



Public Community Meeting Minutes

Project: Speed River Storage Project

Location: West End Community Centre – Community Room 2

Meeting Date: November 30th, 2023

Nameplate Capacity: 200MW Battery Energy Storage

Proponent: Shift Solar Inc.

Summary

A Public meeting was hosted by Shift Solar to present information on the proposed Speed River Storage project and give members of the public an opportunity to provide comments, concerns and ask questions.

The Community Room was open at 5:30pm for folks to arrive, grab a coffee or snack and find a seat. Shift was available for questions as well. At or around 6pm, Shift presented a PowerPoint (slides to follow), that provided project name, legal name of the proponent and contact information, nameplate capacity, type of technology, info about Shift and our partners, information about the IESO procurement, information about energy storage, the project proposed location and connection including a scale map, and a project timeline.

Shift also provided a handout with some basic information and the same scale map that was shown in the presentation (handout to follow).

Following the presentation, Shift opened the floor for Q&As (notes by Stantec to follow).

Notification

Notice of the Public Community Meeting was provided through the following mechanisms:

- Email to Chief Administrative Officer of the municipality Ian Roger as well as Clerk Amanda Knight
- Registered mail notices to property owners of land adjacent to the boundaries of the project site
- Standard mail notices to property owners within 1km of the project site
- Email to other regulatory agencies and stakeholders identified as having potential interest
- Although the project is not located on indigenous lands, Email notice was sent to the Six Nations of the Grand River and the Mississauga of the New Credit First Nation.
- Newspaper ad in the Wellington Advertiser posted November 16th, 2023.

Attendance

There were 6 people in attendance.

A-56 Mill Street East, Unit 183
Acton, Ontario L7J 1H3
CANADA

6 Liberty Square, PMB 577
Boston, Massachusetts
UNITED STATES

1-416-953-3495
shiftsolar.ca

To: Mike Brugge
Shift Solar

From: Leslie Greener
Stantec Consulting Ltd.

Project/File: 160901047

Date: December 6, 2023

Reference: Speed River Storage – Shift Solar Open House Q&A Summary

PRESENTATION DATE: November 30, 2023

PRESENTATION BY: Mike Brugge, Mario De Agüero, Grant Johns and Bogdan Dinu.

PRESENTATION START TIME: 6:00pm

Q AND A START TIME: 6:16 pm

END TIME: 7:00 pm

Question: I know this is a preliminary drawing but on here you're showing at the very back of the property it looks like a roadway in this circle?

Answer: The design is not finalized yet, what is shown at the back of the property would be part of the proposed stormwater management system.

Question: So, it's draining off the back corner of the property?

Answer: The stormwater management design will be refined as detailed design progresses. Our illustration shows drainage off of the back of the property, but this is subject to review and approval by the Ministry of the Environment, Conservation and Parks.

Question: There's no chance of flooding down at that end?

Answer: A detailed hydrogeological analysis will be completed to confirm what drainage system will be required to handle the stormwater on site which will be incorporated into the stormwater management design. It would be designed to prevent any adverse effects from runoff.

Question: Do the containers make any type of sound or noise?

Answer: Yes, they use fans for cooling, and we must comply with the Ministry of Environment, Conservation and Parks noise regulations. Impacts at sensitive receptors (any residence) cannot exceed 40dBA. A noise assessment will be completed, and an Air/Noise Environmental Activity and Sector Registry will be obtained from the Ministry of the Environment, Conservation and Parks prior to operation.

Question: Is it a constant sound or is it just on and off?

Answer: The cooling fans cycles, so it is on and off, not constant. The frequency of the fan cycling depends on when you're charging or discharging the battery. It also depends on atmospheric temperature. In the summer, it depends if the HVAC system is on to maintain appropriate temperatures within the battery containers. The noise assessments will be completed to determine if mitigation is required to meet the requirement of 40 dBA (max) at the closest receptor. All receptors are treated the same as a residence - every residence will be mapped out and we must make sure that the sound is below 40 dBA at those receptors. For perspective, 40 dBA is about the sound of a library.

