

**Multi Municipal Energy Working Group
MINUTES**

**MMEWG-2024-05
Thursday, November 14, 2024, 7:00 p.m.
Virtually via Microsoft Teams**

Members Present: Mark Davis - Municipality of Arran-Elderslie - Citizen
Appointee
Ryan Nickason - Municipality of Arran-Elderslie
Scott Mackey - Township of Chatsworth
Tom Allwood - Municipality of Grey Highlands
Todd Dowd - Municipality of Northern Bruce Peninsula
Sue Carleton - Township of Georgians Bluffs
Stewart Halliday - Municipality of Grey Highlands -
Citizen Appointee

Others Present: Julie Hamilton - Recording Secretary
Bill Palmer - Technical Advisor

1. Meeting Details

2. Call to Order

The Chair called the meeting to order at 7:00 p.m. A quorum was present.

3. Adoption of Agenda

MMEWG-2024-11-14-01

Moved by: Terry Mckay - Township of
Chatsworth

Seconded by: Todd Dowd - Municipality of
Northern Bruce Peninsula

Be It Resolved that the Multi-Municipal Energy Working Group hereby adopts the agenda of the Thursday, November 14, 2024 as distributed by the Recording Secretary.

Carried

4. Disclosures of Pecuniary Interest and General Nature Thereof

There were no disclosures made by the Members.

5. Minutes of Previous Meetings

5.1 MMEWG Minutes - September 12, 2024

MMEWG-2024-11-14-02

Moved by: Ryan Nickason -
Municipality of Arran-
Elderslie

Seconded by: Sue Carleton - Township of
Georgians Bluffs

Be It Resolved that the Multi-Municipal Energy Working Group hereby approves the minutes of the Thursday, September 12, 2024, meeting as presented by the Recording Secretary.

Carried

6. Business Arising from the Minutes

6.1 Letter from Arran-Elderslie Re: Recording Secretary

The Recording Secretary agreed to remain on a contractual basis.

MMEWG-2024-11-14-03

Moved by: Sue Carleton - Township of
Georgians Bluffs

Seconded by: Scott Mackey - Township of
Chatsworth

Be It Resolved that the Multi-Municipal Energy Working Group hereby agrees to a monthly contract amount of \$200.00 for the Recording Secretary Services of Julie Hamilton.

Carried

6.2 FOI - Skyway 8 Turbine Failure

The original Freedom of information request was submitted in March of 2022 as follows:

"All documentation supporting the amendments to the original approval (5612-99-QHT7) to permit the installation and acoustic testing of a device known as a "Power Cone" on turbine T4 including the applications of June 28, 2018, and September 25, 2019, signed by Patrick Leitch, VP Skyway 8 Wind Energy Inc.,

and all supporting documentation submitted with these applications, including amended documentation up to November 12, 2019. In addition, we request all summaries, reports, memoranda, notes of meetings and telephone calls, and emails related to the catastrophic failure of the wind turbine in what is known as the Skyway 8 operated by Capstone, including the results of the investigation of the incident, the role of the "Power Cone" experimental equipment, and any recommendation for future operation of the wind power generator. Timeframe: January 1, 2018, to March 7, 2021."

The Working Group discussed the records that were released noting that there appeared to be no information on the acoustic testing related to the audit power cone failure as requested. There was before and after the failure aspect of the acoustic audit but no information or measurements with the power cone in place or related to when the failure occurred.

There is a second request that broadly addresses wind turbine failures that the results of have not yet been disclosed.

MMEWG-2024-11-14-04

Moved by: Mark Davis - Municipality of Arran-Elderslie - Citizen Appointee

Seconded by: Todd Dowd - Municipality of Northern Bruce Peninsula

Be It Resolved that the Multi-Municipal Energy Working Group hereby receives agenda item, 6.2 FOI - Skyway 8 Turbine Failure and further directs that a letter be drafted to acknowledge receipt of the information and address the information related to the request that was not included in the documentation.

Carried

7. Delegations/Presentations

7.1 Bill Palmer - Update to MMEWG on presentation to Georgian Bay Chapter on BESS safety

Mr. Palmer made a presentation to the Working Group regarding a presentation he attended on BESS safety, which is appended hereto to form a part of the minutes. [Palmer - Presentation on BESS Safety](#)

The Working Group thanked Mr. Palmer for his presentation and entertained having Mr. Palmer making a presentation or getting more information into the hands of the Grey and Bruce County Fire Chief's. The existing codes and standards that are being relied on do not appear adequate enough to protect in the the event of a failure.

