



Global First Power
Micro Modular Reactor™ Project at Chalk River
Community Telephone Town Hall
March 2, 2021

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Neal Kelly:

Good evening everyone, and thank you for joining us tonight. I'm Neal Kelly, and I'm happy to be your host for tonight's Global First Power Telephone Town Hall Meeting. Global First Power is an Ontario-based energy company that is proposing to construct and operate a small modular reactor at the Chalk River Laboratory site near Deep River, Ontario.

This is the second town hall hosted by Global First Power. They hosted a similar session in May of last year, and welcomed almost 4,000 participants. We are looking forward to another great discussion tonight.

Now before we get started, let me explain how this telephone town hall works. Right now, residents from across the Ottawa Valley are answering their phones and connecting to this discussion. Now this is just like a traditional town hall, where guests arrive and file in through the front door, except in place of a front door there are thousands of phones ringing in people's homes inviting them to join us. So people will continue to join us over the next few minutes.

A telephone town hall is live and interactive, and allows us to reach out and talk with thousands of people from the comfort of their homes. It's a great way to stay connected, especially today when we can't gather in person.

Tonight, we are joined by representatives from Global First Power who are ready to take your questions and share information about their proposed small modular reactor project at the Chalk River Laboratory site. We are also joined by a representative from Canadian Nuclear Laboratories, the company that manages the Chalk River site.

We have about one hour together. We are already experiencing a high volume of calls, so we'll try our best to get to as many as we can.

For anyone who has just joined us, welcome to the Telephone Town Hall with Global First Power. Before I turn things over to our Global First Power representatives, a couple of housekeeping notes. Given the unprecedented times that we are in, we are hosting this session while working remotely and adhering to public health guidelines and protocols. So please bear with us, we apologize in advance for any technical issues we may run into.



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Also, tonight's session is being conducted in English. However, we do have staff who are able to respond to questions in French. The full transcript of tonight's session will be available in English and French on the Global First Power website within the next few days.

So moving along, I want to introduce our speakers. Tonight, we're joined by Robby Sohi, President and Chief Executive Officer of Global First Power; Eric McGoey, Engagement & Communications Director for Global First Power; Rose Ahlan, Project Director for the project at Chalk River; and Niel Kemp, Global First Power's Technical Director.

As mentioned, we are also joined by Keyes Niemer from Canadian Nuclear Laboratories should there be questions about CNL's small modular reactor program.

Here's what you need to know to participate in this evening's call. If you have any questions for the panel, please press *3 to get in line to ask your question. An operator will take down your question live. You will still be able to hear the town hall conversation while you're waiting, and when I call your name you will be able to ask your question live on air. So that's *3 to get in line to ask your question.

We are also going to ask you to get involved a little later on by responding to some poll questions. I will provide instructions on that in a bit.

Now this evening's agenda is fairly straightforward. First, Robby Sohi is going to provide an overview of the progress of Global First Power's Small Modular Reactor project at Chalk River. After that, you'll have a chance to ask questions. If we don't get to your question tonight or if Global First Power doesn't have the information to respond to your question, they will get back to you.

Before I turn things over to Robby, just a reminder if you want to ask a question to one of our speakers now or any time during the call, press *3. And for anyone who has just joined us on the line, welcome to the Telephone Town Hall with Global First Power.

Now, I will turn it over to Robby Sohi, President and CEO of Global First Power, to provide an update on the progress of their Small Modular Reactor project at Chalk River. Take it away Robby.

Robby Sohi:

Thank you Neal. Good evening, and hello to everyone on the call. Thanks a lot for taking time to join us this evening. I know these are difficult times for everyone, and we hope you have been keeping safe and healthy.

Neil mentioned we held a similar session to this in May last year, and we were pleased with the great participation. We had hoped by this year we would be able to meet you in person, however we will continue to meet virtually for now until public health guidelines allow us to do so.



Before we get too far, I should explain who we are. Global First Power, or GFP, is an Ottawa-based company focused on project development for small nuclear power plants to provide an alternate to diesel for electricity generation for communities and minds who are not connected to the provincial electricity grids.

Global First Power is jointly owned by Ontario Power Generation and Ultra Safe Nuclear Corporation. Ontario Power Generation is the company that generates about half of Ontario's electricity and has safely operated nuclear reactors for 50 years. And Ultra Safe Nuclear Corporation is a developer of technology we are proposing to build at Chalk River, the Micro Modular Reactor™ design.

