

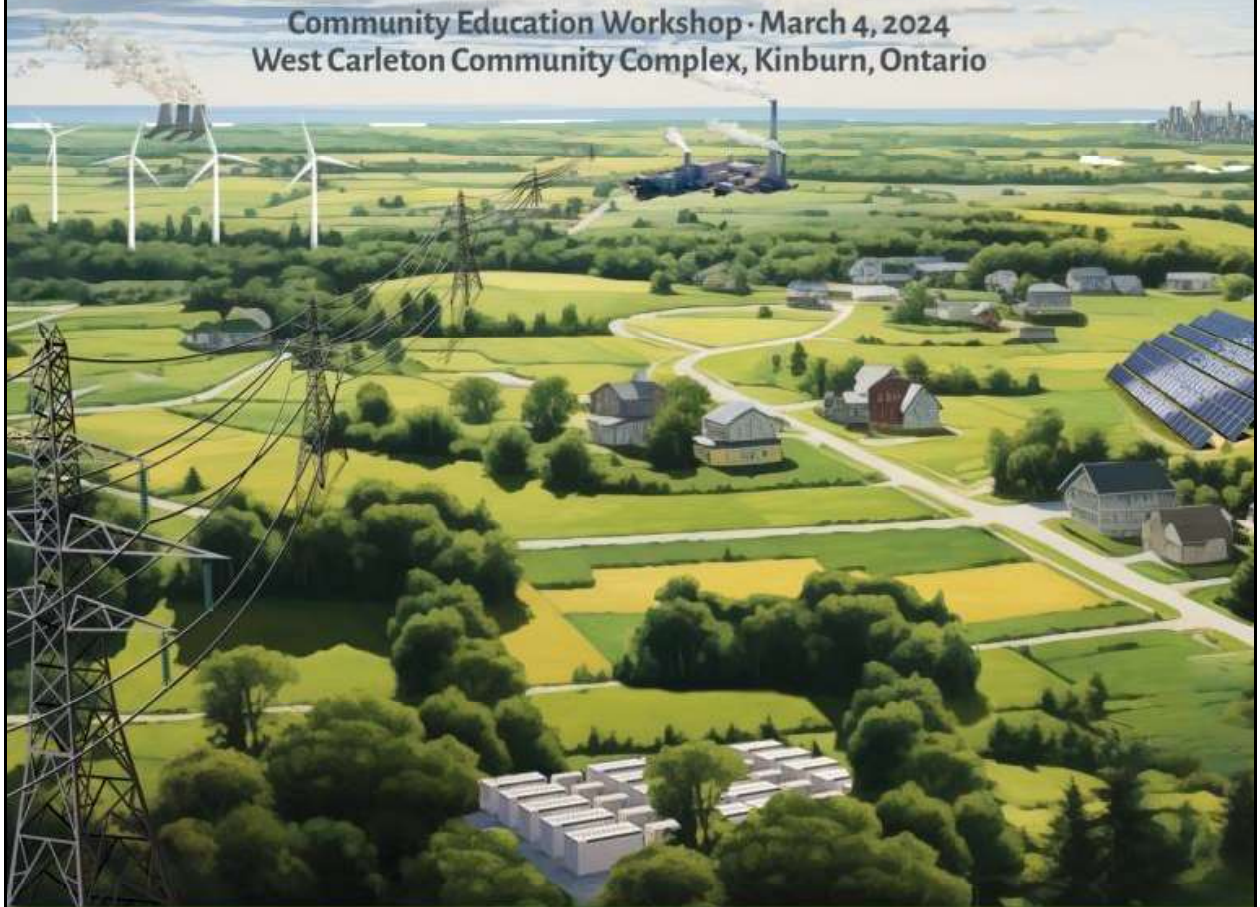
OUR POWER GRID

The Future of Electricity Capacity

**What is it? What does it mean to me?
The mysteries explained.**

Workshop Report

Community Education Workshop · March 4, 2024
West Carleton Community Complex, Kinburn, Ontario



CAFES Ottawa

Community Associations for
Environmental Sustainability



<https://cafesottawa.ca>

ACKNOWLEDGEMENTS

Land Acknowledgement

We acknowledge that we are living on the unceded, unsundered territory of the Anishinaabe Algonquin Nation whose presence here reaches back to time immemorial. We recognize the Algonquins as the customary keepers and defenders of the Ottawa River Watershed and its tributaries. We honour their long history of welcoming many nations to this beautiful territory and uphold and uplift the voice and values of our Host Nation. We respect and affirm the inherent and Treaty Rights of all Indigenous Peoples across this land. We continue to honour the commitments to self-determination and sovereignty we have made to Indigenous Nations and peoples. We acknowledge the historical oppression of lands, cultures and the original peoples in what we now know as Canada and are committed to the healing and decolonizing journey we all share together.

Volunteer Acknowledgement

We are grateful to the CAFES volunteer workshop organizing team who made this workshop happen (including heavy lifting by Ottawa West-Carleton residents). Thank you Rudy Aksim, Barrie Ashworth, Jacklyn Cunningham, Guy Dubuc, Jennifer Gautreau, Raymond Leury, Judy Makin, Don Sproule and Nicky Trudell as well as additional volunteers on the day of. A lot of deliberation and planning went into this workshop, followed by a concerted effort to find the right speakers with the right expertise to provide the needed information to the community. A big thank you to our speakers and expert resource persons who accepted our invitation to come to Kinburn for the workshop.

Local Councillor Acknowledgement

We would like to acknowledge City of Ottawa Ward 5 Councillor Clarke Kelly who identified the need for more public information on grid evolution and the new BESS technology in a meeting with CAFES and concerned Ward 5 residents in December 2023. Thank you for your follow-through support: for welcoming the workshop to the Kinburn West Carleton Community Complex venue and then so very ably hosting the workshop.

Community Acknowledgement

Lastly, we would like to thank all community members and residents who attended and participated in the workshop for their civic engagement.

Project Acknowledgement

Errors of commission and omission in this narrative report rest with the CAFES report team for this project- Jennifer Gautreau, Guy Dubuc and Angela Keller-Herzog.

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Executive Summary

Just short of a hundred residents attended a public education and community engagement workshop entitled “Our Power Grid” at the West Carleton Community Complex in Kinburn Ontario on March 4, 2024. The workshop was organized by a volunteer team from CAFES, an Ottawa-wide environmental network, and hosted by Councillor Clarke Kelly.