Question: What's the history of fire explosions? Anything like that, with projects like this?

Answer: There have been no cases of explosion; but there have been fires. The units themselves are design with early warning/detection systems to alert the operator of increasing temperatures that may lead to a fire. Additionally, the containers are vented which prevents explosions. When designing the project,

Reference: Speed River Storage – Shift Solar Open House Q&A Summary

there is a minimum distance between each container and between battery cells within the containers, to help control the spread of a potential fire. For example, if a fire were to occur, it would consume one container and the safety distance would prevent the fire from jumping to the next container. For these types of fires, you must wait until the fire consumes the container as traditional fire extinguishing method do not work. Manufactures of utility-scale batteries are required to comply with the high standards of various international fire regulations.

Follow up to previous question: With the byproducts in question, are there special characteristics to help these things burn and release?

Answer: Yes, there are. The batteries consume themselves slowly. There's no liquid leakage, therefore there's no hazards to the water, but there is a smoke hazard. In our Emergency Response plan, we will have detailed plans on how we notify people what's going on and what precautions they must take. During the permitting phase, we will have to do a detailed risk assessment to take account of all these possible scenarios.

Question: So, I'm also a neighbor, what really is the benefit for us as a neighbor? I'm hearing drawbacks, but not necessarily any benefits. Are there tax deductions that are going to be offered to all the neighboring property owners?

Answer: At this stage we are still exploring financial benefits to the community. Locally, there are the benefits to power grid stability and there certainly will be increased taxes; possible job opportunities, things like that. For this project we anticipate setting up a benefit sharing program. We will hold additional meetings with the community to solicit ideas on what would be considered a benefit under this type of program.

Question: I recognize there may be community benefits, but I'm more interested in what the individual Property owner benefits of the immediate neighbors is. So, if we must look at the visual distraction, there's potential threat of the fire, toxic fumes. Does it affect our property values and if so, what's the compensation for us?

Answer: In other cases, we haven't seen that the construction and operation of these projects affects the property value. As it relates to visual impacts, we will explore mitigation options including berms, walls, and/or natural vegetation to improve the aesthetic view of the project. We also have a corporate mandate for our projects where we invite local artists to paint or make an artwork inside the project, and that's also a way to mitigate visual impact. So again, we're very flexible with that, it's just a matter of discussing how, and what would be acceptable to the municipality and adjacent landowners.

Question: There are a lot of residential homes there, it's not all industrial and some of Hwy 24 is zoned agricultural, some is residential strictly, some are a combination - in the past have you built these sites where there are a lot of residential properties, or are your current projects mostly in industrial areas? Is this site selection a little different from some of your historical sites, given the fact that there are people that live there with their families and farms?

Answer: There's a mix of projects out there. A couple years back, we built a small facility in Kitchener and then another one in Stratford and so we have built facilities close to neighbors before. During the design and environmental assessment phase we will further evaluate the property to determine the best location for the project within the site boundaries based on the specifics of the terrain. Based on our preliminary assessment we feel like this is a good location for a project of this type.

Question: Looking at the proposed property parcel, this is currently zoned agricultural. What is your discussion with the Township and the County with the land use changes. This is agricultural, right? So, are you turning it into rural industrial?

Answer: As this project is still in the early phases, we have had limited engagement with the municipality. We anticipate the zoning requirements will be discussed with the municipality and we anticipate that site plan approval will be required. We have completed a preliminary review of the Official Plan and zoning by-

Reference: Speed River Storage – Shift Solar Open House Q&A Summary

law and anticipate that a zoning by-law amendment will not be required because electrical generation facilities are allowed on agricultural land.

Question: It seems like a lot of work for 20 years. Are we not going to need energy in 20 years? Why do you get decommissioned after 20 years?