Now onto our project. Tonight, we're very excited to have the opportunity to share the progress that has been made by our team on our project at Chalk River, in particular the progress being made to support the environmental assessment that is underway. We are proposing to construct and operate a small reactor at Chalk River Laboratory site. Our project will provide a solution to help meet Canada's energy needs, specifically for heavy industry, mining, and remote locations, while also supporting Canada's environment and climate change goals.

Our project could serve as a model for the future and be a solution that provides clean, reliable energy to support Canada's heavy industry and mining applications, or for far north or remote communities, a solution that contributes almost no greenhouse gas emissions or smog, and a solution to support Canada's environment and climate change goals and help build prosperity.

Using Ultra Safe Nuclear's patented Micro Modular Reactor™ design, our proposed plant would provide approximately 15 megawatts of heat energy that could be converted to electrical power up to five megawatts of electricity.

Our demonstration project is our attempt to prove that our technology is an economically competitive alternative to diesel power, which is commonly used in heavy industry and remote communities without greenhouse gas emission and with a smaller environmental footprint.

We have applied to the Canadian Nuclear Safety Commission for the first in a series of regulatory licenses that would be required, and the environmental assessment has begun. Since we talked to you last May, our staff have made significant progress to support the work on EA, including identified a preferred location for the project at Chalk River site, progress some of the preliminary studies to support EA, and continued our engagement with Indigenous communities and members of the public.

Engagement with Indigenous communities and the public is key part of any project, so we are pleased to have this opportunity to engage with participants this evening. I also want to mention that we're hosting a virtual open house right now until March 10th. You can visit our open house website, where you can find more information about the project, provide valuable



input to some key aspects of our EA work so far, and submit any questions that may not be answered this evening. You can visit the open house by going to our website at www.gfpcleanenergy.com. We will remind you of that website later in the session as well.

I think I'll stop there Neal, but before I hand it back to you, I'd like to call on our Project Director Rosalie Ahlan to provide a brief overview of the proposed timeline. Over to you Rose.

Rose Ahlan:

Thanks Robby. As mentioned, I'm the Project Director, and I'm pleased to provide a high level timeline for the project. If all goes to plan, we expect first power, which is to say when the unit would be first operational, by 2026. There's still a lot of planning to do and many things to consider, so the detailed project schedule is a work in progress right now and will be more fully defined over the next few years, particularly after we have an improved environmental assessment and license to prepare the site.

The processes we must complete include loss of opportunity for public input, which is very important, and because of this the schedule includes estimated timelines right now.

We are working on the environmental assessment, and at the same time the first stage of the license to prepare site right now. This license is one of several licenses GFP would need over the course of the facility's lifetime. While this is occurring, we as well continue with other activities, things like updates to our corporate policies, exploring terms for service providers, improving our cost estimates, planning out our staffing needs, developing our supply chain model, and engaging with Indigenous communities, public, and stakeholder groups. This work is fundamental to GFP.

From a technical perspective, while USNC is the designer of the reactor, we still have some design to do or oversee with respect to the balance of the nuclear plant and adjacent plants. We're doing this now at a concept phase level, and will be moving to a definition phase level of design later this year.

As mentioned, this is a very high level overview, and we can get into more questions in a moment. Over to you Neal.

Neal Kelly:

Okay, thanks Rose, and also thanks to Robby. For those of you who just joined, that was Rose Ahlan, the Project Director, and Robby Sohi, President and Chief Executive Officer for Global First Power. Lots of good information there Robby and Rose, and they provided the participants with an overview of the project.

And perhaps this is a good place to start with our first question, which is an online question, and Robby I'm going to throw this question to you. Why are you building the plant here? We don't need the power. Robby?



Robby Sohi:

Thanks. That's I guess a two part question. Maybe the first part I'll deal with, why are you building the plant here? Canadian Nuclear Laboratories, Canada's national nuclear laboratory and home to significant breadth of experience, capabilities, and unique facilities to conduct nuclear research. And also when you think of birthplace of nuclear, Chalk River comes to mind. And CNL has a long and proud history when it comes to nuclear operational excellence, and the site has excellent infrastructure to support a nuclear development project like ours.

Through our SMR program, we're seeking to advance Canada's small modular reactor industry through hosting a demonstration unit at CNL's main site and through application of our skills and capabilities on the commercial terms for the SMR vendors.

In terms of the location itself, as I said the infrastructure and proximity to the skillset we need, that's part of the reason. And it is a commercial demonstration site. So that's the piece around why we're building a reactor at Chalk River.

Now as far as why are we building it, why do we need the power in the first place? Very good question. As I said earlier, this is a commercial demonstrator for now. Once this technology is proven, the idea is to deploy this technology where it's needed. As I said earlier in my opening remarks, this is an off grid technology that'll be deployed in heavy industry, mining, remote communities that do not have access to the provincial electricity grids.