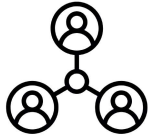
The purpose of the workshop was three-fold:

- a) **To provide the community with information on the challenges faced by the Ontario electrical power grid and the expected evolution of the grid over the medium term.**
- b) **To provide the community with more information on Battery Energy Storage Systems (BESS) in the context of the IESO LT1 procurement process.**
- c) **To provide an opportunity for the community to dialogue on what effective local grid energy project consultations should look like.**

Expert speakers, including Dr. Henry Schriemer (University of Ottawa), Trevor Freeman (Hydro Ottawa), Dr. Jocelyn Zuliani (Hatch), and Deputy Chief Nathan Adams (Ottawa Fire Services), delivered keynote presentations covering topics such as grid innovation, resiliency, Battery Energy Storage Systems (BESS), and emergency response and grid management.

Following these informative presentations and a Q&A, attendees actively participated in breakout group discussions focused on *effective public consultations for grid energy projects*. The report provides detailed information on the community dialogue regarding who should convene public consultations for energy projects; who should be invited; timing and place of consultations; and approaches and rationale.

Across the six break-out groups, several common themes emerged underpinning effective public consultations on energy projects:



1. **Stakeholder Inclusion:** Groups emphasized the importance of including a wide range of stakeholders in consultations, including residents, experts, government and institutional representatives, community groups, project proponents and vulnerable populations.



2. **Solid Information:** There's a shared belief in the need for clear communication both before, during and after consultations. This includes providing advanced information, briefing notes, and educational materials to ensure participants are well-informed at the start of the consultation; access to expert and technical knowledge during consultation; and accessible post-consultation records.



3. **Community Engagement:** Groups advocate for community-focused consultations, suggesting town hall meetings and engagement at the local neighbourhood level to facilitate discussion and gather feedback.



4. **Transparency and Trust:** Building trust and transparency are recurring themes, with suggestions for Q&A sessions, factual context provision, and importance of direct public engagement by energy system operators (IESO, Hydro One, Ottawa Hydro) and government agencies (provincial and municipal).



5. **Timeliness:** There's a consensus on the importance of timely consultations, with recommendations for starting discussions well in advance of decision-making deadlines.



6. **Whole of Community:** Local media and councillors' offices are seen as playing an essential role of reaching a broader audience.



7. **Diverse Perspectives:** Finally, there's a recognition of the need to include diverse perspectives and voices in open public consultations, including those critical of proposed plans or agendas, to ensure comprehensive and constructive discussion. This will lead to better outcomes, risk mitigation and avoid polarization of the community.

Overall, the workshop underscored the importance of proactive and inclusive community engagement in shaping the future of the Ontario electricity grid. Attendees expressed a desire for improved information sharing to cultivate trust and transparency in the consultation process. The workshop was recognized as an important first step in this regard.



1. Introduction

This report provides a detailed account of a public education and community engagement workshop entitled “Our Power Grid” that took place in Kinburn Ontario on March 4, 2024. The workshop was organized by a volunteer team from CAFES, an Ottawa-wide environmental network, and hosted by Councillor Clarke Kelly.

1.1 Purpose and Objective of the Workshop

The purpose of the workshop was three-fold:

- d) To provide the community with information on the challenges faced by the Ontario electrical power grid and the expected evolution of the grid over the medium term
- e) To provide the community with more information on Battery Energy Storage Systems (BESS) in the context of the IESO LT1 procurement process.
- f) To provide an opportunity for the community to dialogue on what effective local grid energy project consultations should look like.

1.2 Context

In summer 2023 the [Independent Electricity System Operator](#) (IESO) issued a Request For Proposal (RFP) for Battery Electric Storage Systems (BESS) deployments. The Long-Term 1 RFP aimed to deploy BESS at approved locations across the Ontario grid to enhance grid stability and reliability. The IESO oversees and evolves Ontario's electricity markets and is a not-for-profit entity established by the Government of Ontario.

Utility-scale energy storage is a fast growing sector adding to grid capacity and resiliency as a result of progress in research and development and economies of scale in manufacturing.

Ontario's Electricity System

(Generation greater than 20 MW)

Planning Regions + Generation + Transmission

The map illustrates the distribution of electricity generation and transmission across Ontario. Generation sources are categorized by color: Nuclear (purple), Hydroelectric (blue), Gas-fired (green), Wind-powered (light green), Biofuel (brown), and Solar (orange). Transmission lines are shown in blue, with a legend indicating 500 kV, 230 kV, and 115 kV. Major cities and regions are labeled, including Bruce, Pickering, and Arnprior. A callout box highlights a \$2 billion refurbishment project for 30 more years. A date stamp indicates the announcement was made on 30 January 2024.

30,000 km of transmission

500 kV
230 kV
115 kV

Bruce • OWEN SOUND

Pickering • PETERBOROUGH

Arnprior

\$2 billion refurbishment for 30 more years

30 January 2024 announcement

Canada's Big Three

- Bruce (1977, ON)
6,610 MW / 48,000 GWh/yr
- Churchill Falls (1971, NL)
5,400 MW / 35,000 GWh/yr
- Pickering (1971, ON) – reborn!
3,100 MW / 20,000 GWh/yr

The IESO is taking a multi-pronged approach to meeting Ontario's growing electricity needs and implementing the government's [Powering Ontario's Growth](#) plan. This includes competitively procuring new and existing resources; planning for future transmission infrastructure; delivering demand-side management programs; supporting innovation; and exploring other local solutions. The Long-Term 1 Request for Proposals (LT1 RFP) targeted capacity to come into service between 2026-2028 to meet system needs and included significant energy storage capacity. The IESO is offering contracts to 10 battery storage facilities – varying in size between nine megawatts (MW) and 390 MW – for a total of 1,784 MW. Utility scale BESS facilities can charge during off-peak hours and inject energy back into the grid when it is needed the most. [Energy storage](#) is not new to Ontario's electricity system; IESO began procuring newer types of energy storage resources in 2012.

Ontario ratepayers also benefit from improvements in the energy storage supply chain, maturing technologies, and the IESO's competitive process and price transparency. The weighted average price for BESS storage in the LT1 RFP is \$672.32/MW-business day, with contracts ending in 2048. This compares to the weighted average price for natural gas and bio-gas stream in LT1 RFP at \$1,681.14/MW-business day. The LT1 procurement included 411 MW of gas and on-farm biogas generation from three facilities in three communities.