Answer: The contract length is 20 years as per Independent Electricity System Operator's (IESO) terms. It is possible there could be extensions in the future, but we do not have any details pertaining to these at this time. Secondly, the battery life for a project like this is between 20-25 years, so at that time it may be reassessed to see if it could be recycled, or if it's financially viable to keep going.

Question: I hear that, but it makes no sense. You want all the work to do this, I can only imagine this would get extended; you've got it set up but only imagine it's in your best interest to extend this for a term?

Answer: At this time, there are no plans for the extension of IESOs current contract terms. The lifetime of the battery cells is typically 20-25 years, so we'd have to assess in that moment if it's financially viable to replace the containers at that time. At the end of the day, it's a legal matter, a contract matter with the IESO, and the technology in tandem. The energy market is rapidly changing, so reassessment will be necessary.

Question: On this drawing I see a yellow line, which is your connection I'm imagining, is the white line back is that a new driveway access off Hwy 24.

Answer: At this point, yes, this is our current concept design. We require further assessments to determine if this particular access road will be viable. This is not the final layout; we have to assess the access roads later in the process to see what the most feasible option is.

Question: What's involved with decommissioning? So, at the end of 20 years should we decide to decommission, what type of remediation is required?

Answer: A comprehensive decommissioning plan will be developed to focus on the responsible recycling, disposal, and compliance at the end-of-life stages for batteries and associated equipment. We do not anticipate any remediation of the soils to be necessary. It is about removing the equipment, safely de-energizing and disconnecting the site, and the removal of everything installed. The batteries will be recycled, and the containers will be reused. We unearth any underground cables and scrap these materials, recycling what is possible. If topsoil is stripped, we will add it back to ensure the land is farmable again.

Question: There's no chemicals or liquids or anything used in this that would go into the soil?

Answer: That is correct, units are self-contained. The transformer that will be installed will also be designed with secondary containment underneath in case of an oil leak from the transformer. This is a standard mitigation for large transformers in Ontario.

Question: How many containers are you purposing? How long are they 20 foot or 40 feet?

Answer: These units are approximately 20 to 25 feet in length. There will be roughly 200 containers. These are drawn to scale on the map referenced within the presentation.

Question: Is the topsoil being stored on site through repurposing

Answer: We do not have a definitive answer yet. If topsoil did need to be stripped it would likely be taken off site, and we would have to comply with all the standards of the municipality, and Ministry of the Environment, Conservation and Parks.

Question: Would it be possible to use it [topsoil] to berm, so it's not visible?

Answer: We do not have a definitive answer at this point in time, but we would need to comply with municipality, and the Ministry of Environment, Conservation and Parks requirements for excess soils. Topsoil could be utilized as a berm to mitigate potential noise impacts or visual impact, which would also serve as a means to store it for use at the decommissioning phase.

Reference: Speed River Storage – Shift Solar Open House Q&A Summary

Question: How many people received notice about this, is that all the immediate neighbors on Hwy 24?

Answer: Adjacent property owners within a 1KM radius were notified as well as additional nearby public community members/landowners, nearby Indigenous communities, relevant agencies, and elected officials, and third parties (e.g., Businesses) were notified resulting in over 115 contacts across these various lists.

Question: There was drilling equipment on this property a week or two ago, what was that for and why?

Answer: There was a geotechnical assessment for the structural composition of the soils and ground (e.g., soils, clay, penetration testing to see the firmness of the ground). This is to provide a rough estimate for what type of foundations would be required to provide more information for the submission.

Question: Are there any animals and reptiles, plants, species and so forth, that will be impacted by this?