There was no discussion of setbacks during the presentation however, in an incident in Montreal that people were advised to evacuate and shelter in place, there were setbacks quoted in the article. The Working Group has circulated unwilling host information until which time as the Fire Marshall addresses the issue of fire safety in rural volunteer fire departments. There could be insurance implications were proper suppression methods are not available. In the past, related to wind turbines, bylaws have been put in place that put the onus to on the company to provide proof of sufficient fire suppression plans before any approvals were given.

A project in Arran-Elderslie has approved a project with the supply of special monitoring equipment and training for all of the local firefighters being a condition of approval.

MMEWG-2024-11-14-05

Moved by: Sue Carleton - Township of Georgians Bluffs

Seconded by: Scott Mackey - Township of Chatsworth

Be It Resolved that the Multi-Municipal Energy Working Group hereby receives, notes and files agenda item, 7.1 Bill Palmer - Update to MMEWG on presentation to Georgian Bay Chapter on BESS Safety for information.

Carried

8. Correspondence

8.1 Requiring Action

8.1.1 Approval of Recording Secretary Invoice - May - Oct 2024

MMEWG-2024-11-14-06

Moved by: Scott Mackey - Township of Chatsworth

Seconded by: Todd Dowd - Municipality of Northern Bruce Peninsula

Be It Resolved that the Multi-Municipal Energy Working Group hereby approves payment of the invoice for the Recording Secretary services for May, June, July, August and October.

Carried

8.2 For Information

8.2.1 Zorra Township Re: Municipal Support Resolutions

Warren Howard provided some context to the correspondence

There have been a number of project proposed in Oxford County which have been strongly opposed and produced unwilling host resolutions. In Zorra Township, a local group very quickly organized a well attended community meeting. Following this, a Mr. Howard made a presentation on the municipal rules relating to BESS proposals, which ran concurrent with a Council meeting, where the Mayor stepped down as Chair and proposed the motion, which passed unanimously.

MMEWG-2024-11-14-07

Moved by: Terry Mckay - Township of Chatsworth

Seconded by: Ryan Nickason - Municipality of Arran-Elderslie

Be It resolved that the Multi-Municipal Energy Working Group hereby receives, notes and files the correspondence for information purposes.

Carried

9. Members Updates

Member Dowd updated the Working Group on recent activity in Northern Bruce Peninsula regarding potential solicitation for new wind turbines leases as well as the extension of the Ferndale Turbine contract. Newmar Wind Limited is looking to lease land for new wind projects. It is suspected that the same conclusion will happen as years earlier, that the powerlines currently in place don't support moving the hydro off the peninsula. The current three wind turbine contracts expire June 26, 2027.

Member Davis raised a question regarding current solar panel installations and the renewal of those contracts. It was noted that there has been cases where companies have upgraded the panels to more modern, more efficient ones and the IESO said this was in contravention of the contract however the courts did not find it to be the case, so existing contracts are being extended. It was further noted that projects, including wind turbines, if they were attached to the grid, they do not need to meet the dispatchable criteria and they can renew their contract for a 5-year term.

10. New Business

10.1 Roundtable Discussion - IESO Updates

There was a webinar yesterday for the Indigenous and Municipalities related to the RFP-LT2.

The new Minister of Energy and Electrification gave the IESO some very clear points about being open minded on energy generation.

Mr. Howard provided the Members with an overview of the key talking points which are appended hereto to form a part of the minutes.

[Howard - IESO Update - November 14 2024](#)

Chair Allwood added that with the rated criteria points system, the lowest price gets the highest rating, but if there is local indigenous community participation, if the project is sited outside of prime agricultural area or in Northern Ontario, the project scores higher and the IESO may be willing to pay more if this criterion is met. He also addressed the requirement of a pre-engagement consultation on the municipal support resolution, noting that the correspondence is to go through the CAO, and not the Clerk. There is also no provision for conditional municipal support resolution. There are a lot of concerns with the agricultural assessment, the work involved and the timing of it. The IESO has no position on whether costs could be recouped by

municipalities, along with community benefit agreements. Decommissioning is also not dealt with in the contracts. Municipal support resolutions do not override normal planning processes and projects could fail even with support if the proper planning designations are not in place to support the project.

The meeting with the IESO has been proposed for December 4, 2024, which conflicts with Chair Allwood's council schedule. A new date will be requested. Chair Allwood, Warren Howard and Bill Palmer will attend and provide a summary for the Members. The talking points will be refined and sent to the IESO.

11. Closed Session (if required)

Not required.

12. Confirmation of Next Meeting

The next meeting is scheduled for January 9, 2025, 7:00 p.m. via Microsoft Teams.

