PG&E CORPORATION

Moderator: Michael Blaevoet
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3:00 pm CT

Coordinator: Welcome and thank you for standing by for today's webinar. Today's webinar is being recorded if you have any objections you may disconnect at this time. All participants are currently in listen-only mode. I would now like to turn the call over to your host Michael Blaevoet, thank you.

Michael Blaevoet: Thank you and good afternoon everyone. Welcome to our webinar for the 2021 Distribution Investment Deferral Framework RFO or the DIDF RFO, where we will be going over utility ownership offers for the Blackwell Bank One deferral opportunity.

So my name is Michael Blaevoet and I'm in PG&E's Structured Energy Transactions Group within the Energy Policy and Procurement Organization and I work on various commercial procurement activities including the DIDF RFOs.

I'd also like to introduce some of my colleagues who will be presenting today. First I'd like to introduce Kean Amidi-Abraham who is in - who is a Grid Innovation Engineer in the Integrated Grid Planning and Innovation Team. He

works on the technical and operational requirements of the deferral project for the DIDF program. And next I'd like to introduce (Max Ernst) who is Program Manager for PG&E's Energy Storage Development Program under Electric Operations working on utility owned energy storage projects.

So I'll be providing an introduction to this presentation which includes a lot of the housekeeping and administrative items and then I'll be turning it over to Kean to talk about the distribution services we're seeking and what we plan to procure. And then he'll turn it over to (Max) to give us an overview of some of the technical requirements for utility ownership offers and then (Max) and I will close out the presentation with information on how to submit an offer and some of the details about the offer form. And then at the end we'll have some time for a Q&A session.

So we're not taking questions during the presentation but we will do a Q&A session at the end as mentioned so please save all questions for the Q&A session but please feel free to email questions to our mailbox during the presentation to didfrfo@pge.com and then we'll answer questions at the end of the webinar.

We will also post a list of attendees from this webinar on PG&E's DIDF RFO website. So if you don't want your name or your company name published please send us an email by the end of this week letting us know.

This presentation is intended to provide a high level summary of the information and requirements in the RFO material for utility ownership offers but given the grid need information for the Blackwell deferral opportunity is confidential and the utility ownership offer materials are confidential we will only be covering things at a high level today.

And participants are really encouraged to review all of the RFO materials on the website and the Power Advocate portal for utility ownership. Also to the extent there are any inconsistencies between the summary of information we present today and what's in the RFO materials the written materials govern.

I'd also like to note that we hosted a participants webinar on January 19 where we reviewed detailed information on how to provide an offer for third party ownership in the current DIDF RFO. So we encourage everyone that intends on submitting a third party ownership offer for Blackwell to go back and review the webinar presentation and the audio that goes along with the slides which you can access on our website at the link shown below. And just as a reminder we will be evaluating both utility ownership and third party offers for the Blackwell deferral opportunity.

And as with all of our RFOs we have an independent evaluator monitoring the solicitation and the primary function of the independent evaluator is to make sure that our RFO process is fair and transparent and that we treat all participants equally and consistently.

The independent evaluator monitors and evaluates what we've done to make sure what we've implemented to make sure that we've implemented the methodology as we've described in our RFO materials. And then at the end of the process the IE will report on our RFO and any proposed transactions filed to the CTC.

The IE also sees all of the offer data in the RFO and all the communications with participants. For this RFO the IE is (Alan Taylor) at Sedway Consulting and I believe (Alan) is on the call as well.

So now I'll go over the Power Advocate website and communications. All materials that are needed to submit a utility ownership offer are located on the Power Advocate site at the link shown on the slide. Once you gain access to this Power Advocate site you will have access to the offer form, Appendix B as well as technical specifications, project drawings and the EPC agreement in addition to other supplemental materials and information.

Other materials can be found on the DIDF website including the RFO documents, detailed instructions for submitting an offer, Q&A and other updates or announcements. And then again any communication should be directed to the DIDF RFO mailbox with a copy to the IE.

So the schedule shown on this slide is specific to the utility ownership offers for Blackwell Bank One. We launched the overall RFO on January 11 which included the overall RFO materials, grid need information and third party offer materials.

