question in full and the answers. These are. There have been many frequently asked questions, but these were the ones that we have seen asked the most frequently.

Do processing streams associated with the production of metal oxides qualify?
What we feel is that applicants are encouraged to clearly describe how their proposed feedstock and process align with the definition of metal processing stream. I think you one can make a very easy case why metal oxide production would qualify. I've said this before, but is the goal is 50 kilograms in a 14-day window for Phase 2. The performer tests and validates the Phase 2 prototype with the industrial partner on their actual feedstock for recovery of gallium. In order to validate the production at one metric ton per year scale, the prototype must produce at least 50 kilograms of 4 N gallium from a single successful 14-day campaign of continuous operation with the actual processing stream. Phase 2 performers must produce 50 kilograms within a single continuous campaign that is no more than 14 days in length. As I said on the webinar itself, if you can produce 50 kilograms in a single day, you have met that met that standard. I think we have two more frequently asked questions. So, thanks, Julia.

Another question, we have designed these answers so that we give applicants the space to defend or describe why they meet our application requirements. So, the question is, **does the metal processing 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 byproducts 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 partners 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

the initial source.

One more, **will the government shutdown impact the TRACE-Ga opportunity?**
I think I have said this enough. Please continue plan to submit on November 20th.

With that, we can take new questions.

Carla Heron 24:17
Julia, will be transitioning over to Slido to pull up the questions that have been submitted today. Again, we ask that you enter your questions via this portal. We will be asking them in the order in which they have the most interest, the most thumbs up. We will be reading the questions out prior to DOE answering them. That allows the recording and the transcript to pick up all of that information clearly, so that if you want to keyword search after the fact, you will be able to.
So, JuliaI willll hand it back over to you. Thanks.

Julia Prudhoe 24:57
Thank you, Carla. All right, so the first question we have here,

Can a technology developer submit more than one proposal?

Lambert, Devinn 25:07
Answer here is yes, we are looking for unique applications. So, if they are submitting unique applications that is a go.

Anything additional?

Thomas, Burt 25:19
Sounds great.

Julia Prudhoe 25:23

Can repositories, tailings, piles, etc. be used?

Lambert, Devinn 25:28

I think we have answered this question. The answer is yes. I encourage folks to look at the Frequently Asked Questions online or when this is posted. Listen to how we've answered that for the nuance in how that aligns with the eligibility and review criteria.

Julia Prudhoe 25:50

Would DOE accept a letter of support from a foreign bauxite facility while all testing and technology validation are performed in the US?

Lambert, Devinn 26:03

So this is a great question and one that we have answered online. Burt, if you want to answer, you certainly can. I would like to just pull up how we have answered it online as well.

Thomas, Burt 26:15

We will clarify because there could be a domestic entity with a foreign facility for which I think we may not have answered sufficiently. We will need to reply offline.

Julia Prudhoe 26:33

Of course.

Is electronic waste acceptable feed examples GaAs or GaN?

Lambert, Devinn 26:48

Burt this one.

Thomas, Burt 26:51

I do not think we have answered this before. The intent here is that I mean recycling of post-consumer materials is a potential metal processing stream and I think that could be in scope. Notice the intent is for gallium of a particular 49 grade and so.

I think the question is, is electronic waste considered possibly considered a metal processing stream and I think that that could be answered, yes.

Julia Prudhoe 27:33

As a U.S. company, may we use a feedstock from Canada, Australia or another country to demonstrate the extraction technology? I think we answered this question already. I do not know if you want to provide additional response. If you missed our answer to this earlier, we can always repeat it in the Q&A that we send out.

Lambert, Devinn 28:00

I think give me a second for this one. I'd like to answer it online and we have but just let me get the source.

Julia Prudhoe 28:06

Of course.

Lambert, Devinn 28:16

Why don't we move on to the next question?

Julia Prudhoe 28:18

Sounds good.

What evidence will you require to confirm the applicant's industrial partners actually has dependable access to the Gallium resource?

Lambert, Devinn 28:40

I think that is going to come through most strongly in the criteria around business plan and commercialization. The applicant will make the case whether that be access rights, or letter of off-take agreements. That will be really dependent on the application itself. If there is uncertainty, DOE does have the ability to ask follow-up questions once we have received applications. If we do follow up follow up questions, it is not an indication of how an application is doing necessarily in the selection process. So, I think the plain answer is making the best case, and if needed, we will follow up.