Answer: Once awarded the contract from IESO in 2024, the proposed Project will be subjected to the Class EA process where the following assessments will be conducted (not exhaustive):

- Archaeological assessments (including engagement with Indigenous Communities)
- Cultural heritage assessments
- Natural heritage assessments (including impact on wildlife, vegetation, watersheds etc.)
- Noise impact assessments

Results from the assessments will influence design and siting decisions. Findings from the studies will also be subjected to approval from agencies such as the Ministry of the Environment, Conservation and Parks (MECP).

Biological studies will be undertaken to protect the various species in the area (all organisms are included in these ecological assessments).

Question: I know this is all IESO driven, but could you expand this in the future, is this Phase one of something that's under other contracts available?

Answer: It is unlikely because this project would be using most of the available capacity on the transmission lines.

This is a proposed project that is being submitted in the IESO Long-Term 1 (LT1) Request for Proposal (RFP) request (more information can be found on the website [here](#)). At this time, we do not have a contract with IESO, and are submitting this project to be considered. No other contracts for BESS projects are currently being considered at this point in time. Additional RFPs are anticipated in the future as energy needs continue to grow.

Question: Is there a local benefit to them having this; are they not going to find uninterrupted power for the area around the site?

Answer: There is a regional benefit to reliability and stability, but this project helps the grid as a whole meet provincial demand.

Question: I think you asked the question with the benefit to owners around this, from your website do I understand there's some rate benefit?

Answer: Usually there are benefit sharing programs, but they are determined on a case-by-case basis. There are community solar projects on our website that we do work on, but this is a different style of project. These are discussions Shift Solar would be open for discussion as the project moves forward, and we would be open to discussing with the community what something like that would look like here.

Question: What's the IESO looking for in a successful project?

Answer: It is mainly price-based. However, criterion for assessment are not publicly available, but all applicants must comply with the requirements of the RFP which can be found on the website: [Long-Term RFP \(ieso.ca\)](#)

Question: Are you measuring only on the storage or equally generating?

Reference: Speed River Storage – Shift Solar Open House Q&A Summary

Answer: This is an energy storage project, so we are pulling it from the grid and storing it until it is needed. There is no generation at this facility.

Question: So, I'm clear there's no solar panels going to be showing, storage containers only and the storage of power you're pulling, is from the existing power line going through, putting it back?

Answer: This project concerns battery energy storage systems (BESS) only and does not pertain to solar energy. The BESS facility will connect to the existing Hydro One transmission lines

Question: Before it's stored, where does the power go; do they sell it somewhere?

Answer: It's the IESO that buy the power and pay for the capacity service it provides. The IESO need storage to accommodate the gap between generation and demand of power and when it's needed.

Excess power is exported predominantly to New York and Michigan. Previously, power has been negative or very cheap prices overnight. We would pay American States to take our power then only to need it again during the daytime. Being able to store power within Canada is where a significant portion of these savings comes from. There will be regional pricing introduced in the future, but these discussions are ongoing.

Question: Will you be continuing the next information session, with like the same audience? When do you expect the next information session will be?

Answer: The same audience will be reached for further discussions. The next information session will be in approximately 1 year, the contracts with the IESO are not anticipated to be awarded until April-May of 2024. If awarded, further plans and consultation will occur.

Question: Is there a particular reason for this location; is there a weakness in the system?

Answer: There is a need in the area as there is not a lot of generation in the Kitchener-Waterloo/Guelph area. We saw a growing need here that could benefit the system overall.



Public Community Engagement Meeting

Project Name: Speed River Storage

Proposed Project Location: 7111 Wellington Rd 124, ON, N1H 6J3

Date: Thursday, November 30, 2023

Proponent: Shift Solar Inc.

Technology: Battery Energy Storage

Nameplate Capacity: 200MW (with 4 hours capacity, 800MWh)

Approximate footprint: 25 Acres



Preliminary project layout, subject to change depending on permits and technical studies

Project Website: <https://www.shiftsolar.ca/speed-river-storage>

Contact us at info@shiftsolar.ca

Speed River Storage - Community Engagement Meeting



WELCOME

Community Engagement Meeting

Welcome, please sign in and provide your contact information if you would like to receive project updates. If you have any questions, there will be a formal Q&A period after the presentation. We will be available until 7:30pm for more private discussions or comments.