So although we're building it at Chalk River, it is a commercial demonstrator. Once we prove the concept ... I look at it this way. This is going to be a showcase that allows the potential communities that want to build an SMR in their community, this is the way for them to come and look at it and assess whether they'd want a plant like that. It'll be a showcase in the community. Over to you Neal.

Neal Kelly:

Okay, thank you Robby, lots of good information there. We have many callers already in the town hall, and a number of you are still joining. So we will be answering your questions live in just a couple of minutes.

Just before we do, I mentioned earlier that we'd like you to get involved tonight through some quick real-time poll questions, so let's do our first poll question now. So the first question is before tonight's town hall, had you heard of Global First Power and the proposed project at Chalk River?

Press 1 if this is the first time you've heard about the proposed project. Press 2 if you know a little bit about the project and want to know more. Press 3 if you already know a lot about the project and have specific questions you would like to get answered.

Once again our question is before tonight's town hall, had you heard of Global First Power and the proposed project? Press 1 if this is the first time you've heard about the proposed project. Press 2 if you know a little bit about the project and want to know more.



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Press 3 if you already know a lot about the project and have specific questions you would like to get answered. Thanks to everyone who participates in the poll, and we'll have answers for you in a little bit.

Okay, it looks like we've got lots of callers on the phone waiting to ask your question, so we're going to go straight to a caller. I want to go to Alan in Deep River. Alan, you're live on the air, please ask your question.

Alan:

Oh, thank you. Yes, I just wanted to know a little bit more about where you're at and what the high level view, I was wondering if you could ...

Neal Kelly:

Alan, we seem to be having some problems with your line. I think if I heard you correctly you were saying at what stage is the project now? I want to throw this over to our Project Director Rose Ahlan. Rose?

Rose Ahlan:

Thanks for the question Alan, hopefully we paraphrased your question correctly. And as I said briefly, right now we are still in the early stages of the environmental assessment and the license to prepare site. On the environmental assessment, we've retained a consultant to help us in that effort. And as much as we do know about the Chalk River site, there are still additional studies underway in order to better understand the existing physical, biological, associate, economic, and cultural environment where the project will be located. For example, we did a geophysics investigation in the late fall, and have been reviewing that data.

On the licensing side, it's a thorough and pretty detailed process. We are undergoing the license to prepare site right now. That's again the first license in several licenses. We have one major submission coming up very soon, but there'll be additional packages of information that go to the regulator, the Canadian [inaudible 00:18:42] Commission.

Again, we also continue to progress efforts on the project development planning side. Cost, schedule, and scope. Hopefully that answers your question Alan.

Neal Kelly:

Yeah thanks very much Rose, and I think you answered it well for Alan, and Alan thank you very much for the question. We're going to do an online question, this comes into us from Mark and I think I'll throw this question over to Niel Kemp. So Niel, if you're on the line for us, the question is has Global First Power applied for the VDR at CNSC, and at what stage is it now? Niel, can you take that question?



Niel Kemp:

Yes, thank you. In terms of the vendor design review process from the CNSC, the process is created for reactor vendors. So Global First Power do not directly apply for a vendor design review with the CNSC, but rather applied as a licensee for the different nuclear licenses.

In this case, USNC who is the reactor vendor, that's Ultra Safe Nuclear, has already completed phase one of the vendor design review and is currently busy with phase two of the VDR process. Thank you, back to you Neal.

Neal Kelly:

Okay, thanks very much Niel, and thanks very much for the question Mark. Just a reminder if you have a question you'd like to ask our panel, press *3 at any time. That's *3 and you'll be added in the queue to ask your question.

Let's go back on the line. We have Suzanne on the line, she's somewhere along the Ottawa River. And Suzanne, I'm going to ask you to ask your question live on the air. Take it away Suzanne.

Suzanne:

Hello, thank you for taking my question. I'm wondering what is involved in the preparation of the site? I'm also wondering which Indigenous community or communities you are currently engaged with or partnering with?

Neal Kelly:

That's a very good question Suzanne. Eric, can I ask you to take that question?

Eric McGoey:

Sure. Thanks Neil and thanks Suzanne, great question. So let me answer the second piece first about the Indigenous communities that we're engaged with. So there are a fairly large number of Indigenous communities in the region that we are engaging with, so there are seven different communities on both sides of the Ottawa River.

We have been engaging with all of those communities, which include Algonquin communities in Quebec, Algonquin communities in Ontario, and the Williams Treaty First Nations in Ontario as well, as well as the [inaudible 00:21:50] Nation of Ontario Regions Five and Six.