Julia Prudhoe 29:39
OK

Is coal ash an acceptable feedstock?

Thomas, Burt 29:45
I think if coal ash can be demonstrated to be part of a metal processing stream, the answer could be yes. For example, if coal ash were being reprocessed for recovery of metals and this process were associated with one with a gallium recovery. That would be an example where that could be possible.

Julia Prudhoe 30:13
OK, Devin, Are you ready for this question now? OK

As a U.S. company, may we use a feedstock from Canada, Australia or another country to demonstrate the extraction technology?

Lambert, Devinn 30:18
Yes. This question was answered in the OSS Q and A's and so what I'll say whoever asked this question, they can look at that that document.
What we are looking for as part of the criteria is that trace projects will restart domestic primary gallium recovery. So, to achieve this, the processing and operations, the processing operations and the processing stream for the projects must come from inside the US. There is no eligibility requirements on the origin of the initial material entering the metal production process. The Phase 2 prototype for TRACE-Gallium must be capable of processing that gallium at a minimum of one metric ton per year, we are looking at that 50 kilogram within 14-day window being an indicator of that. So, applications will be evaluated on the eligibility and review criteria. An eligibility requirement is a description of the potential for scale up at the initial metal industry processing stream.

Julia Prudhoe 31:44
Thank you.

On submitting more than one application, can you please elaborate on unique applications? Can the same technology be applied to different feedstocks?

Thomas, Burt 31:56
I will take that one. Unique here is not intended to identify the technology itself, but the project where the project includes both the feedstock and the technology. So, the same technology applied to different feedstocks has different scale up needs and locations etcetera. So those would be unique.

Julia Prudhoe 32:22
To what extent will documented gallium supply capability influence the scoring of the application?

Lambert, Devinn 32:35
It is one factor within our review criteria. I need to check if it's also a part of the eligibility criteria, but it is one component among many.

Julia Prudhoe 32:51
Is a smaller project less than 50 kilograms OK?

Lambert, Devinn 32:56
Phase 2 requires demonstrating a prototype that produces 50 kilograms. Part of how this mechanism works is the achievement of milestones that affect the payment. So, the answer would be here, no, you need to be targeting a project that can deliver 50 kilograms at the end of Phase 2.

Julia Prudhoe 33:32
Will the program support project storage batteries to replace motor generator?

Lambert, Devinn 33:40
I think no.
Burt?

Thomas, Burt 33:45
I do not understand the question. I will say no.

Julia Prudhoe 33:54
You require an AACE Class 3 cost estimate at the end of phase two. Is this referring to a cost estimate for further scaling the tech after phase two?

Lambert, Devinn 34:11
This is a great question, Burt. Let me just take the start of this and then I think you can elaborate. This is something we have a frequently asked question on.
First, let's define you know what is meant by the AACE Class 3 cost estimate. We are looking for a medium fidelity cost estimate per those AACE standards. You are not applicants are not required to complete an AACE in Phase 2. They are expected to conduct activities so that cost baselines, process flow diagrams and cash flow projections can support a Class 3 cost estimate at the end of phase two.
So as described in the Technical Volume template under key area one project approach and work plan, the application should describe measures to ensure cost baselines, process for flow diagrams and cash flow projections align with that class 3 estimate at the end of Phase 2, but it is not. requiring that cost estimate. Burt, with that said, anything to elaborate on?

Thomas, Burt 35:26
So, we are not paying for the cost estimate. We are paying for work to be done that could support a cost estimate. Thanks.

Julia Prudhoe 35:38
Can a university serve as the primary lead institution on this application?

Lambert, Devinn 35:46
Yes, they the requirement is that there is an industrial partner. It is not a requirement that the industrial partner that is providing the metal processing stream serves as the lead.

For the person that submitted the AACE question, if we missed part of that thinking about future technology scale up, please re-ask that just to make sure that we have answered what you what you needed there.

Julia Prudhoe 36:23

I want to confirm that we don't need to provide detailed budget justification, IE quotes besides that we estimate budget by task in the work plan.

Lambert, Devinn 36:33

Correct. What we will be looking for in the application is estimated budget by task and the work plan. Anything ENERGYWERX wants to clarify here?

Carla Heron 36:49

No, I think that that is accurate. From our perspective, this is going to ultimately be a firm fixed price award. ENERGYWERX is not looking for that level of detail. It is really what DOE needs.

Julia Prudhoe 37:18

This is a follow up in response to the GaAs and GaN question.