Respondents to the LT-1 RFP were required to make community presentations to residents near proposed BESS sites and seek municipal support as part of the procurement process with proposals due in December 2023. In late fall 2023, five prospective proponents emerged in the Ottawa area:

Name	Ward	Proposal
Fitzroy BESS	West-Carleton-March	https://evolugen.com/facilities/fitzroy/
Arnprior BESS	West-Carleton-March	https://arnpriorbess.ca/
650 Upper Dwyer Hill Road BESS	West-Carleton-March	https://solarflowthrough.com/public-notice/current-public-notices/community-engagement-notice-in-ottawa-548t
2393 8th Line Road BESS	Osgoode	https://ottawaenergystorage2.com/
Trail Road BESS	Rideau-Jock	http://www.evolugen.com/facilities/Trail

The 8th Line project in Osgoode was withdrawn early in the process. The community presentations for the Fitzroy BESS and the Arnprior BESS in Ward 5 elicited negative responses from local residents. Residents felt blindsided by the proposals and felt that they were not adequately consulted. Concerns about the potential hazards associated with large-scale lithium battery deployments, such as safety risks, environmental impacts, and community disruption, were prominent. The community presentation for the Trail Road BESS was well-received with the proponent better prepared to address community concerns.

Motions for municipal support resolutions (MSR) for the three Ottawa West-Carleton-March projects were declined at the November 30 2023 meeting of the Agriculture and Rural Affairs Committee (ARAC), but the MSR for the Trail Road BESS in Rideau-Jock ward was approved, decisions that were subsequently validated by the Ottawa City Council.

A December 2023 meeting between Ward 5 residents in support of the BESS projects, representatives of the CAFES network, and Councillor Clarke Kelly agreed that the process of community consultation surrounding the BESS proposals had not been satisfactory and that the level of public information around the projects and BESS technology was lacking (including many instances of mis-information and fear-mongering). Neither IESO nor the municipality of Ottawa had stepped up to fill this gap.

Out of this discussion came the resolution for the CAFES network to hold a workshop with the support of the Councillor in Kinburn in the coming year that would provide public education regarding the evolution of the Ontario electricity grid, information about the deployment of BESS, and a dialogue around better public consultation processes regarding energy development projects and municipal support resolutions.

1.3 Regulatory Context of MSRs

The Independent Electricity System Operator (IESO) is responsible for managing Ontario's electricity system and receives specific directives from the Provincial Minister of Energy. The Provincial Government recognizes that support from local communities is vital to new-build energy projects and expects proponents to engage local communities to seek their support for the proposed projects.

The *Green Energy Repeal Act, 2018* gave powers back to municipalities regarding how land use for renewable energy is regulated and approved in Ontario, including restoring municipal siting authority under the *Planning Act* over new proposed projects. In addition, the IESO has been directed to require a resolution from municipal council (“municipal support resolution”) that supports a proponent or counterparty with a proposed project located in that municipality, separate and apart from that municipality’s permitting and regulatory requirements.

Municipalities can also express support through a blanket resolution endorsing multiple projects or technology types.

In the LT1 competitive procurement, preferential points were awarded for projects that had obtained the MSR prior to bid submission. Although obtaining municipal support bolsters a proposal's prospects, it does not guarantee the issuance of a contract for the project. Projects that were selected by IESO without a MSR are required to attain such support no later than sixty (60) days after the eighteen (18) month anniversary of the Contract Date (or the contract is cancelled).

Regardless of when the Municipal Support Confirmations were provided, it does not replace or impact applicable land use or environmental regulatory approvals required under applicable Laws and Regulations. Counterparties are subject to all applicable Laws and Regulations, including local by-laws and planning, permitting, or zoning requirements.

1.4 About CAFES

Community Associations for Environmental Sustainability (CAFES) is a federally incorporated non-profit organization. We are a forum for community and residents' associations and their members on local environmental and climate issues. Our members include representatives from over 50 different organizations spanning urban, suburban and rural communities.

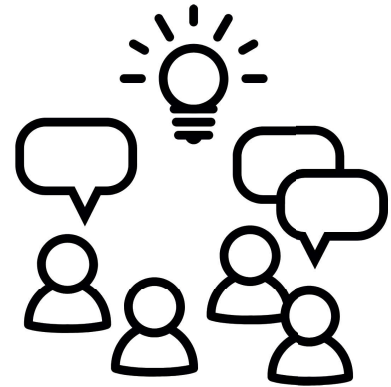
CAFES is a network of local environmental and climate leaders - citizens who are working to promote environmental sustainability in our city and our neighbourhoods, sharing information on concerns, community events, best practices and research.



Since its founding in 2010, CAFES has monitored and regularly provided input to municipal environment and climate programs and policies. CAFES raises awareness and builds knowledge of municipal decisions and issues related to the environment and climate issues. CAFES serves as a bridge between community associations, its membership and the City of Ottawa. In 2023 CAFES undertook broad based [community dialogues across the city regarding climate resiliency](#).

1.5 Workshop Program and Promotion

The workshop was advertised in local Ward 5 community publications, social media and Councillor Kelly's newsletter as well as across the Ottawa-wide CAFES network. It was free and open to any City of Ottawa resident and the session was recorded in its entirety.



The workshop was held in the main hall at the Kinburn Community Complex. Drinks and snacks were provided.

Attendees were seated in rows and later moved their seats to collaborate with their neighbours. The breakout groups were informally chosen by gathering with individuals seated next to each other.

The program was as follows:

6:15 Doors Open

6:30-7:00 Snacks and Welcome from Councillor Clarke Kelly

7:00 to 7:50 Presentations by a Panel of Experts

7:50 - 8:10 Questions and Answers

8:10 - 8:40 Community Break Out Groups

8:40 - 8:55 Key Suggestions from Community (rapporteurs)

8:55 - 9:00 Wrap Up - Councillor Clarke Kelly



1.6 Workshop Highlights Video and Recording

The highlights of the workshop were captured in this 12-minute [Highlights Video](#).

The full length video of the workshop is available [here](#).

The videos were produced by Max Barzo (LumetreeStudios.ca) and Saudicka Diaram, students in the Algonquin College School of Media and Design.



2. Summary of Expert Panel Presentations

The first segment of the Electricity Grid Workshop involved a series of technical presentations, each about 15 minutes long, followed by a short Question and Answer session. The content of each presentation is summarized below and the slide decks used by each presenter are linked.

2.1 Speaker 1: Dr. Henry Schriemer, University of Ottawa

Bio: Henry Schriemer received his B.Sc. in mathematics and Ph.D. in physics from the University of Manitoba, in 1987 and 1997, respectively. After several years in the photonics industry, he joined the University of Ottawa where he is now a Professor in Electrical Engineering.