And so the amount of engagement that we've done varies from community to community. There are some communities that have been very open to working with us and talking to us about for example how traditional knowledge from their community members might be able to inform our environmental assessment process, which is really encouraging and something that we're really pleased to be cooperating on.



And there are other communities that are less interested in engagement, and of course that we obviously respect the perspective of communities. Many communities have capacity issues around consultation and engagement dealing with a lot of different projects simultaneously, and so of course we understand that we're not necessarily going to be every community's top priority. But we're really encouraged by the relationships that we're building and some of the agreements that we've been able to reach with communities.

In terms of site preparation, to get technical about it the license to prepare site is the first of three licenses that are required from the Canadian Nuclear Safety Commission before a project can move ahead to the point that you can have a reactor that's been constructed and then ultimately turned on. So there's the license to prepare site, which is the first license that we're currently in the process of applying for. And should we be successful in getting that site license, we would then apply for a license to construct and then a license to operate the reactor. And until we got each of those three licenses, we wouldn't be able to move on to the next phase.

So in terms of site preparation, we've looked at three different sites at the Chalk River campus. And the one that is our preferred site right now is currently in the existing staff parking lot. And we think that's a good site because it actually would require less in terms of you don't want to disturb a greenfield site, cut down trees and so on, if you don't have to, and so we liked the parking lot site because it's close to power lines and other infrastructure at CNL, but also because it's a previously disturbed site.

I hope that was helpful in terms of answering both of your questions.

Neal Kelly:

Yeah, thanks very much Eric. On the site preparation, I'm going to ask Niel Kemp. Neil, do you have anything else you want to add on that? I know you have a lot of expertise in this field.

Niel Kemp:

Yes, thank you Neal. I think that in terms of the site preparation itself, that is usually just the I could almost say pre-construction activities. So it's usually the land clearing, labeling of the site, building some road infrastructure, etc. But it's important to note that the plant that we're proposing is very small, so it's only about 180 by 200 meters site in total. And therefore, the site preparation work will be actually relatively small. And as Eric explained, we are focusing on a previously disturbed area so there would be actually minimal work as part of the license to prepare site scope of work. Thank you Neal.



Neal Kelly:

Okay, thanks very much Niel, and Suzanne hopefully we've been able to answer your question there. I want to stay with the phone lines. George from [inaudible 00:25:43], George you're live on the air, do you want to ask your question?

George:

Okay, the question is do these things already exist? And when they do come into existence, how long can they maintain the power for because they've already built them?

Neal Kelly:

Okay thank you George. Eric, could you go ahead and answer George's question?

Eric McGoey:

Yeah, thanks Neal. It's a great question. And yes, one of the confusing things about small modular reactors is that there's certainly a lot of talk about them now and it gives some people the impression that this is completely new technology. But really, the technology has been in use in a couple of different places for several decades now. And the two obvious places where you'd find something that you could define as a small modular reactor that's been operating for many years already would be one, research reactors that are used at post-secondary institutions like McMaster in Hamilton, or I believe Royal Military College in Kingston has one as well.

And then the other places, the Navy, the U.S. Navy in particular, uses small modular reactors to power for example their submarines because if you have a nuclear reactor, you can power it silently essentially compared to relatively noisy diesel powered submarines.

But the difference of course is that in both of those applications, it's not really a commercial market where you're competing against other technologies based on price for example. It's more of do you want one of those things or do you not? There's not really a substitute for them.

So what's new about small modular reactors is the idea that we could use them off grid to provide power in places where it's not economical to get transmission lines to. And that allows you to provide an alternative to diesel fuel generation at for example remote mines in northern Ontario or in Canada's Arctic or in the perhaps remote communities where it's not economically viable to connect those communities to provincial transmission lines.

And so, it's really the commercial aspect of SMRs that's new, and that's exactly what we're trying to prove at Chalk River. It's not about demonstrating the technology. That's been proven in labs and in demonstration projects in other countries. It's really about proving the commercial model so that we can work with mining companies and other potential remote users and give them really clear information about this is what it's going to cost, this is how long



the reactor can run, this is how many million liters of diesel it will displace over the course of its 20 year lifetime on a single load of fuel. 265 million liters of diesel is the amount of energy that one SMR unit of the kind that we're demonstrating at Chalk River site would displace.

So obviously climate change is a huge driver here, the need to decarbonize the energy sector, and that's why we're looking at SMRs, older technology in a new light.

Neal Kelly:

Okay, thanks very much Eric, and thanks for the question George. That was a very good question. Just a reminder if you have a question you'd like to ask our panel, press *3 at any time. That's *3, and you'll be added in the queue to ask your question.