13. Adjournment

MMEWG-2024-11-14-

Moved by: Ryan Nickason -
Municipality of Arran-
Elderslie

Seconded by: Sue Carleton - Township of
Georgians Bluffs

Be it Resolved that the meeting of the Multi-Municipal Energy Working Group is hereby adjourned at 8:40 p.m.

Carried

Tom Allwood, Chair

Julie Hamilton, Recording
Secretary

Update to MMEWG
on PEO Georgian Bay Chapter Seminar titled
“New Battery Technology and Fire Safety Concerns”

Bill Palmer P. Eng.

Delivered to MMEWG – Nov. 13, 2024

Background to Seminar

- The 90 minute seminar (including questions and discussion) was delivered to ~ 35 Professional Engineers Ontario (PEO) Georgian Bay Chapter members August 22, 2024
- Delivery was by Mr. Iman Yavari, P.Eng. CEO and Principal Engineer of Ai Integrated Systems, Richmond Hill, ON
- Mr. Yavari is a registered Professional Engineer in Ontario, BC, Alberta, Quebec, Newfoundland and Labrador, as well as the state of Nevada, with registration pending in the state of Texas
- He is active on the (USA) National Fire Prevention Association (NFPA) 72 Technical Committee and is involved in a number of UL (Underwriters Laboratory) and ULC Technical Committees on Fire Safety, including UL 9540 – Energy Storage Systems and Equipment (and others)

Overview of Seminar Content

- Brief history of storage battery development
- Overview of how Canada's (federal) Net Zero Emissions Accountability Act drives battery implementation
- Overview of Battery Energy Storage System Applications
- Brief discussion of Lithium Ion battery fire history and BESS hazards
- Brief discussion of how code UL 9540 addresses battery safety
- Brief mention of applicable International Electrotechnical Commission (IEC) Codes for Lithium Ion Battery safety

Highlights for MMEWG

- Storage Battery History

- Lead acid batteries developed ~ 1859, the first rechargeable storage battery
 - Capable of high current output, but relatively low energy density compared to modern
 - Relatively safe from fire, but sulphuric acid electrolyte is toxic and causes skin burns. Lead is toxic heavy metal.
- Nickel Cadmium battery initial development 1899
 - Higher energy density than lead acid, but suffer from memory effect if charged often and only partially discharged. Cadmium is a toxic heavy metal
 - Refined development ~ 1947 yielded sealed battery. Better in cold than Lead acid.
- Lithium Ion battery initial development began in 1970's. Have seen many different chemistries.
 - Initial types prone to fire based on "thermal runaway". Newer LiFePO₄ is less prone to fire (but not a zero risk). The main choice for BESS today.
 - LiFePO₄ costs have fallen from \$1191/MWh in 2010 to \$137/MWh in 2021

Recent LiFePO₄ Battery Issues

- No mention in Ontario Fire Code as of 2024 regarding installation of new batteries
- Fires of LiFePO₄ batteries a public concern
 - Fire on TTC subway of E Bike – TTC considering limitation on e bikes – deferred to review impact on gig workers “and equity seeking groups.”
 - June 2024 - Toronto Fire Services, in partnership with the Office of the Ontario Fire Marshal and the Ontario Association of Fire Chiefs, launched a lithium-ion battery public safety and education campaign “This is Your Warning” that highlights the fire risks associated with lithium-ion batteries.
 - MS Chi-Cheemaun ferry bans Chrysler Pacifica hybrid vehicles due to fire concern
 - Fire of LiFePO₄ factory in South Korea in June 2024 kills (at least) 22 workers
 - Fire aboard ships and their cargo reported regularly
 - Felicity Ace carrying 4000 cars – some EV’s (off Portugal) Feb. 2022
 - Freemantle Highway carrying 3000 cars – some EV’s (off the Netherlands) July 2023
 - Genius Star XI – carrying Li-Ion batteries (off Alaska) Dec. 2024
 - Truck carrying Li-Ion batteries offloaded ship tipped over on bridge near Los Angeles Harbour Sept. 2024 – shut down highway for 2 days while batteries burned – off and on
 - Cargo unloaded Montreal Harbour Sept. 2024 battery fire – results in evacuation of 100 residents, lockdown of others due to toxic fumes

More LiFePO4 Fire Issues

- Presentation discussed incomplete regulations concerning installation of EV chargers in Condos and parking garages
 - Codes discuss limits of 600 kWh – perhaps 6 EV's today.
 - Limitations of where to locate EV chargers in buildings, particularly underground garages are inconclusive
- LiFePO4 BESS Hazards
 - Discussed risk of batteries (including LiFePO4) “swelling” indicating failure
 - Thermal runaway
 - Toxic and flammable gases
 - Deep Seated fires
 - Cannot be extinguished with water – only use to cool adjacent batteries