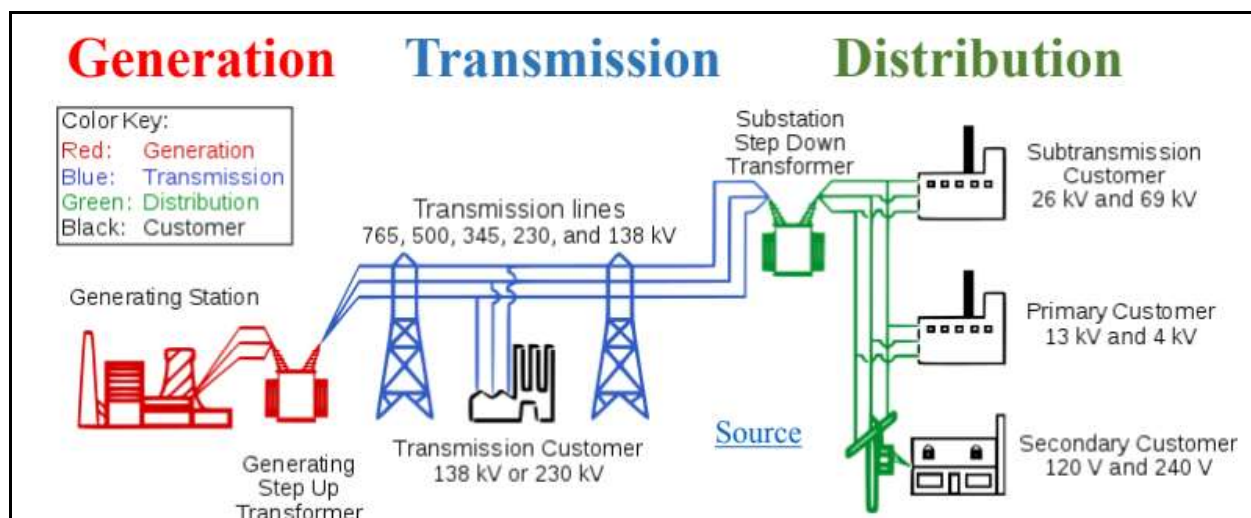


He has over 30 years' experience in engineered complex systems, the last 15 in solar photovoltaics (PV) and smart grid technologies, has collaborated with dozens of companies, and has authored over 100 peer-reviewed publications. With his team, he built Hydro Ottawa's Migen transactive energy platform – the first IEEE2030.5 standards-compliant community field test of distributed PV, battery storage and home energy management. Henry has lived in rural Goulbourn Township as an erratic homesteader for over 20 years.

Summary of Workshop Presentation

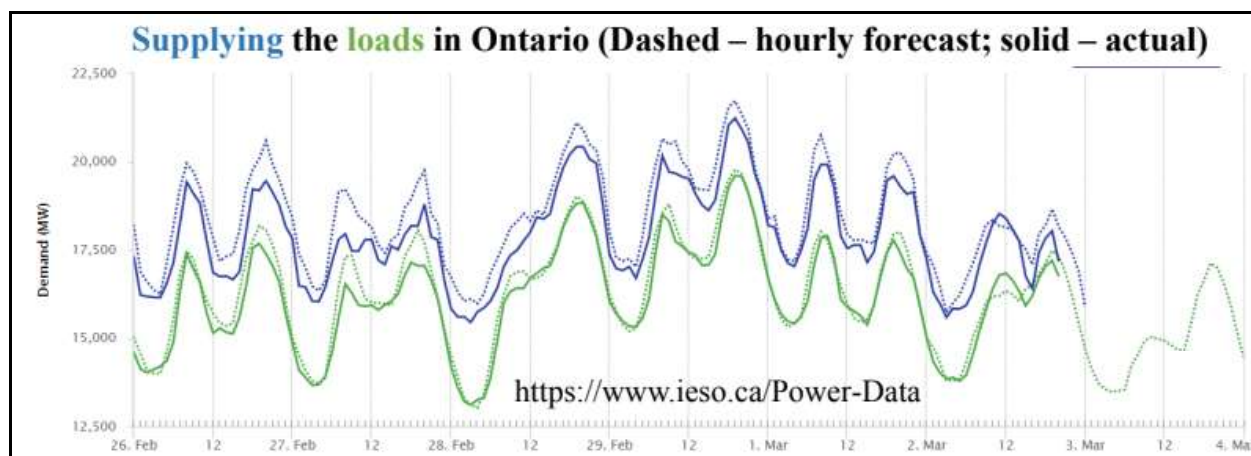
Professor Schriemer began by defining some basic terms in electricity: voltage (volts, kilo-volts), current (amps), power (watts, kilowatts, megawatts, gigawatts) and energy (kilowatt-hours) and provided an example of how these are applied (kitchen kettle boiling water). Refer to slide 2.

He then described the three classes of components in the grid – Generation, Transmission and (Local) Distribution. (Slide 3.)



Prof Schriemer emphasized a key aspect of the grid, the instantaneous matching of power generation and use. He explained that the North American electricity grid is divided into four large geographical segments (slide 4), within which a number of regional “Balancing Authorities” manage the matching process.

The professor discussed the critical problem of grid stability and how the Balancing Authorities “dispatch” different types of generation facilities to meet demand (slide 5). He showed how supply and demand vary over time but track each other over a seven day period, and provided a breakdown of the Ontario generation capacity by source type, along with the amount of energy produced by each type (slide 6).



Professor Schriemer further explained how Ontario’s Balancing Authority, the IESO, must forecast growth in demand and put in place purchase agreements to ensure any additional capacity (generation and transmission) is available when needed (slide 7).

Slide 8 shows the mix of generator types and network of transmission lines across south and eastern Ontario.

[Link to the powerpoint presentation.](#)

2.2 Speaker 2: Trevor Freeman, Hydro Ottawa

Bio: Trevor Freeman is a Supervisor, Key Accounts at Hydro Ottawa based in Ottawa, Ontario. Trevor is a Certified Energy Manager (CEM) and holds the LEED AP BD+C certification. Previously, Trevor was a Manager, Metering Services at Carma Industries and also held positions at WSP, EWB-Canada, Wateraid, Nemak. Trevor received a bachelor's degree from University of Windsor and a Environmental Engineering Degree from University of Windsor.