Now a little earlier in the evening, I mentioned our first poll question, and I thought I would give you some results. So before the town hall, we asked the question had you heard of Global First Power and the proposed project at Chalk River? And 46% of you said this is the first time you've heard about the proposed project. 39% said you know a little bit about the project and want to know more. And 15% said you already know a lot about the project and have specific questions. So thanks very much for participating in that poll.

I want to go to one of our online questions, and Robby Sohi, the President and CEO of Global First Power, I'm going to throw it to you first and possibly to others to answer this. This comes from Joanna, and Joanna says, "I understand you'll be using enriched fuel. Where will that fuel come from, and how will you safely dispose of it?" Robby, do you want to answer that question?

Robby Sohi:

Sure, absolutely. Thanks for the question Joanna, really a great question. First of all, let me start with as we have this commercial demonstrator project, the intent long-term is to have a Canadian bill/solution that's going to help people who live in Canada, and the benefits come to Canada. So the long-term plan is to have a fuel supply for small modular reactors. You source it from Canada.

Currently as you stated in your question, it's going to have to come from somewhere else because we do not have enriched uranium. So it will initially start off where we're actually looking at all the sources today, see where we can source it from, to initially start the production run for our demonstration project, with the long-term visibility that the supply chain for fuel will be in Canada.

So that's a broader answer. Eric, maybe I can turn it over to you, and if you have anything else to add?

Eric McGoey:



Sure, thanks Robby. So yeah, enriched fuel is new to Canada. In Canada, we're very fortunate to have a huge supply of natural uranium in Saskatchewan, and so we've been using that in our CANDU reactors and have a tremendous safety record in those CANDUs using natural uranium. And frankly, the abundance of natural uranium in Canada has made it less appealing to look at enriched uranium as it's used in other countries until now.

But what's quite interesting about the SMR technology, and I talked a little bit about the fact that it's based on existing designs that have been used for decades now, is that essentially the CANDU technology is about 40 years old and it's very safe, but it's fairly large and it's fairly complex, and it requires a lot of people to run.

And so the promise of SMRs and why we think there's a commercial model that makes them economical now where that might not have been true 20 years ago is that improvements in design and technology have allowed us to simplify design of reactors so that they're less complicated than the CANDUs were and require fewer people to operate them, while being at least as safe as if not potentially more safe than the CANDU fleet. And so that's the appeal of using these SMRs.

And so, we have the opportunity to use some enriched fuel, and that's not currently available in Canada. We're going to have to import that from another country, which is going to be new for Canada. But the advantage is once we take that enriched fuel and manufacture fuel from that enriched uranium, which we are hoping to do at Chalk River, is once that fuel is made it allows the reactor that we're building at Chalk River, the USNC-designed GFP reactor, to run for 20 years on a single load of fuel, which means you don't have to be handling the fuel. That's done robotically at the existing CANDU plants like Pickering and Darlington. You don't have to be putting new fuel in, taking old fuel out while the reactor's running, nor do you need to shut it down regularly to do that fuel change the way that you do in the United States.

Instead, you can get 20 years of operation off a single load of fuel, and so that is the really exciting thing about being able to use enriched fuel.

Neal Kelly:

Okay, thanks very much Eric, really appreciate that answer to the question. And before we go to the next caller, let's do another poll question now, and here is the question. Do you believe nuclear energy and small modular reactors are an important part of providing a clean energy mix in Canada? Press 1 if you think nuclear energy is a very important part of the energy mix. Press 2 if you think nuclear energy is somewhat important. Press 3 if you think it's not important at all, press 4 if you are not sure.

Once again the question is do you believe nuclear energy and small modular reactors are an important part of providing a clean energy mix in Canada. Press 1 if you think nuclear energy is a very important part of the energy mix. Press 2 if you think nuclear energy is



somewhat important. Press 3 if you think it's not important at all. Press 4 if you are not sure. And we'll have your answers a little bit later, and I appreciate you participating in the poll.

Let's go back to the phone lines. I want to go to Mark in Pembroke, and I think what I'm going to do, Mark I believe has a question about the local economy, and I want to throw this to Keyes Niemer from CNL. So let's hear from Mark first, and then we'll go from there. Mark, you're live on the air.

Mark:

Oh thank you very much. 30 years in the nuclear industry working at Chalk River, BSC chemistry, all that stuff. But frankly, I really really love what you guys are trying to do. I really hope it's going to happen. But the fact is people are scared, right, because they don't know about how much they benefit from nuclear every day, between the medical, I worked on the isotope side of the business. Tell them about the fact that you take uranium out of the ground, it's already radioactive. We just use the stuff, speed it up, and then it's more radioactive. We can take it out, but in a couple hundred years, it's the same stuff that we took out of the ground.