Carla Heron 37:27

I just brought it back. So, you will see that as the next one, Julia.

Julia Prudhoe 37:32

Thank you.

Is electronic waste accessible feed example GAAS or GAN? The partner we have that produces 4 nines has facilities in the US, but the lab to produce the four nines is not in the US. Is this an issue?

Thomas, Burt 37:57

That's not actually clear to me. The intent here is for the work that we are paying for to be accomplished in the United States.

Julia Prudhoe 38:10
Thank you.

Are you able to put applicants in contact with suppliers of waste material, or do we have to locate them ourselves?

Thomas, Burt 38:27
There's a Teaming Partner List. Who has that?

Lambert, Devinn 38:32
So, on the website, you'll be able to find a Teaming Partner List, but the applicants will need to connect with those on the Teaming Partner List themselves.

Carla Heron 38:37
Correct.
I believe that has been posted into the Teams chat. I am going ahead and posting that in there with highlights so that everyone can see the link and then the code.

> View Potential Partners here: https://energywerx.wufoo.com/reports/tracega-teaming-partner-list/
> Password: TRACEGA

You can see who has already signed up.

To sign up yourself, there's a link for the form so that you also could be part of the Teaming Partner List. As far as serving as a matchmaker, it is up to you to reach out and coordinate that. ENERGYWERX is just providing the dashboard, but please coordinate the deadline for finding that partner to fulfill what you need for an application is closing, so the sooner that relationship and confirmation is started, the better.

Julia Prudhoe 39:38
We got a couple more questions in here.

If our industrial partner prefers not to disclose business sensitive information in the application, what options are available?

Lambert, Devinn 39:57
We so applications that are submitted will remain in the CUI environment. They will not be made publicly available. All information will be treated as proprietary and privileged. We will only be able to review on the information that.
Is submitted to us. We are familiar with managing information that is business sensitive. That is that is part of our bread and butter.
So we will be able to review. We will review applications based on what is submitted aligned with the eligibility and review criteria. There may be instances where we follow up with companies for applicants for clarifying questions.
If we do, that is not an indication of where an application stands in in the overall process.

Thomas, Burt 40:56
Yes, I think it is also important to be clear that ENERGYWERX will be establishing the funding through one agreement and it. DOE will not be involved in the activities necessarily with the partner. So, if the letter of support contains information necessary for review, that may be the last DOE involvement.

Carla Heron 41:27
One thing to add to that in most cases there will be two different entities coming together for this application. One is the technology developer, one as the host of the feedstock that was supporting the bench testing and prototyping of this technology that is being demonstrated. The assumption is those two entities are going to establish their own internal agreements. Those agreements are not shared in this application. That is why there is a letter of attestation from the host of the feedstock that they are working together. Ideally the application is coming in from the technology developer. If that is flipped, then that needs to be elaborated on.
Those individual agreements between those entities are not part of the application. ENERGYWERX is not going to ask for that, nor will DOE. So, if there is business sensitive information that needs to be disclosed to establish this relationship, that is between the entities not to be submitted.

Carla Heron 42:46
You will need to provide enough information that there is confidence in the technology to be demonstrated. Julia.

Julia Prudhoe 42:56
I was just going to read this question so that we capture it for the transcript, but we already answered this question as a part of the discussion. **So will submissions be publicly released or can such information be treated as proprietary slash privileged?** We just answered that.

Carla Heron 43:16
Thank you, Julia.

Julia Prudhoe 43:16
Of course.

Going back to AACE Class 3, the cost baselines, process flow diagrams and cash flow projections are for scaling up beyond one TPA.

Thomas, Burt 43:36
Yes, the intent is for future activities to be able to be informed at that Class 3 estimate level by operations here in Phase 2.

Lambert, Devinn 43:51
We are looking for scaling beyond that one TPA. Thanks all. We really want to be able to answer all of your questions. So, thank you for your patience as we process and make sure we are articulating clearly in real time.

Julia Prudhoe 44:14
What is the recourse if an industrial partner declines to include sensitive commercial details? Are there mechanisms to safeguard trade secrets?

Thomas, Burt 44:31
I think that we answered this in the sense that trade secrets don't need to be provided by an entity that is not receiving the funding for the technology.

Julia Prudhoe 44:56
Thank you.
Are there any expectations or requirements regarding intellectual property, IP generation, ownership and licensing under this program?