Summary of Workshop Presentation

Mr. Freeman's presentation touched on the activities and concerns of Hydro Ottawa, as a representative local distribution company. He explained that Hydro Ottawa has an extensive network (slide 2) and covers most of the City of Ottawa, and serves a portion of Ward 5, where most of the workshop attendees live. Hydro One is the other local distribution company serving Ottawa West-Carleton-March.

Mr. Freeman explained the current electricity grid was built in a steady, linear fashion over 100 to 120 years. However, the push for electrification (that is, the transition away from fossil fuels to electric vehicles, electric heating and so on) was potentially going to require a doubling of the grid capacity over the coming 20 to 30 years. This has already been apparent – whereas one new transformer substation had been deployed in the previous 10 years, 2 have been added in the last year and 2 more are planned. (Slide 3)

Extreme weather events are becoming more frequent and will necessarily result in outages. Consequently, the utility will have to better anticipate and prepare, then react and repair more quickly. (Slide 4)

Hydro Ottawa has undertaken research in a number of areas (Slide 4), including:

- Undergrounding Study: Moving electrical wiring underground creates issues (higher cost, more difficult fault detection and repair) but there are particular locations where there may be the most benefit, particularly in terms of resiliency and redundancy.
- Climate Vulnerability Risk Assessment.
- 2050 Electrification Study: This is intended to identify the chokepoints and locations in the distribution network most impacted by the push to electrify.

Mr. Freeman concluded by saying that enhancing customer dialog and support were crucial to the successful evolution of the grid (Slide 5).

[Link to the powerpoint presentation](#)

2.3 Speaker 3: Dr. Jocelyn Zuliani, Hatch Engineering

Bio: Jocelyn Zuliani, PhD, Peng, is the Global Lead, Energy Storage in the Power Transmission & Integration team in the eGrid group at Hatch. Her work focuses on assessing various energy storage technologies and integrating these technologies in grid-connected, microgrid, and behind-the-meter configurations. Jocelyn has worked with a range of international clients to support integration of energy storage including utilities, developers, industrial facilities, and remote communities in North America, the Caribbean, Australia, and Africa.

Jocelyn has worked on a wide range of energy storage projects, from conceptual studies through support on the specification and procurement of battery energy storage systems. She was also the technical lead for multiple BESS installation projects either as part of the EPC or owner's engineering team. She has a broad understanding of various energy storage technologies, having completed assessments of current and emerging energy storage technologies. Jocelyn has worked on several hybrid power projects assessing the need for energy storage to support grid stability, renewable integration, and improve overall grid reliability.



Summary of Workshop Presentation

Dr. Zuliani provided a tutorial on Battery Energy Storage Systems (BESS).

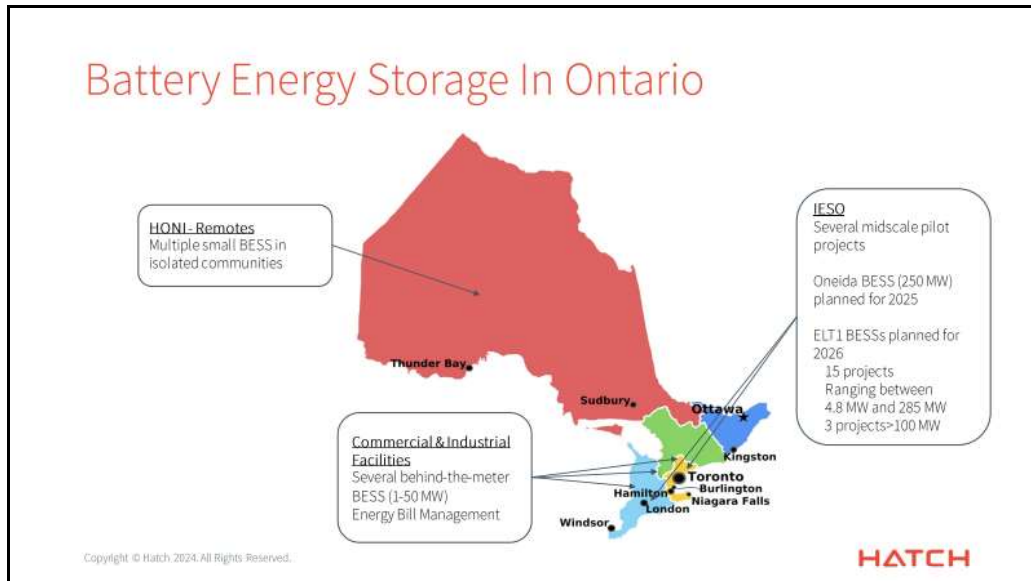
Energy storage is critical for grid modernization and the push for electrification. Battery Energy Storage systems, in particular, are relatively quick to deploy (2 years), have minimal environmental impact, are reliable and are rapidly dispatchable. They are a low/no carbon alternative to natural gas peaker plants and, in addition, their life cycle cost is lower. Moreover, they are decentralized and can serve to stabilize the electricity grid and make it more resilient. They can provide local benefits, including load shifting at network choke points. (Slide 3)



There is a history of BESS deployments in Ontario, although these were initially used in smaller microgrid or behind-the-meter applications. IESO's first mid-scale grid BESS (Oneida 250MW) will be operational in 2025. (Slide 4).

2023 was a record year for global BESS deployments.

Dr. Zuliani presented photos of typical BESS systems (Slide 5), emphasizing their characteristic modular containerized configuration. She then provided a detailed description of each container module (Slide 6).



Safety has been a particular preoccupation in the BESS design mindset. A detailed suite of technical and safety standards has been developed and continue to evolve. (Slide 7). Much attention has been given to remote battery management, fire detection and suppression, as well as fire propagation mitigation measures. The certification of BESS systems includes verifying the performance of the system in an induced fire (thermal runaway) scenario.

She further noted that the latest and preferred lithium battery chemistry, LFP (Lithium – Iron – Phosphate), only releases “normal” atmospheric gases when burned and not toxic fumes and are therefore vented outside the container.

[Link to the powerpoint presentation](#)

2.4 Speaker 4: Nathan Adams, Deputy Chief, Ottawa Fire Services

Bio: **Nathan Adams** is the Deputy Fire Chief Community Standards & Communications. He looks after the Fire Prevention Division and the Communications Division. This includes the fire engineering portfolio that speaks to fire safety elements, planning approvals and Ottawa Fire Services requirements as they relate to fire suppression.

Mr. Adams did not make a presentation but participated in the Q&A panel to address concerns about BESS installations and safety.