Project Name:	Speed River Storage
Date:	November 30th, 2023
Legal Name of the Proponent:	Shift Solar Inc.
Nameplate Capacity:	200MW
Technology:	LFP Storage



TODAY'S MEETING

Overview of the Meeting

- Land Acknowledgement
- About Shift Solar
- IESO Procurements
- Why Energy Storage?
- Speed River Storage Project
- Project Timelines
- Q&A



BEFORE WE START

LAND ACKNOWLEDGEMENT

We would like to begin by acknowledging that we are meeting on the traditional lands of many Nations including the Six Nations of the Grand River and the Mississauga of the New Credit First Nation. We also recognize the Metis, whose ancestors shared this land and these waters. We extend our gratitude to all First Nation and Metis people, and their descendants - past, present and future, who continue to care for and inhabit these lands and tend these waters.

SPEED RIVER STORAGE



ABOUT US

Catalyzing a more sustainable future

Shift Solar Inc. is an Ontario-based solar and energy storage developer with clients in Canada and the United States. Our goal is to expedite the adoption of green energy initiatives and support the shift to sustainable energy infrastructure.

With a development motto of “do the greatest good,” the Shift team is committed to the communities we work in and thus, are focused on engaging with stakeholders.



SYNERGY

A Collaborative Partnership

The local expertise of Shift in project development, combined with Neoen's extensive international experience in developing, building, and operating storage projects, will ensure the creation of a responsible, sustainable, and high-quality project.

Together we will oversee the LT1 RFP and permitting stages.

Subsequently, Neoen will assume sole responsibility for the planning, construction, and long-term operation of the energy storage project





ABOUT US

Neoen is dedicated to the energy transition...

Founded in 2008, Neoen is the leading French independent producer of renewable energy and a major player on the world stage.

Our mission: we design and implement the means to produce the most competitive renewable electricity, sustainably and on a large scale.

Our total capacity in operation or under construction is currently close to 7 GW and we are aiming for more than 10 GW by end 2025, with the ambition to reach 20 GW by 2030.



EXTENSIVE EXPERIENCE

We have surpassed 1 GW of storage

EUROPE

Yllikkälä Power Reserve (2020)



 30 MW / 30 MWh

Azur (2019), Pod tredan (2022), Antugnac (2022)



 22 MW / 22 MWh

Storen Power Reserve (2024⁽¹⁾)



 40 MW / 40 MWh

AMERICAS

Albireo (2020), Antares (2022)



 14 MW / 10 MWh

AUSTRALIA

Hornsedale Power Reserve (2017)



 100 MW / 129 MWh

Hornsedale Power Reserve Extension (2020)



 50 MW / 64.5 MWh

Victorian Big Battery (2021)



 300 MW / 450 MWh

Capital Battery (2023⁽¹⁾)



 100 MW / 200 MWh


Western Downs Storage (2024⁽¹⁾)



 200 MW / 400 MWh

Blyth Battery (2025⁽¹⁾)



 200 MW / 400 MWh

DeGrussa (2016)