On April 15 we made available via Power Advocate the utility ownership materials for Blackwell and today is the webinar. And participants have a bit over a month to submit offers via Power Advocate to PG&E and then also to the independent evaluator with via mail and sent out in a flash drive.

And there’s approximately one month for us to review offers and identify a short list for which we would pursue negotiations. And then we expect to do our negotiations from August to mid-November and we would file any transactions that result in this RFO for commission approval by mid-December of this year.

All right so now I'll go over some of the times participants should focus on when submitting their offers for Blackwell and whether it’s for third party

offers or utility ownership offers it would be evaluated together. And for third party offers you're going to want to make sure to submit the Appendix C or the NDA, nondisclosure agreement, as early on as possible so that you can receive the third party offer form in the grid need information in Appendix F2 for Blackwell and both of these are confidential.

For utility ownership offers you will want to also provide PG&E with the Appendix C and you'll need to email PG&E acknowledging acceptance of the confidentiality agreement or the Appendix G. And you'll also register with Power Advocate so you can obtain access to the utility ownership offer form, the grid need information and the technical specs at Blackwell. And we encourage participants to please make sure to be proactive and do this well in advance of the offer deadline.

And then another thing is to make sure to check Power Advocate for any updated documents that may be submitted periodically. And then some key success that pertain to all offers includes submitting a complete offer package by the deadline as well as making sure your offer meets all of the eligibility requirements and that your offer is competitively priced with respect to the deferral value and other offers given all offers are evaluated in comparison with one another for both utility ownership and third party offers.

And then again if you have any questions please make sure to send them to our RFO mailbox at didfrfo@pge.com with a copy to the IE. So now I'll turn it over to Kean and he's going to provide an overview of the Blackwell grid need information we're looking to defer and some of the eligibility requirements.

Kean Amidi-Abraham: Thank you Michael. So the first slide we're going to be looking at the location for Blackwell and the specifications of the bank itself.

So Blackwell Bank One is located in the Central Valley region of Kern County near the intersection of Highway 33 and 46, is a three-phase 12.5 MBA bank with two 12.47 kV feeders 1102 and 2101. Next slide please.

The deferral opportunity at Blackwell Bank One is a single capacity need that solves a reverse flow due to overgeneration. The requirement is to increase the load on the bank when solar generation is forecasted to cause a backfeed on the bank. A combined need of 1 to 5 megawatts across feeders 1102 and 2101 is required.

The exact need, in service date and other confidential performance and technical requirements will be provided upon signing and submitting the nondisclosure and use of information agreement, Appendix C, and the confidentiality agreement, Appendix B. These documents can be found on the 2021 DIDF RFO website and are also linked at the bottom of this slide. Next slide please.

Project cost represents the estimated capital cost of traditional distribution investment, this is represented on this slide in 2020 dollars. The distribution deferral value represents the net present value of deferring the annual revenue requirement associated with the traditional distribution investment.

The revenue requirement recovers the capital cost of the distribution upgrade plus any associated O&Ms and overhead such as taxes and depreciation. The deferral value is calculated using the real economic carrying charge, RECC, methodology as described in PG&E's Demo B final report, Section 8.24. The date used to calculate the net present value for Blackwell Bank One is November 1, 2021. Next slide please.

Next we're going to go over the offer eligibility for Blackwell Bank One. The utility owned offer is only eligible if the proposed technology is a battery energy storage system or BESS. This is due to the requirement for an increased load on the bank due to forecasted backfeed from solar overgeneration. The BESS must meet the technical specifications and requirement as well as the grid need requirement. These are all outlined in the documents on Power Advocate. Next slide please.

Next we're going to have our associate (Max) go over the specifications for the EPC offer at Blackwell.

(Max Ernst): Thanks Kean. Looking at Blackwell substation - next slide please Michael thank you. The Blackwell substation like Kean said is in the Central Valley. This substation land is owned by PG&E and the footprint of the substation is 3-1/2 acres. Next slide please.