Lambert, Devinn 45:19
For this one, my quick answer is that we are going to follow the standards for Fossil Energy and Carbon Management, DOE IP. That being said, this is one we're going to have to follow up on in writing.

There is one follow-up we might do on this commercially relevant data.
Because of the review criteria around market potential, Department of Energy is regularly receiving applications for large scale work. Sometimes the projects are in the range of 5 million, sometimes in the range of hundreds of millions.
We maintain secure environment and protocols for handling such information.
Federal employees are bound to the Uniform Trade Secrets Act, and so part of our ability to do this work in public-private partnership is our ability to reputationally maintain, maintain trust. That being said, it is partner's choice to submit an application and the contents within that application.

Julia Prudhoe 46:51
And then another question came in on the same kind of vein.

Some materials, example process flow diagrams, resource size and capacity may be confidential. Are these required in the application and if so, what level of detail?

Lambert, Devinn 47:07
The full Technical Volume is up to 10 pages. Within those 10 pages are where you will can include additional information such as process flow diagrams, but we have a

very tight Technical Volume. There will be some general limits on what you are providing, but again, we maintain a secure environment and confidentiality of the information submitted.

Julia Prudhoe 47:44
Then also on the Technical Volume,

Do supplementary tables, PDFS, PEAS, experimental result tables, et cetera, count for the 10-page limit for the technical volume?

Lambert, Devinn 48:00
Yes, and let me get the exact answer this. The information to this is on the website and in the technical volume templates.

Julia Prudhoe 48:17
Would you like me to leave that one and we can go to the next one? OK,

May certain details be provided by reference example, published papers, prior DOE reports, data sheets rather than reproduced in full with in the page limit?

Lambert, Devinn 48:27
Yeah.
The key information for the reviewer's knowledge needs to be provided, but the additional detail can be referenced.

Thomas, Burt 49:10
We've taken a couple of questions now about like what is in this 10-page technical volume. That 10 pages is the technical volume that all the people reviewing the proposals will have in front of them to make a determination. So, if it is important, and if it proves the case, it needs to be in the technical volume.

Chrissi Emery 49:31
I have a technical volume up. Devinn, if that helps, I can walk through at the very end if we have time as well.

Lambert, Devinn 49:41
That sounds, that sounds great if we have time and I am very happy to see additional questions come in.

Julia Prudhoe 49:49
Our resource contains germanium and gallium. Is this of interest?

Thomas, Burt 49:56
It probably relates more to the market potential and discussions about that, but the criteria that we are evaluating here have everything to do with Gallium.

Julia Prudhoe 50:12
Can portions of the application be marked as proprietary so they are not disclosed or distributed beyond the review process?

Lambert, Devinn 50:23
Yes, and that is our normal process as well. We do not distribute application materials beyond the review process, and you can label information as proprietary.

Carla Heron 50:43
All right. Well, we have almost 10 minutes left, but I would like to do a couple of things, much as was mentioned by Chrissi. She can, if there's time left, review the template.

I would also like to pull up the website. We have made a lot of references to that and I think it is imperative that everybody feels comfortable going and finding what they need there. So, on the ENERGYWERX.org webpage, you're able to go to Opportunities and under opportunities you see the current, coming soon, as well as past opportunities.

In this case we're looking at the Gallium opportunity. On it you'll find all of the information here. I will not kid you, it is a very long scroll, but we have referenced a few things that are of key importance, not only with the description, but obviously we have mentioned deadlines. So, you have a guide to hopping to different sections

in here. You can see the submission deadline. There's information here what is part of what is required to be submitted.

We have also mentioned the FAQs. If you jump down to the FAQs, you'll see not only they are organized by certain categories. If we have an updated answer for something, much as this one is, **does the does the metal production stream have an on have to be ongoing or can it be historically accumulated pile?** The answer was updated recently and included in there.
It is a long scroll to get to the bottom, but I do want to highlight in the Quick Links. The very last section are the Downloadable Files and with that you see the three templates that have been referenced including the Workplan, the Cover Page and the Technical Volume template.

I believe Chrissi has that up. I will hand this over to her in just a moment, but before I do that, I do want to reiterate a couple of things. We will get the video recording either later today or early tomorrow. That will be available on the website in case you want to go back and review a section or share it with others if they are collaborating with you on the application. They have the first-hand information as well. The transcript will be available as soon as we complete any cleanup. That will either be later tomorrow or early next week, probably Monday before noon.