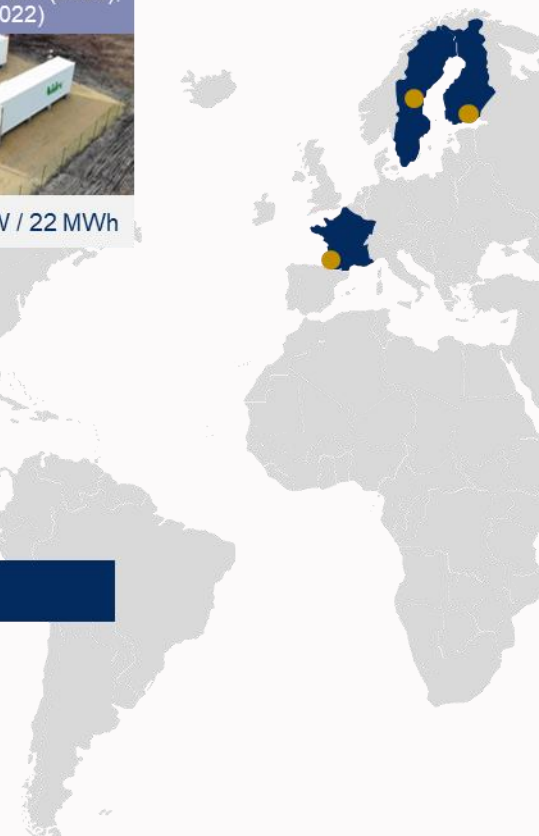
 6 MW / 1.4 MWh



Bulgana (2020)



 20 MW / 34 MWh



Behind the meter



Stand alone



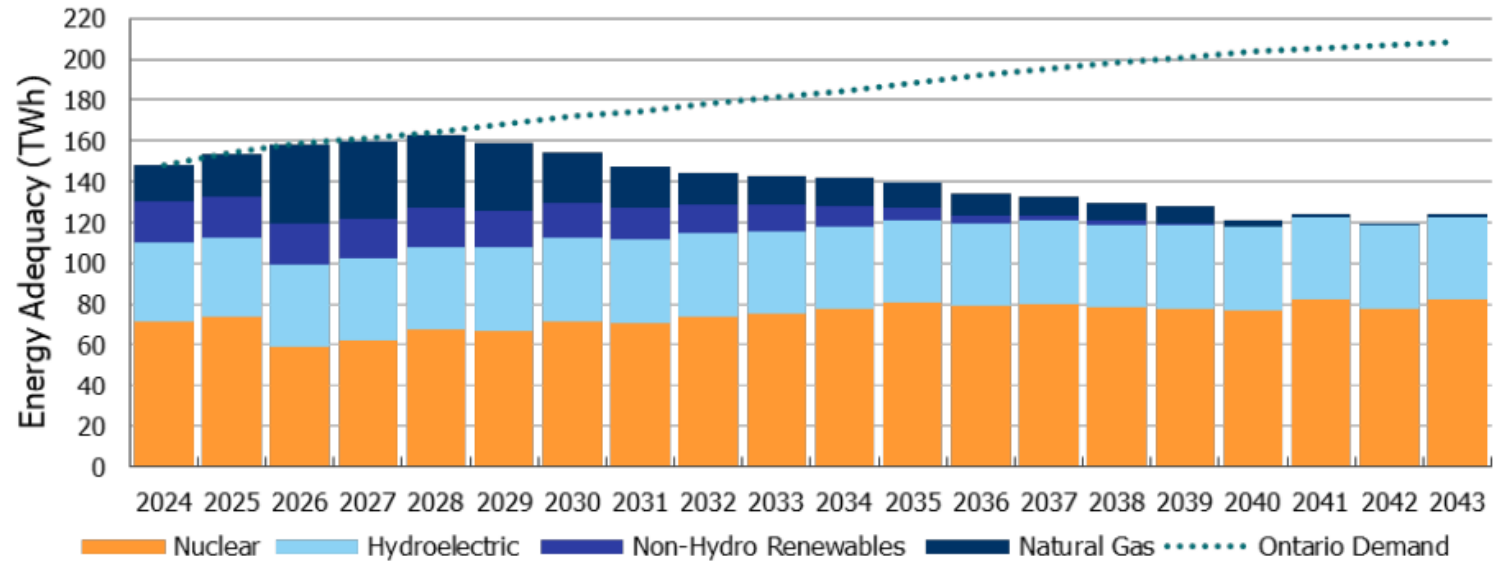
THE NEED FOR NEW STRATEGIES

Ontario is on the brink of an energy crisis

In their planning outlooks, the IESO predicts an energy and capacity shortfall as soon as 2026.