Neal Kelly:

Yeah, thanks very much Mark. Mark, I'm going to get one of our experts to jump in. I want to start with Keyes. Keyes, you're there, you're on the ground. What does this mean for the local economy? And then we'll throw it to some of the Global First Power people. Keyes?

Keyes Niemer:

Great, thank you very much. So from a CNL perspective, we're really excited about SMRs and hosting an SMR site. We started looking at SMRs a couple years ago, and as Robby said we saw that the SMRs is a great opportunity for demonstration of an SMR. So at CNL, we're looking to clean energy as one of our missions there, and so we're looking to host this SMR or multiple SMRs on site.

And there's opportunities in the local community from a CNL perspective just to provide research and development opportunities. There'll be local trades and jobs to help support the preparation of the site and the ultimate construction of the reactors on site. And then, I want to actually turn it back to GFP and ask one of their experts to talk about where the actual SMR would be built in a factory, and what type of opportunities those bring to Canada.

Neal Kelly:

So Keyes, I think I'll throw it over to Robby Sohi, the President and CEO of Global First Power. Robby?

Robby Sohi:



Thanks Neal. I think it's again a great question in terms of how does ... The question really is how does it benefit the local economy, and Keyes touched on that a little bit. And I want to focus also on broadly what does it do for Canada. And I think as a nuclear industry, we collectively have an opportunity to first advance SMR technology such that Canada will become a global leader. These are good jobs across the Canadian economy.

And then number two is we want to make the next generation of nuclear technology a leading option for Canada and the globe. And when we think of Canada, think of oil stands, mining, critical pieces of the Canadian economy, and to provide them safe, reliable, commercially-viable power, which will create jobs and have a positive impact on the GDP for Canada. So mining industry's thriving, oil stands are thriving, and the SMRs are making life better for remote communities. From an economic development, it's very good.

And also, we need to help the Canadian nuclear industry grow while having a positive impact on the climate change. So that's what these SMRs will do, so it's tied to jobs, climate change, and GDP. I hope I've answered the question, I'll turn it back to you Neal.

Neal Kelly:

Yeah nice job Robby, that does answer the question. And Keyes, thanks very much for your answer as well. And Mark, thank you for the question. I want to stick with the online calls. We have John in White Lake. John is standing by, and John, do you want to ask your question? You're live on the air.

John:

Oh, thank you very much. Actually I have probably three quick questions. First is you mentioned the timeline to development involved three steps, the site, the construction, and the operation, the three different licenses. Would each individual remote site that you propose to put these on have to also go through that process? And if so, what is the length of time for those mines and/or remote communities to actually go through it? That's the first question.

The second question is around security, to the extent that there is nuclear fuel being used, do we have any risks with dirty bombs?

The third question is around investment in your company. I understand you're a joint venture between two entities, 50/50 privately owned. Will there be any opportunity at a point in the near future for the public to become shareholders in this venture?

Actually I probably have a fourth question as well with regards to you mentioned a 20 year single load on the fuel. How long is the actual lifespan of the individual plant? In other words, could you get three or four loads per plant? So four questions.

Neal Kelly:



Okay, there's a lot there John to unpack, so I'm going to start with Rose. And Rose, if you want to start and then we can bring others in?

Rose Ahlan:

Sure. Thanks very much John. Lots of detail there, let me see if I can try to get to those questions. So the reactor would be fueled, and the estimated life is 20 years. It would not be refueled. There's only one unit for this project at Chalk River, there would be no more units installed after that, if that's what you were getting at.

In terms of I think your first few questions on the licensing steps and licensing phases, the CNSC sets out the licensing requirements. And you are correct, we're in the first license, license to prepare site stage. That process does not change for other sites. If we were to build this in another location, we would still have to adhere to the same regulatory processes.

What we do hope is that as we go through this first of a kind commercial demonstration, that we get better at doing it and we become more efficient on our project management and project planning side so that we can ensure that we go through that regulatory process with the CNSC as efficiently as possible.

Neal, maybe you can ... Yep.

Neal Kelly:

I was just thinking about the investment question, and I was going to throw it over to Robby Sohi. Robby, do you want to hop in there and answer the investment question that John had?

Robby Sohi:

Sure, thank you. On this particular item in terms of looking for equity investment, today is a joint venture. But one of the partners in a JV is Ontario Power Generation. Ontario Power Generation has a very long, proud history of developing hydro assets in the north with the Indigenous communities. So as we deploy these things, we are going to be very open to any commercial partners that are a willing host.

