Township of Blandford-Blenheim

47 Wilmot Street South
Drumbo, Ontario N0J 1G0

Phone: 519-463-5347
Fax: 519-463-5881
Web: www.blandfordblenheim.ca

April 30, 2024

To: County of Oxford Council

From: Township of Blandford-Blenheim Council

Re: Delegation Regarding Concerns with Wind Turbines

At the April 17th, 2024 Meeting, the following resolution was passed by Township of Blandford-Blenheim Council:

i. Darrell Fried & Tyler Vollmershausen, Residents, re: Concern over Renewable Energy, Specifically Wind

RESOLUTION #9

Moved by – Councillor Demarest
Seconded by – Councillor Young

That the delegation from Darrell Fried & Tyler Vollmershausen be received as information; and further,

That Council direct staff to forward the correspondence to Oxford County for information.

.Carried

Delegates Darrell Fried and Tyler Vollmershausen presented a slide deck regarding concerns related to wind turbines, citing health, safety, and environmental concerns.

In light of the presented concerns, the Township of Blandford-Blenheim Council directed staff to forward the delegate correspondence to the County of Oxford for information.

Please contact the undersigned regarding any questions relating to this notice of resolution.

Best Regards,

Sarah Matheson

Sarah Matheson, Clerk
smatheson@blandfordblenheim.ca
519-463-5347 ext. 7422

Encl.

Hello Council Members and Chair,

I should introduce our committee that has worked diligently to prepare tonight's presentation: Darrell Fried, Tyler Vollmershausen, Bob Harrison, Erica VanRooyen, Ed Crawford, and Dean Jancsar.

We represent a significant group of farmers and landowners—encompassing 31,478 acres out of the 94,475 acres in Blandford-Blenheim—who are deeply concerned about the impact of wind turbines on our prime farmland. We are in good company with over 89 other municipalities which have already established “Unwilling Host” resolutions for wind projects.

Agenda:

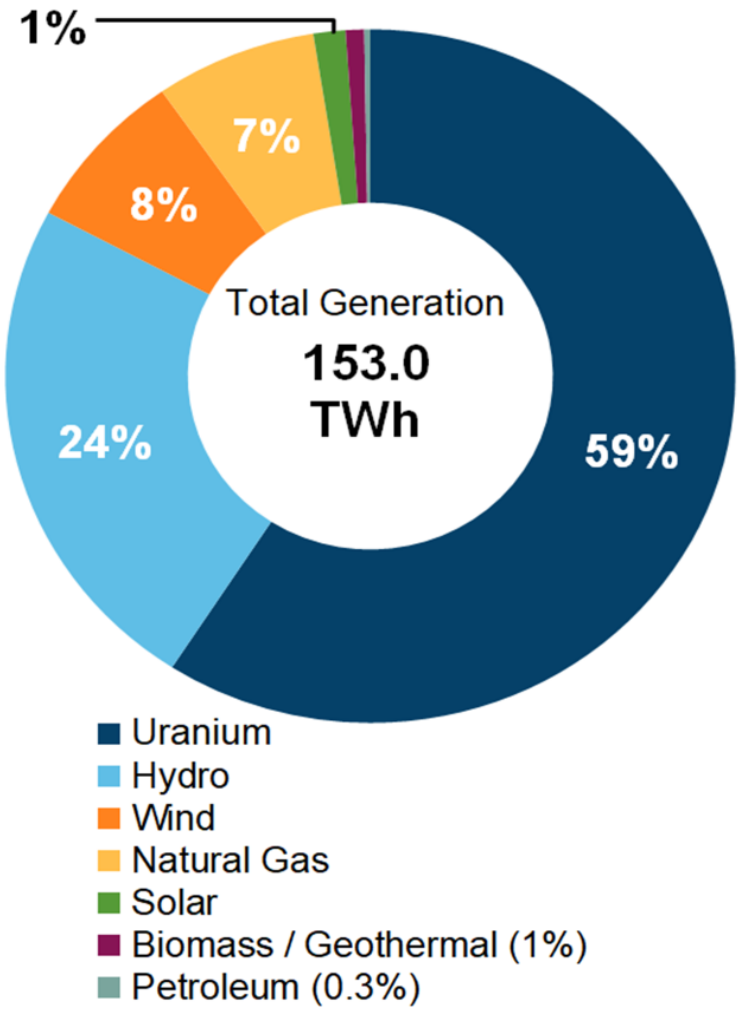
1. ***Educational Slide Deck:*** Tyler will first present an abbreviated version of the slide deck previously shown to the community. This aims to educate the council about our concerns, initially prepared by David Cunningham in EZT.
2. ***Main Concerns and Proposed Actions:*** We will detail our principal issues with potential wind turbine projects and suggest concrete steps that we believe will mitigate these concerns.
3. ***Existing 'Unwilling Host' Resolution:*** We wish to discuss the resolution that has been acknowledged by regulating bodies, with special thanks to Mayor Mark Peterson for his thorough examination and support.