Here are a couple of photos of street view of the layout. You can see that the actual equipment in the substation is shifted off to one side leaving some space here in the far southwest corner for a potential battery solution. Next slide please.

So taking a look again at the aerial view, the area that we've reserved for the potential battery solution is in the southwest corner and is highlighted by this green polygon toward the bottom. And then there’s a purple line surrounding the substation and goes slightly outside the substation fence which is the parcel boundary where we would be able to expand the fence to in the event of the battery solution being implemented here.

So within the green polygon area we have an approximate 9500 square foot area starting at about 115 feet from the substation entry gate and extending to the edge of the parcel just south of the substation fence approximately 26 feet.

And it's a little hard to see here but probably easier to see once you zoom in in the actual documents the small red rectangle in the top left corner of the battery area would be the suggested switch gear location which would be vendor supplied and that would need to be a 12 kV switch. That would then be the point where PG&E would furnish a generation tie-line from the 12 kV breaker and meet the vendor supplied switch gear. And next slide please.

So the scope of work is detailed in PG&E's Specification 7193 which is our standard battery storage specification for utility ownership. And then taking a look at this blue circle is where all of the vendor responsibility work would take place and it would need to be constructed to the requirements in Spec 7193.

At this point Spec 7193 specifies that the battery solutions must be lithium ion and the preferred chemistry is lithium ion phosphate but nickel manganese cobalt would be accepted as well. More detail there on the specification. Next slide please.

And then taking a look at a high level chart of the division of responsibility, laying out what PG&E and vendor would be responsible for. So in the case of the battery site engineering that would be on the responsibility of the vendor subject to PG&E approval and then permitting would mostly be led by PG&E but there may be activities that require collaboration with the vendor.

Site preparation in the area where the battery begun that green polygon would be the responsibility of the vendor as well as site civil and electrical works in

that area. PG&E would bring the interconnection point so the generation tie-line, any related substation upgrades and then there would be a joint effort to energize commission and test for commercial operations and market calls.

Project management would be led by the vendor. PG&E definitely will ramp up their own project management but the actual project management of the battery project and all the vendor as well as post-COD maintenance. So we are seeking a long term performance and maintenance agreement under the RFO. Next slide please.

And regarding site visits and detailed specifications. So at this point during the initial round of offers we're not conducting site visits but short list of vendors will be organized for a visit to the site walk down. And then a little bit of background on Spec 7193 it does reference a long list of additional PG&E specs related to PG&E's construction and civil requirements. So quite a few of them are listed in the RFO package and at the point of shortlisting we would be sharing all of those more detailed specifications. Next slide please Michael.

All right and then I'll pass it back to Michael and I'll join in for some of the offer submittal process background.

Michael Blaevoet: Great thanks (Max). Yes and as (Max) mentioned I'll be covering the offer submittal process and then (Max) and I will both be covering the different parts of the offer form in this presentation.

So as mentioned earlier in this presentation the grid need information and offer materials are confidential. Participants must provide PG&E with both the Appendix C NDA for grid need information and the Appendix G confidentiality agreement to get access to Power Advocate in order to

download the utility ownership offer materials. So participants must completely fill out, sign and date the NDA which is located on our website and must also email PG&E acknowledging acceptance of the confidentiality agreement for utility data.

Moving along so all offers must be submitted with the online platform Power Advocate. There's a link on the RFO webpage to Power Advocate which is also included on the slide. Offers for Blackwell are due by June 14 at 1:00 pm Pacific Time. You will also need to submit all of your offer materials via a USB flash drive mailed to our IE (Alan Taylor) at Sedway Consulting by June 15. And we will only be considering offers that meet the deadline and that are complete and conforming.

Now onto the required offer submission forms. You must submit a fully completed offer form which is in Excel format and you must also submit a fully completed Appendix B which we'd like submitted in PDF format. Also I'd like to note again that we must receive a fully executed NDA and receive written acknowledgment of acceptance of the confidentiality agreement for utility data via email in order for us to provide access to Power Advocate. And we suggest doing this as early on as possible.