And really the whole idea is when you do these things from a Canadian perspective is asking the question ourselves. How are we making life better for the Indigenous communities that these could potentially operate in, mining sector they could potentially operate in, remote communities where they're off the grid? So when you talk about deploying these reactors, this technology, in remote communities, the natural question will come up around is there perhaps an equity partner that we may want to engage in?

So if the question is are we open to that, absolutely, and details to be worked out as we get involved with each of the communities because I think each community may have a different ask, right? And that's our experience in that that's one of our things one of our partners, OPG, brings to the table. We have been able to successfully build hydro plants with



really great partnerships with the Indigenous communities where the hydro plants are built today.

If you look at our lower [inaudible 00:46:11] project, look at a Peter Sullivan project, [inaudible 00:46:15] multimillion dollar project, a lot of focus on actually developing capability with the Indigenous communities and helping them. So that will be one of the areas where we want to engage, and hence early involvement with public in consultation. This process has already started, even with the commercial demonstrator. But I think we're going to take the same approach as you deploy these reactors. Thank you.

Neal Kelly:

Okay, thanks very much Robby. I want to go back to a telephone question, but before I do that ... And I want to go to Marcia, just so Marcia standby, you've got a good question I see. But I want to talk about the polling question, question number two, I want to give you some results.

So the question was do you believe nuclear energy and small modular reactors are an important part of providing a clean energy mix in Canada? So, 66% of you said yes, that you think nuclear energy is a very important part of the mix. 17% said you think nuclear energy is somewhat important. And 7% said you think it is not important at all. And there were 10% of you that said you were not sure. So that's our poll number two question and answer, I just wanted to share that with you.

So back to the telephone calls, and Marcia in Pembroke, if we can take you, if you want to ask your question, you're live on the air Marcia. Please go ahead.

Marcia:

I have another question specifically about the economic benefit of Canada. You kind of did an overview of it earlier, and I'm just wondering whether or not if you had any more specifics about the number of Canadians that are currently on the project, or future employment levels for Canadians?

Neal Kelly:

Okay, that's a good question Marcia. Eric, can I ask you to answer that?

Eric McGoey:

Yeah, thanks Marcia, it's a great question, and it really speaks to a big part of our motivation for doing this project. Currently in Canada, the nuclear sector supports about 76,000 jobs, and most of those jobs require a lot of training. They're highly skilled jobs, and they're fairly well compensated, so these are really good jobs that communities really appreciate.

And I think if we look at what's ahead for the nuclear sector in Canada, we see that there's refurbishments happening at Darlington, for example there's a \$13 billion, 10 year



refurbishment project which is going to extend the life of that station by about 30 years, and that single station provides 20% of Ontario's total electricity. And at Bruce Power they're doing something very similar, calling it a major component replacement. And so that's going to keep essentially the powerhouses, the workhorses, of the Ontario electricity system producing for the next three decades.

But after that, the future is less clear, and that's where SMRs come in because there's the opportunity for Canada to really be a world leader on this non-carbon emitting technology, and demonstrate that we can use SMRs both on grid the way that companies like Ontario Power Generation have traditionally done, but also off grid where we've never been able to use non-emitting technology. It's always been diesel-based.

And so as we look at what the future looks like and the realization that we can't keep burning fossil fuels the way we have been certainly over the last 100 years without devastating effects on our climate, it's kind of all hands on deck in terms of looking at different technologies. So renewables are fantastic. If you can build hydro, you should. It's a great energy source, great base load power.

But in terms of solar and wind, those technologies are intermittent, which means that if the sun's not shining or the wind's not blowing, you can't get power out of them. And so, SMRs can really enable renewables in an exciting way. And to answer your question really specifically about economic analysis that's been done, there's some really interesting work that's been done between the provinces of Saskatchewan, New Brunswick, and Ontario, who together signed an inter-provincial memorandum of understanding on the development and deployment of SMRs back in December of 2019.

And OPG has been working with Bruce Power and SaskPower, New Brunswick Power, on a feasibility study that really looks at what the economic impact of SMRs could be on grid and off grid in Canada, and did a study with the Conference Board of Canada to get some independent validation of those numbers. And that feasibility study is expected to be released by the provinces probably by the end of this month, and so there will be some good hard data that you'll be able to look at that's going to give you a sense of what the economic impact of SMRs could be across Canada, both on grid and also at smaller off grid projects like the one that we're doing commercial demonstration of at Chalk River.