Issues Apparent from Presentation

- UL 9540 Code tests for battery safety by charge – discharge – charge – discharge cycle (i.e. 2 complete cycles).
 - Battery deterioration (including swelling) occurs after multiple cycles due to development of “dendrites” (rigid needle and tree like structures) that penetrate anode/cathode separator and result in eventual failure
 - A 2 cycle test to show code compliance is hardly definitive for BESS batteries that may cycle daily for a 20 yearly lifetime (6000+ cycles)
 - Question asked at presentation, does presenter believe the codes provide adequate protection. Response, “there may be gaps.”
- Presenter noted BESS installations have extensive fire protection, such as massive water deluge for fire suppression / fire propagation. An array like the 400 MW, 1600 MWh array in Arran Elderslie has no municipal water fire protection supply. Delivery by tanker trucks inadequate.

Fire Crew Training and Risks

- Presentation showed video clip of Arizona 2.16 MWh that critically injured 4 firefighters
 - Report notes, “the design of the ESS complied with the pertinent codes and standards active at the time of its commissioning.”
 - *(contrast to Arran Elderslie 400 MW 1600 MWh installation – over 740 times larger)* Arran Elderslie protection will be provided by the volunteer firefighters of Arran Elderslie – no training provided nor identified by Fire Marshall before approval of facility to ensure safety
- Questions asked at the presentation if the presenter believed the current situation addresses concerns
 - Response given was “there may be gaps”

Final post presentation Comments by Presenter – received by e mail

- “I wanted to take a moment to express my sincere gratitude for your participation in yesterday’s seminar ... “
- “The thoughtful questions and vibrant discussion during the Q&A session were truly energizing.”
- In response to my formal submission to him, he noted,
- “Thank you for your constructive feedback and appreciate your time.”
- *W. Palmer final comment – There are gaps in the codes that MMEWG members should be aware of. Do not consider that your communities or protective service personnel are protected.*

MMEWG Report

IESO Activity

- Moving to a series of RFP's with a new round each year starting in Q3 2025 with decisions in Q1 2026
- Municipal meeting held on November 13. Questions raised include:
 - Consideration of Alternate Sites required before submission/Municipal Support Resolution
 - Fees Allowed for Planning and Zoning work but not for reviews of AIA
 - Need revision of schedule of fees
 - AIA should include protection of growth areas and livestock protection
 - Municipalities should ask for information early including AIA before support resolution
 - Wording of municipal support resolution indicates work with proponent on municipal support resolution – conflict of interest
 - Require application forms with site plans and report on consultation with resident within 500'.
 - Book Council presentation 4 weeks in advance, municipality advises residents by mail.
 - Previous aggregate sites potential sites for projects
 - Cancellation of support resolutions the new multiple wind process.

IESO Contract in Court

- Issue retooling solar projects to increase output within an existing contract
- IESO challenged companies but lost on appeal
- No restrictions on equipment upgrades in existing contracts.

Trillium Power

- Wants to build wind projects in Lake Ontario
- Not allowed in current process

Perth County Official Plan

- Unwilling Host status – included in new Official Plan

Revenue Model

- Proponents declare name plate capacity and output expectations – monthly
- Process based on Day Ahead Markets – proponents commit to future production
 - Need to make it up when if not actually delivered
- Payments based on Day-Ahead market pricing and estimated monthly output based on production factors in contract.
- Additional payments if there is a short fall in revenue required.
- Un-resolved – ability to predict wind output one day in advance
 - Under consideration since March – no resolution

Municipal Activity

- **Zora, Oxford**
 - Mayor supports “renewable energy”
 - Very active opposition from agricultural community
 - Mayor responded with resolution looking for direction; critical of IESO
- **South-west Oxford**
 - ProWind failed with East Zorra-Tavistock; Blanford- Blenheim
 - Now looking for leases in another township
- **Adelaide-Metcalf, Middlesex**
 - Interest expressed
- **Eastern Middlesex**
 - Some leasing activity underway
- **City of Kawartha Lakes**
 - Pro-renewable energy Councilor proposed repeal of Unwilling Host resolution
 - Motion defeated
 - Councilor then requested a staff report on Unwilling Host resolution.
 - 2 members of Council affected by wind turbines
- **Mapleton**
 - Motion to review projects despite Unwilling Host statues approved
 - Mayor does not support more wind turbines
 - Investigation of local status underway
- **Northern Bruce Peninsula**
 - Leasing activity underway