- Between 2025 and 2027, Ontario needs 4,000 MW of new supply
- The gap between demand and generation is expected to expand for 20 years
- Multiple storage projects have been awarded under the E-LT1 procurement and there will be an additional 1,600 MW worth of projects awarded under this LT1 procurement.

Figure 21 | Energy Adequacy Outlook (Case 1)

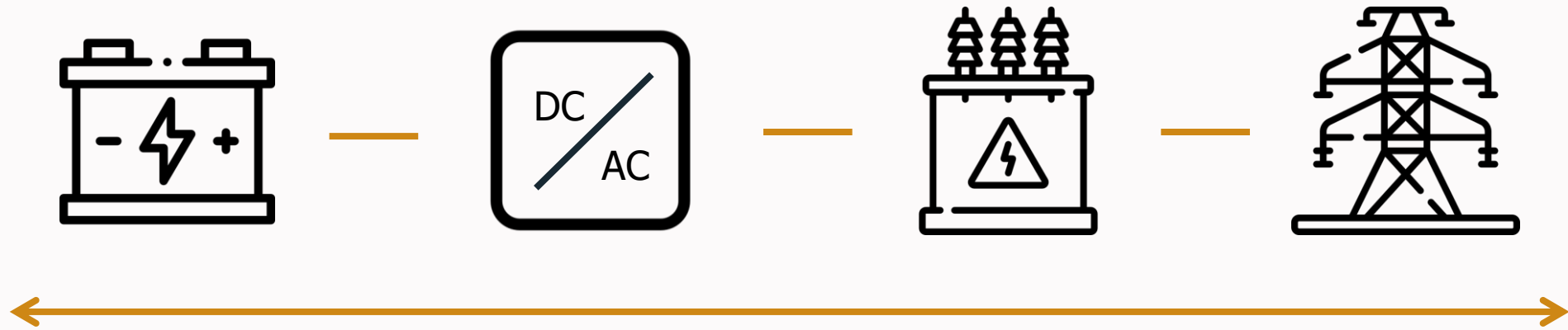


www.ieso.ca/en/Sector-Participants/Planning-and-Forecasting/Annual-Planning-Outlook



THE TECHY BITS

Here's how energy storage works



Flow of Power

Battery Energy Storage Systems (BESS), are power plants that enable energy from the electrical grid, to be stored and then released when customers need power most. Typically in Ontario, storage is charged during the night when nuclear base load and wind power is producing more energy than the demand. Lithium-ion batteries, which are used in mobile phones and electric cars, are currently the most-used storage technology for large scale energy storage projects.



THE TECHY BITS

Here's how energy storage looks



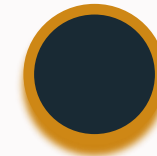
Construction

A site consists of containerized batteries, inverters, medium voltage transformers, gravel internal access roads, buried collector and communication cabling, a small transmission substation, potential garage and operations and maintenance building.



Containerization

Each 20 ft containers holds up to 6MWh of battery “stacks” connected with DC cables to a main protective device. Also included are communication cables, HVAC and fire safety equipment.



Fire Safety

Each container is equipped with fire alarms and detection as well as fire suppression. Battery management systems can monitor battery cell temperatures and allow for mitigation through disconnection and HVAC controls.



THE SOLUTION

Save it for a rainy day

This project is proposed to be a 200 MW battery energy storage system with 4 hours of capacity (800 MWh) connected to the dual circuit 115kV transmission lines. It will sit on roughly 25 acres of land. Each charge of this battery can power 800 households for an entire month.