Let's begin with the same enlightening information presented at our Ratho Church community meeting by Dave Cunningham of EZT, which resonated with the EZT Council and proved successful in establishing an “Unwilling Host” resolution.

Overview for Blandford – Blenheim Concerned Citizens

Presented by
Darrell Fried, Tyler Vollmershausen
Wind Concerns BB

Ontario is the second largest producer of electricity in Canada and has an estimated generating capacity of 40 200 megawatts (MW). In 2019, about 92% of electricity in Ontario was produced from zero-carbon sources: 59% from nuclear, 24% from hydroelectricity, 8% from wind, and 1% from solar.



5 More TWH Required by 2030

Factors:

- Demand expected to grow “sharply”
- Federal Clean Energy Regulation
- Pickering being retained

IESO Proposing a “Cadenced” Procurement Approach

LT RFPs	Launch Date	Operational	Target
LT2	2025	2029 – 2031	2,000 MW
LT3	2027	2032	1,500 MW
LT4	2029	2034	1,500 MW
Total		**2029-2034**	**5,000 MW**

- **Wind**, solar, hydroelectric, storage and bioenergy projects qualify for 2024 RFP.

Proposed Stages for IESO Process

First Year – 2024

- Issue Draft RFP in mid- year
- Collect Meteorological Data
- Seek Municipal Support

Second Year – 2025

- Final RFP Issued at start of year
- Procurement open period

Third Year – 2026 – 2027-2030

- Proposal submission at start of year
- Contract executed at end of year

Fourth to Eighth Years

- Permitting, Construction and Commissioning

Target Commercial Operational Date - 2030

Not Secure www.windatlas.ca/nav-en.php

Values | Roses | Histograms | Turbine formula

Numerical Values at 80m

Latitude = 43.249, longitude = -80.769

Period	Mean Wind Speed	Mean Wind Energy	Weibull shape parameter (k)	Weibull scale parameter (A)
Annual	7.01 m/s	357.88 W/m2	1.85	7.89 m/s
Winter (DJF)	8.35 m/s	518.00 W/m2	2.16	9.43 m/s
Spring (MAM)	7.02 m/s	340.00 W/m2	1.95	7.92 m/s
Summer (JJA)	5.47 m/s	157.00 W/m2	1.99	6.18 m/s
Fall (SON)	7.28 m/s	375.00 W/m2	1.97	8.21 m/s

Values | Roses | Histograms | Turbine formula

Calculation of the turbine formula for a given wind turbine at 80m

Latitude = 43.249, longitude = -80.769

Enter wind turbine data (all fields are required):

max power output (kW): 3000
cut-in wind speed (m/s): 4
rated wind speed (m/s): 12

Submit

Calculation for the data you entered (3000, 4, 12):

Period	Power Output	Energy Output	Use factor
Annual	1156.26 kW	10135.78 MWh/year	38.54 %
Winter (DJF)	1515.63 kW	3321.51 MWh/period	50.52 %
Spring (MAM)	1164.63 kW	2552.30 MWh/period	38.82 %
Summer (JJA)	726.47 kW	1592.05 MWh/period	24.22 %
Fall (SON)	1232.64 kW	2701.33 MWh/period	41.09 %