2.5 Panel Question and Answer Session



There was a brief Question and Answer session following the panel presentations. The speakers listed above were joined for the Question and Answer session by:

Mercedes Liedtke, Environmental Planner, Mississippi Valley Conservation Authority;
Melissa Jort-Conway, Senior Planner, City of Ottawa Climate Resiliency Unit;
Bill Bell, Chief, Ottawa Fire Services (and Ward 5 resident).

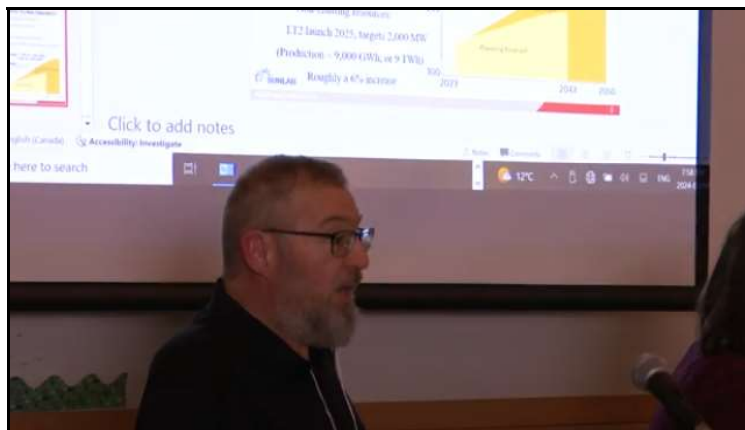
Question 1: Are there special firefighting requirements for BESS?

Nathan Adams: Recommendations are being developed as part of the development and planning phase of these sites. These will include on-site water, physical site access and so on. The duration of a potential BESS fire event will also need to be studied, in terms of potential impact on fire services resources. Both the safety and fire-fighting divisions are at the cusp of learning about best practices.



Question 2: How is electrification and expansion of the grid going to be funded ?

Henry Schriemer: There is a very wide range of estimates of what will be required. The engineering (as opposed to political) forecasts are much more conservative and are achievable. However, electricity rates will likely go up.



Trevor Freeman: The Hydro Ottawa 2050 Electrification Study includes low, medium and high growth scenarios. There are many unknowns. The medium growth scenario will likely entail more distributed energy generation, load shifting, increased use of battery storage, conservation measures and so on. The solution set will need to be very broad. But electrification will have a cost.



Question 3: There were two recent BESS fires in upstate New York that were significant in duration and involved the release of toxic gases. Is the cause known? What will be done in any Ottawa deployment to avoid this?

Jocelyn Zuliani: The root cause assessment of the New York fires is still underway. No report has been issued yet. However, the industry takes these investigations seriously and changes to technical practices and standards do result (as was the case for a BESS fire in 2019). However, BESS fires remain rare/isolated incidents.



Question 4: Will the demand for the special materials (metals) associated with the push for electrification outstrip the supply?

Jocelyn Zuliani: This is certainly a concern but the industry is working on solutions. For example, a major lithium battery recycling plant is being developed in the Kingston area. Material use, in general, needs to become circular rather than linear.

Question 5: I have read about a BESS serving a hospital during a power outage. How many of the 15 planned BESS deployments are associated with a microgrid and/or can be used in this way?

Jocelyn Zuliani: The grid configuration and power switching infrastructure would need to change. Standards regarding “island” versus “non-island” operating modes are a work in progress. But the battery modules can certainly be re-configured.

Question 6: There is a BESS fires website. There were 14 or 15 in 2023. The total number of entries in the database has grown from 69 to 70. What do you consider low risk? Can BESS sites be located elsewhere than on farm land if there is a risk of a runaway fire?

Melissa Jort-Conway: The IESO BESS requirement requires a large vacant site located close to the provincial transmission line corridor. It would be challenging to find suitable sites in the urban core.



Question 7: What steps will organizations like the Conservation Authority, Fire Services and so on take to evaluate a proposed BESS site? What are the checks and balances?

Melissa Jort-Conway: A BESS installation is designated (for zoning purposes) a Public Utility Facility. It would be subject to all of the studies and checks associated with the full Development Plan Approval Process. In her very comprehensive reply, Ms. Jort-Conway mentioned environmental assessments, site plan controls, pre-development consultations, early on-site signage, advance information published on the City web site, assessment of emergency response requirements, conditions of approval, and so on.

3. Community Dialogue: Process of Community Engagement

Following the Question and Answer session, attendees discussed the questions “What should effective public consultations for grid energy projects look like? Who should convene? Who should be invited? Where? Why?”.



Break-out Groups – Question for Discussion

What should effective public consultations for grid energy projects look like?

Who should convene?

Who should be invited?

When

Where

How

Why (what objectives, purpose)

The break out groups each had a facilitator and a note taker to record discussions. Following the group session, a rapporteur relayed key items back to the group.



3.1 Detailed Notes on Break-out Group Discussions

What should effective public consultations for grid energy projects look like?				
Group	Who Should Convene Public Consultations for Grid Energy Projects?	Who Should be Invited?	When? (i.e., Community consultation timeline) Where?	How? Why?
1	→ There should be Provincial guidelines on who has responsibility to convene → Municipalities have a role → Proponents (companies interested in building installations should not be convenors of public consultations)	- Residents - Experts - IESO, engineering from city - Proponents (energy project developers) - Ward Councillor - Local MPP	When: More advanced timeline for dispersion of information, for people to think about it, for people to learn about the energy project proposed and the future grid development challenges and plans Where: In the community	- More direction needed from the province itself, as to who should have responsibility to convene (provincial guidelines, Ministry of Municipal Affairs, Ministry of Energy). - The Provincial Government and IESO have the responsibility to plan for the future of our electricity grid. - Each municipality and each ward councillor should not have to work out this same process issue. - Other committees like Environment need to provide input to Council as well when dealing with climate change issues (not only Rural Affairs). Although this is a divisive issue, the discussion must happen.
2	→ IESO, tentatively	- IESO - Hydro One - Ministry - Vulnerable populations - Agriculture - Local Businesses - Social services - Technical support and resource persons to answer community	When: At least 3 months before decisions need to be made - Need more on process being discussed - More information given in advance via local media Where: In community affected	- Town Halls - Breakout groups were helpful - IESO should do outreach in community first, along with explanation of why expansion is needed. Need to have information about the overall plan for the grid to situate projects and their need/rationale. Need to have explanations of why grid expansion is needed in a particular area/region. Need "early education" and published information by the IESO for the public (not just insiders). - There is some doubt that massively increased energy demand is not real, but an artificial phenomenon that has been manufactured by government. - There should be clarity on the steps in