In the same vein, we're going to take all of these questions that were presented in Slido. We will send them over to DOE with the answers that were given during the session for them to go through and do a cleanup. They can add more of an elaboration of an answer, perhaps provide clarification or links if need be. So those will be available as soon as we have those back from DOE. There will be a message going out to all of the participants in the webinars so far and for those who have started applications that updated answers are provided on the ops page. So as
We get information, we'll be sharing it and we are adhering to the deadline of application being submitted by Thursday, November 20th, 3:00 PM Eastern Time if you have any issues.
Please reach out to info@energywerx.org that has been posted in the chat so far. You can also find that easily, if you will, on the opportunity page under FAQ's. There's a section called Questions and that just gives you our info@energywerx.org e-mail address so that the team can respond to you.

Chrissi, I will hand it back to you unless there have been more questions that have come in. I think there are now that I look there, but I am going to go ahead and hand this over.

Julia Prudhoe 54:48
Yes, there just came in one more question here about the templates as we were talking about them and they asked, **Just the three templates, correct?**

Lambert, Devinn 55:00
I'm really glad that you've asked this question. I was about to answer this. You will use Submittable to submit your application. Submittable does have a few fields off the top of my head. I imagine you stating the name of your company, the location that attestation we mentioned that you're not under influence of a country of concern. So it is also in your interest to open the submittable to be aware of the few fields that are there. To my knowledge, we don't have long field questions, just some core information on who's submitting.

Julia Prudhoe 55:45
Then another question,

Do technology developers need to have issued patents or is an invention disclosure or provisional filing sufficient?

Lambert, Devinn 55:56
Convention disclosure or provisional filing is sufficient. That is going to be one thing reviewed among many things in your application.

Julia Prudhoe 56:12
Then Chrissi or Carla, go ahead.

Carla Heron 56:12
All right. Chrissi, if you want to tag in and while she's pulling that up, I will reiterate please go to submittable as soon as possible. You'll establish an account and you'll be able to get back into your draft application. You know, if it's open for two more

months, you could still get into your draft application. I would say go in there, ensure that you are accessing it, you are at least opening that application so you can look through it, be familiar with the questions that are there, and of course there are those requirements for these templates to be included as well.
Chrissi.

Chrissi Emery 57:00
Absolutely. Thank you, Carla. Just a real fast overview. On the right-hand side, you're going to see that Technical Volume template. DOE did a fantastic job adding in this blue text. This blue text will guide you and give you additional context about what is allowed. So, I know one of the questions was what does the 10 pages count towards? Include graphics and figures that is going to be included against the maximum of the 10 pages for that technical volume. Also, another reminder that DOE will be reviewing your technical volume and making sure that it clearly addresses the four key areas under the review criteria. While you're creating this, it's always beneficial to have both up next to each other in my opinion. Like Carla said below, once you get into submittable itself. The application is right here. You will have those areas to upload all of those templates in as they are labeled. So if you have any questions at all though, please feel free to reach out to us at info@energywerxs.org. I'll hand it back to you, Carla and Devinn. Thank you.

Lambert, Devinn 58:03
I have a one point. So, if you notice on the Technical Volume, a good example here the blue text is guidance and you should delete that before submission. That would mean then the black text is consistent text that we are seeing throughout.

Carla Heron 58:04
Thank you.

Lambert, Devinn 58:19
The examples of the key areas are called out in the Technical Volume Summary. Thank you. Nothing further from me.

Chrissi Emery 58:29
OK.

Carla Heron 58:31

All right, it looks like we are at time. I didn't see any more questions come in, but if you do have follow-up questions, it comes to you later on today or after you're talking with colleagues, please reach out to info@energywerx.org, submit that question there. If we can answer it directly from the knowledge we already have, we'll do that for a very quick turnaround. If we do need to run this by our counterparts over at DOE, we will get this back to you as fast as possible. In the spirit of equitable sharing of all information, it'll also be posted on the FAQ page so that everyone has access to it. Periodically, we'll send out reminders that updates have been made so that everyone can go and check. I will ask one more time as I thank DOE for their participation and their knowledge in this session. Do you have any final words? Any last thoughts?

Lambert, Devinn 59:30

Thank you very much to everyone who's shown interest in this opportunity and considering applying.

Carla Heron 59:38

Thank you Devinn and Burt and Scott for being here from DOE. Thank you to the ENERGYWERX Works team and to all of those who participated. We hope you are working diligently on meeting up and matching your skills with your partners and getting in the applications.