Okay so we will now go over the utility ownership offer form for Blackwell which is available through Power Advocate. So when you open the offer form you will see a few pop up messages with instructions. The first one here instructs the users to avoid using field commands as they may prevent the proper field from being populated in the offer form which may cause the offer form to be considered incomplete. So we highly suggest just filling out each field one by one.

The second message shown on this slide is a reminder to participants that the values that are submitted in the offer form should align with what eventually goes into an agreement. And then you're going to see a yellow bar at the top of the Excel form and you're going to want to make sure to enable content. And then as I said earlier you want to make sure to submit your form in Excel and no other formats will be accepted.

And then here on the next slide we have the file name and it's important that all of these instructions are followed carefully. So for each file name you'll need to select the generate file name button, this will create a customized file name for your particular offer which will be used in the submission of your offer package.

And then this slide shows the contact information section, the offer form. You will need to provide your company name, location and authorized contacts so that we can reach out to you if needed.

And then now we're onto the attestations section of the offer form. So all participants must adhere to the attestations listed in the offer form and it's important that the attestation section is fully completed as each of these fields are required to be filled out for participants to remain qualified and eligible in this RFO.

Okay so I'm going to hand it back over to (Max) now to provide some information on the battery description and the EPC offer pricing sections of the offer form.

(Max Ernst): Thanks Michael. So what we're going to ask for here in the offer form is a basic description of the battery specifications. These are also laid out in Section 2.1 in the battery spec but what we're looking for is pretty standard

battery manufacturer model, country manufacturer, the chemistry itself, each cell's rating, module rating, rack rating and then the main plate power and energy as well as unit pricing per kilowatt hour, the roundtrip efficiency, C rate and then depth of discharge range, any UL listings, ambient temperature range and overall energy density. Next slide please.

And then as far as the EPC offer pricing goes you'll see here that the contract actually is blacked out since that is a specific need here. We're looking for the overall contract purchase price as well as the cost year by year preventative maintenance, ongoing major maintenance and then in general we want to note here that maintenance outages would need to occur outside of the March to October call period.

Again just want to mention here that we're looking for a long term performance and maintenance agreement for the seven year life of the asset. That's all I have for this slide Michael.

Michael Blaevoet: Great thanks (Max). So just a few more slides here. So in the developer experience section of the offer form participants must complete all of the fields here so that we get a sense of the level of experience you have doing these kinds of projects. And then lastly just please make sure to fill out all of the fields related to the supply chain responsibility.

And that does it for our presentation for today. We're going to take a brief intermission and we'll do a Q&A next so please submit any questions you may have to our RFO mailbox at didfrfo@pge.com. And the operator will put you on a brief hold and then after a few minutes we'll come back and answer any questions that receive. Thanks everyone.

Hello everyone thanks for waiting during the intermission. We received a few questions and we'll address those right now.

So the first question that we received was if PG&E would move forward with a project if the cost exceeded the deferral value. And so PG&E will execute a contract with a project that meets the minimum requirement and is under the cost cap.

And the next question we received is will credit be given for a project that has a life in excess of seven years or is PG&E just looking for a system with an expected life of seven years? So PG&E is seeking a solution that can meet the seven year deferral term but the project must also have a minimum life of seven years so that it can meet that deferral need term.

And then the next question that came in is how much reserve capacity does PG&E want in the system? So PG&E is seeking a project that can meet the minimum requirements for the deferral need and we would still accept an offer for a project that exceeds the capacity for the deferral need that we're seeking at Blackwell.

And those were all of the questions that we received during the webinar so if you have any additional questions please feel free to send them to our mailbox at didf@pge.com and we'll make sure to get back to you as quickly as we can. And we'll also be posting our Q&A on our website and there's a link in this PowerPoint presentation to our Web site as well and we'll also be posting the PowerPoint slides in PDF format and we'll also be posting an audio and a transcription of this - of the audio as well.

So thanks everyone for joining today. Hope everyone has a great rest of your week, thank you.

Coordinator: This will conclude today's conference. All participants now may disconnect at this time. Thank you for your participation on today's call, have a great day.

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