		questions factually Provincial government and sector representation -a challenge is to get the community as a whole to engage i.e. to get representative community attendance		the process of approving (or not) of a grid energy project. The discussion/consultations and energy project decisions should not exclusively go through the Agriculture and Rural Affairs Committee (ARAC), but should include other City committees like Environment and Planning as these are planning and climate change issues that affect everyone.
3	→ Councillor (as representative for voters)	- The Ward - Residents and other community members	When: > 3 months to engage and discuss with others Where: Local 'neighbourhoods' and within the community	Information "town hall" with the objectives to: - inform - engage - discuss
4	[no notes]	- Energy system operators (IESO, Hydro One) and provincial government need to be at the public meeting ("less absentees") - Subject matter experts - Residents (the public)	[no notes]	- Q & A and break-out groups. - Allow more time for discussions and digestion of information (to help facilitate a productive Q&A session). - Increased visibility, engagement and trust-building with energy system operators and governmental agencies, cities etc. - It would be good to have trained facilitators for table discussion and pulling more out of participants and keeping notes.
5	→ IESO in partnership with local area	- IESO representative (has to set context) - Councilors - Local media? - Proponents (energy project)	When: Timeline should have a round of awareness building first so residents/community is not taken by surprise Where: Local community	More information prior to the session, not just an agenda (i.e., briefing notes and FAQ could be dispersed in advance). Need to make sure that information is accurate and verified to the extent possible. This could be a role for municipal technical and planning staff. Need to make sure that mis-information and fear are not main ingredients in

		developers)		conversation. • Need more information on process ahead of time from IESO and IESO needs to have more direct public contact • Better use of media to reach a wider audience (city-wide, in ward, and in local area e.g. Fitzroy). Councillors should help to fill information gaps. • Record sessions, to encourage transparency and inclusion (for those who were not able to attend in person) • Proponents could aim to have more engagement with public e.g. site tours etc.)
6	→ Provincial representative → IESO → Governmental representative → For technical issues, would require someone with high levels of expertise	• Community members • Invite those who are specifically opposed to the proposed project, and engage with them in a way that attempts to mitigate polarization	When: Information to be discussed needs to be dispersed to the community well in advance of the workshop/meeting. -technical information needs to be available ahead of time. Where: In the community Ensure that consultations happen across different city wards. Different venues, different times of day to accommodate various participant schedules.	• (Formal) debate-style conversation, where people with differing opinions to the experts/others can express themselves in a way that is productive. Explore town hall formats. • Q&As in front of a microphone and audience are not always the easiest ways to speak up. It also casts the participants as learners. Break-out groups are positive. Incorporate different ways of soliciting public questions during consultation. • Allow time for a long question period. Let people ask questions and then the experts respond. • Consultation post-event summary reports should also note any questions that could not be answered at the time in hopes that some of these questions could be addressed in future consultations or help make the case to bring in additional subject matter experts.

3.2 Highlights of Report Backs by Group Rapporteurs

GROUP 1

- Emphasizes the need for clear direction on local consultations from provincial guidelines (Ministry of Municipal Affairs and/or Ministry of Energy). Different municipalities are all working hard on similar challenges.
- Identifies key stakeholders including residents, experts, ward councillors, and local government representatives.

- Advocates for community-based consultations to have information with enough time to think about it, including information about the grid's future development.

GROUP 2

- Consultations and deliberations about energy projects should go through multiple committees (not just Agriculture and Rural Affairs Committee) as they concern the municipality as a whole.
- No final decisions should be made until proponents have made their safety presentations.
- Stresses the importance of cost considerations and equitable access to the sector.

GROUP 3

- Suggests that consultations be convened by local councillors and focus on engaging the community.
- Advocates for timely and inclusive discussions with neighbourhoods through informative town halls that include healthy discussions.
- Town Halls should be at least three months before any significant decisions are taken.

GROUP 4

- Recommends providing factual context and facilitating Q&A sessions to build trust with stakeholders.
- Emphasizes the need for public-facing discussion time and engagement with grid system operators and responsible government agencies.
- Need to explain to the public why grid expansion is needed and who benefits.

GROUP 5

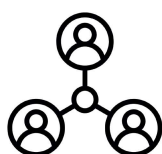
- To set the consultations up for success, the IESO should invest in a round of awareness raising first about the grid and local grid evolution context and plans.
- IESO should be clear on what the process is and what the steps are.
- Public consultation sessions should have in-advance briefing notes for better public engagement and sessions should be recorded.
- Councillors can help fill gaps left by local media.
- Suggests more direct contact with the public and engagement opportunities for proponents.

GROUP 6

- Spokesperson proposes a “reverse” way of doing these consultations: You let the people ask questions and then the experts respond.

3.3 Common Themes across Break-Out Group Discussions

Across groups, several common themes emerged underpinning effective public consultations:



Stakeholder Inclusion Groups emphasized the importance of including a wide range of stakeholders in consultations, including residents, experts, government and institutional representatives, community groups, project proponents and vulnerable populations.



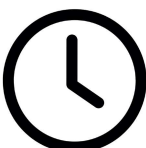
Solid Information There's a shared belief in the need for clear communication both before, during and after consultations. This includes providing advanced information, briefing notes, and educational materials to ensure participants are well-informed at the start of the consultation; access to expert and technical knowledge during consultation; and accessible post-consultation records.



Community Engagement Groups advocate for community-focused consultations, suggesting town hall meetings and engagement at the local neighbourhood level to facilitate discussion and gather feedback.



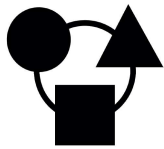
Transparency and Trust Building trust and transparency are recurring themes, with suggestions for Q&A sessions, factual context provision, and importance of direct public engagement by energy system operators (IESO, Hydro One, Ottawa Hydro) and government agencies (provincial and municipal).



Timeliness There's a consensus on the importance of timely consultations, with recommendations for starting discussions well in advance of decision-making deadlines.



Whole of Community Local media and councillors' offices are seen as playing an essential role of reaching a broader audience.



Diverse Perspectives Finally, there's a recognition of the need to include diverse perspectives and voices in open public consultations, including those critical of proposed plans or agendas, to ensure comprehensive and constructive discussion. This will lead to better outcomes, risk mitigation and avoid polarization of the community.

4. Closing Remarks by Councillor

Ottawa West-Carleton-March Councillor Clarke Kelly closed the workshop, remarking that the event was successful. He thanked CAFES for the solid commitment to community engagement, also recognizing that the workshop organizing team included Ward 5 local community leaders.