Neal Kelly:

Yeah, thanks very much Eric, and that was a great question Marcia so I appreciate that you hung on the line until I got to you. I want to go to an online question, and Robby Sohi I'm going to throw this one to you. It comes from Chris, and the online question says, "Does Global First Power have any involvement with OPG's plan to construct SMR at the Darlington site in Durham?" Robby?

Robby Sohi:



Thank you, great question. When we talk about SMRs, it can be a confusing topic. So Global First Power is an organization that's like I said earlier a joint venture between Ultra Safe Nuclear Corporation and Ontario Power Generation. And we are looking at small modular reactors, technology that will be applicable to communities that are off the grid. Darlington Nuclear is actually a larger reactor, 300 megawatt plus, that will be built by Ontario Power Generation. So there's no connection between Global First Power and the Darlington nuclear plant. It's two different owners, although GFP is half-owned by OPG, but GFP will not have a role at Darlington New Nuclear.

Now having said that, all the work we're doing on the commercial demonstrator obviously, it helps broadly both projects because some of the stuff we're doing now on the engineering side, management system, all of these things collectively you're developing a small modular reactor industry. So when you size up, there's obviously lessons you learn, you're going to take it over to the larger nuclear plant. But in short, GFP is building small modular reactors that are applicable to remote communities and mining industry, whereas the Darlington New Nuclear, it'll be maintained, built, operated by Ontario Power Generation.

Over to you Neal.

Neal Kelly:

Okay, thanks ... Yeah, appreciate that, thanks very much Robby. And we're running near to the end, but I'm hoping to get one more phone question in. I see Paul is on the line from Deep River. And Paul, we're going to put you on the air and you can ask your question. Go ahead Paul.

Paul:

Yes, thank you. First of all, I wanted to say that this is a very important, timely, and appropriate project in terms of Canada's electricity and climate concerns currently and going forward. But my question is since this is intended to be a commercial demonstration, I assume you're going to take it to the point of actually generating electricity. Will you use that electricity to power the grid, the demand that Canadian Nuclear Laboratories, and then make whatever excess available to the local and regional power grid? And if so, why not talk more about that as a regional benefit to the project?

Neal Kelly:

Thanks very much Paul. We're running out of time, but I'm going to have a quick answer from Keyes Niemer. Keyes, you want to give a quick answer to that?

Keyes Niemer:



Yeah, great. Thanks Paul, great question. Yes, like you said, Chalk River CNL, we are kind of like a small little community or small little town, and we're absolutely looking at how we could take the energy from GFP's SMR and use it on site, both to provide electricity to different buildings, and also we're looking at how we can use the thermal energy to provide some district heating on site via either low temperature hot water or steam.

And then last but not least, we're also looking at a potential clean energy park at CNL where we could integrate the clean energy from the SMR with renewables on a small micro grid. So great question, thank you.

Neal Kelly:

Yeah, thanks very much Keyes, and thanks very much for the question. And as I say, it looks like we're coming to the end of our hour. It's gone by very quickly. I'd like to thank everybody for participating this evening.

To our callers, if you would like to leave a message for Global First Power, you will be able to do so at the end of this call. Or if you have a question that didn't get answered, leave a message along with your callback number at the end of this call, and Global First Power will get back to you.

Robby before we go, do you have any final comments?

Robby Sohi:

Thank you Neal. I just want to say a big thank you to everyone who participated tonight, and would like to invite everyone to visit our virtual open house, which is open right now until March 10th. Visit our open house website to get more information about the project, provide valuable input on some key aspects of our EA work so far, and submit any questions you have that may not have been answered tonight. Visit the open house by going to the website at www.gfpcleanenergy.com. That's one word, [gfpcleanenergy](http://gfpcleanenergy.com).

We look forward to continuing the conversation with you because I think it's really important that we have stakeholder engagement, public engagement, Indigenous community engagement as we move this project forward. That will always be for us at the forefront. Thank you so much.

Neal Kelly:

Yeah, thanks very much Robby, and that's Robby Sohi, the President and Chief Executive Officer of Global First Power. I'd also like to thank all of our other speakers this evening. Eric McGoey, the Engagement and Communications Director for Global First Power; Rose Allen, the Project Direct for the project at Chalk River; Neil Kemp, Global First Power's Technical Director; and Keyes Niemer from CNL.



Global First Power
Micro Modular Reactor™ Project at Chalk River
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March 2, 2021

But most of all, I want to thank you for participating this evening. I think it was a very good evening, and we thank you for taking the time to allow us to come into your homes this evening. Again if you have questions that did not get answered, stay on the line, leave your question for Global First Power and callback number. And thank you very, very much for participating, and enjoy the rest of your evening.