Location: South of Wellington Road 124, just Southwest of Whitelaw Road

Why was this location chosen:

- Close to growing populous to provide power locally
- Close to distribution and major transmission lines for easy interconnection
- Land that is flat and cleared to cause no new environmental disruptions
- Long major roadway for ease of delivery during construction
- Limited residences affected and can be visually concealed



SPEED RIVER STORAGE



THE PERKS

Here's how your community can benefit



Grid Modernization for Greater Reliability



Conserving Fresh Water Resources



Emission Reduction



Supporting Community Growth

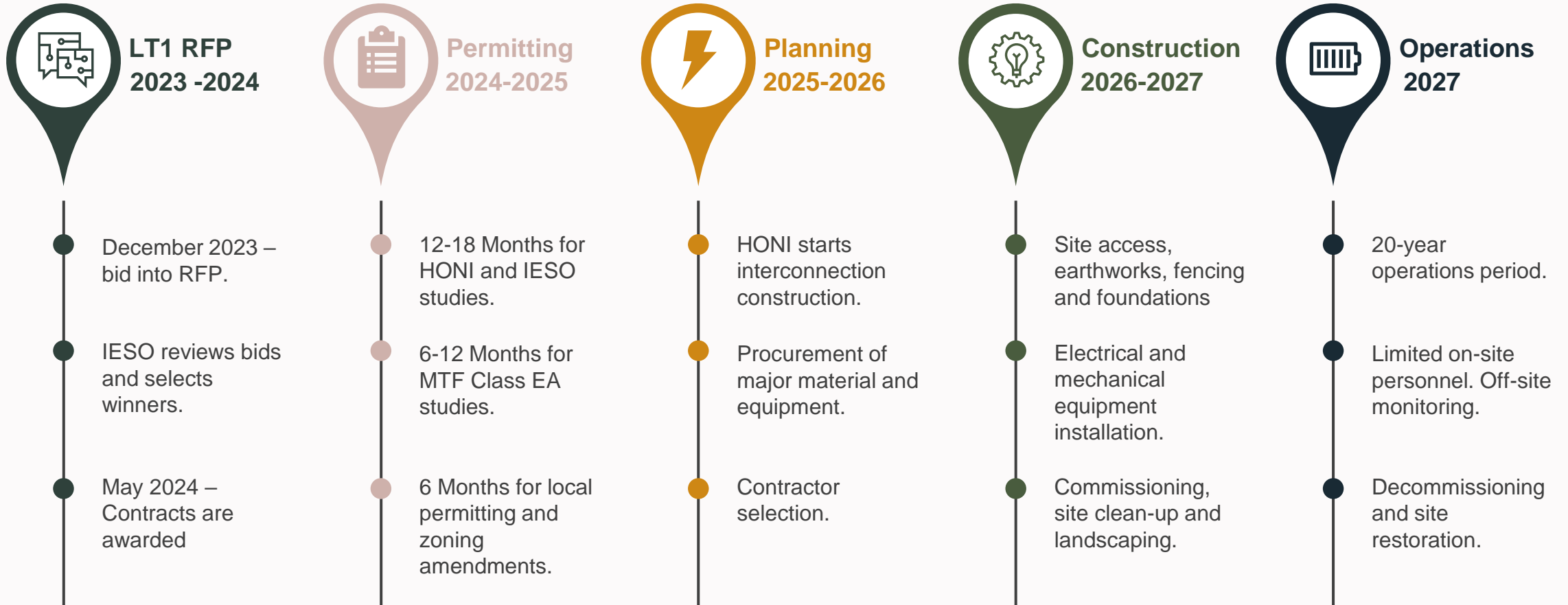


Economic Development



Project Timeline

NEXT STEPS





Questions?



MAILING ADDRESS

A-56 Mill Street East, Unit
183
Acton, Ontario
CANADA
L7J 1H3



OUR WEBSITE

<https://www.shiftsolar.ca/speed-river-storage>



AVAILABILITY

Monday – Friday
8:00 – 5:00 PM EST



GET IN TOUCH

info@shiftsolar.ca