He thanked all attendees and panelists and noted that having questions and concerns should not stop us from having a healthy debate across the whole of the community. He expressed hope that everybody had learned something new and maybe even made a new acquaintance.

Noting the absence of representatives of IESO and the Ministry of Energy at the event, he stated that documenting the workshop and producing a report would be important in informing his follow-up on the issues raised by the community with these bodies. He also thanked City planning staffer Melissa Jort-Conway, Ottawa Fire Services Chief Bell, and Deputy Chief Adams for coming out to Kinburn on a Monday evening.

He closed by acknowledging that the issues discussed are complex and that there are valid concerns. The well-attended evening workshop demonstrated that there is significant interest in learning about energy issues and the evolving electricity grid. Having a community dialogue with different views present is a very important first step forward and he is looking forward to the next one.

Annex 1 - Coverage by West Carleton On-Line - Jake Davies

The Grid filled to capacity

 westcarletononline.com/the-grid-filled-to-capacity

March 9, 2024

Nearly 100 people attended Monday's meeting on the electrical grid, and had the opportunity to ask a panel of experts questions on supply, demand and BESS facilities. Photo by Jake Davies



Nearly 100 people attended Monday's meeting on the electrical grid, and had the opportunity to ask a panel of experts questions on supply, demand and BESS facilities. Photo by Jake Davies

KINBURN – A workshop focusing on the province's electrical system was filled to capacity earlier this week (March 4), and not just locals, as all of Ottawa works to get a grasp on the country's push to increase electricity capacity.

The community education workshop, billed as *The Grid: The future of the Ontario grid*, was hosted by the Community Associations for Environmental Sustainability (CAFES), but led by many West Carleton volunteers.

The turnout was impressive as nearly 100 people filled the West Carleton Community Complex, and many of those in attendance came from outside of Ward 5, as far away as Orleans. Urban residents were interested in the grid and potential electricity supply concerns as well, and CAFES representatives said the Monday night event would be used as a pilot project to see if the meeting would be of value in other parts of the city.



CAFES executive director, left, Angela Herzog-Keller speaks to a City of Ottawa staffer during a March 4 workshop on the grid in Kinburn. Photo by Jake Davies

The event organizers hoped to explain how Ottawa's, and in essence North America's, electrical grid works, what its current needs and pressures are, and what is required in the future as the country moves towards greater electric power generation and away from fossil fuels.

Battery Energy Storage Systems (BESS) was also a big part of the discussion.

Event organizers had a number of subject matter experts in attendance to explain the current electrical system and how it works including University of Ottawa electrical engineering professor Dr. Henry Schriemer, Hydro Ottawa's Trevor Freeman (an environmental engineer), Hatch Engineering's Dr. Jocelyn Zuliani (an expert on BESS) and Ottawa Fire Services deputy Chief Nathan Adams.

All four spoke on the grid, BESS and emergency response to fires.

"An amazing turnout," Ward 5 Coun. Clarke Kelly opened the workshop with. "I think it's really easy to be discouraged by engagement on this issue. I'm really encouraged."

Kelly spoke of all the unintentional misinformation he has seen on social media regarding the grid and BESS in particular.

"The Independent Electricity System Operator (IESO) estimates grid capacity needs to double to handle the demand in the near future," Kelly said.

Carp's Judy Makin, a director with West Carleton Disaster Relief (WCDR) to name one of many volunteer roles, spoke about those who were absent from the meeting including IESO, Hydro One, and representatives from the Ministry of Energy.

"Several of us, for two months, including (Coun. Kelly) tried to get them to come," Makin said. "We thought someone from the province could explain this to us. They didn't come. I am putting that out there."

Schriemer opened the workshop, explaining the grid and electricity in general.

"I teach this at the university," he said. "We have to make sure we are all talking the same language."

Schriemer said a rural resident uses about 50 kilowatt-hours per day and an urban resident uses about half that.

"We make it the moment we need to use it," he said.

And because of that, when someone needs electricity, it comes from all over the grid, not just one spot. North America is split into four grids, with Ontario lying in the largest of those four grids.

"The grid is the largest machine we built in the history of human existence," Schriemer said. "When you are getting power, you are getting it from all over. Energy flows to wherever it is needed. Grid stability is critical."

Freeman spoke of what capacity will look like in the future, and the challenges hydro companies currently have.

"We need to double the capacity we have now in roughly 20 to 30 years," he said. "We are seeing more and more extreme weather events and that's putting more and more stress on our system, and that's not going to plateau."



University of Ottawa engineering professor Dr. Henry Schriemer explains how the grid works. Photo by Jake Davies

Zuliani focused her discussion specifically on BESS, a hot topic issue in West Carleton.

“They have minimal environmental impact,” she said. “They can be ready in two to three years, and it provides a range of solutions. 2023 was a record year for energy storage around the globe. The industry has really taken on a safety element.”

Adams spoke about what the OFS is doing to prepare for emergency response at a BESS and some of the advanced safety protocols.

“From a firefighting perspective of fighting a BESS fire, we are still getting recommendations,” he said. “One is a BESS that has 10,000 gallons of water on site. Access. We’re learning about the durations of an event. We don’t have experience in that yet.”

Following the discussion, the floor was opened to questions. Many of them related to BESS and their safety.

“Fires are very rare events,” Zuliani said.

Following the question-and-answer portion, meeting attendees broke into smaller discussion groups focusing on the question 'what should effective local grid energy project consultations look like?'

Questions considered included who should convene such a meeting; who should be invited; when, where, how and why?

It was obviously related to the recent BESS proponent public information sessions held near the end of 2023 in and around the West Carleton community, during the IESO bid process (see link at top of page).

Mike Peters, a proponent for one of the BESS project bids in West Carleton, was also in attendance. Peters is the director of public affairs for Evolugen and led the BESS public meeting held in Fitzroy Harbour on Nov. 1, 2023. Evolugen has two BESS proposals submitted to IESO. The Fitzroy Harbour BESS project which did not win municipal support, and another project near Manotick that did earn municipal support.

Despite the Fitzroy Harbour project not winning municipal support, Evolugen is going ahead with that bid as well (municipal support does not make or break a bid, it just means the bid does not receive the four points awarded with municipal support in the selection process).

He spoke briefly on the record about his attendance at the meeting.

"It was a very productive session," Peters said. "Kudos to the organizers. We were here to listen and hear the expectations of the community. It was lessons learned for us."

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