Government of Canada | Gouvernement du Canada

Canada.ca | Service Canada | Departments | Français

Wind Atlas

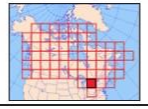
Canada

Home | Methodology | Maps | Downloads | Help | Useful Links | Site Map

Home ➜

Navigation

Click on the map to change the current tile:



Display Field

- ○ Mean Wind Speed
- ◉ Mean Wind Energy
- ○ Roughness Length
- ○ Topography
- ○ Land/Water Mask

Height

- ○ 30m
- ○ 50m
- ◉ 80m

Period

- ◉ Annual
- ○ Winter (DJF)
- ○ Spring (MAM)
- ○ Summer (JJA)
- ○ Fall (SON)

Display Options

- ☐ Power Lines
- ☐ Lakes and Rivers
- ☐ Roads
- ☐ Cities

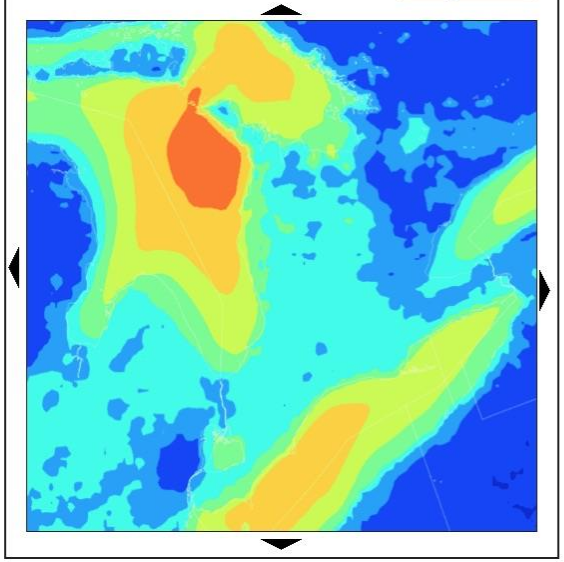
Download and print

Click on the button below to download and print the current image at high resolution:
(opens a new window)

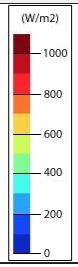
Printing

Quadrangle 40 (j=5; i=18) - Mean Wind Energy - 80m - Annual

Zoom | Overall map



Legend



Cart

Add | Remove | Contents

Tools

Help

Compare with real-life observations

Compare

Values, wind roses, wind speed histograms, turbine formula at a point

Latitude/longitude under the cursor: Lat.=41.763 Long.=-82.703
Click on the map, enter a latitude/longitude or enter a postal code to display information.

Lat.: 43.23973 Long.: -80.80165 or Postal code:

Submit | Clear

Protecting Prime Farmland

- **Food security is at risk in Ontario due to shrinking farmland**

  - As big as our province is, only 5% is arable land.
  - We are losing 319 acres per day of prime farmland in Ontario.
  - In the past 35 years, Ontario has lost 2.8 million acres (18%) of its farmland to non-agricultural land uses like urbanization and aggregate mining. Recent data shows that energy sprawl is now the 3rd largest reason for the decline of prime farmland.
  - Ontario currently has enough farmland to feed 15.3 million people. Our population as of April 2023 is 15.5 million and projected to grow at 3.1% annually.
  - Agriculture in Ontario is not sustainable at this rate!
  - Oxford County has some of the best Class 1 prime farmland in Canada!
  - The provincial Policy Statement and OMAFRA direct energy projects away from prime farmland and instead to the vast area of “rural” lands we have in Ontario

Wind Turbines Setbacks

Current Ontario Minimums – Regulation 359/09		
Receptors	550 metres	Audible noise only based on 40 dBA
Property Lines	Blade length plus 10 metres	Typically 60 metres

Polish Public Health Institute Review		
Audible Noise	.5 to .7 km	No adjustments for pulsing/tonal quality
Total Noise	1.0 to 3 km	Includes low frequency noise & pulsing/tonal adjustments
Shadow Flicker	1.2 to 2.1 km	Depends on height of turbine
Ice Throw	.5 to .8 km	Fragments of ice thrown from blades
Turbine Failure	.5 to 1.4 km	Potential distance for blade fragments

Primer on Wind Turbine Noise

Types of Noise	Definition	How Perceived	Health Effects
Audible Noise	20 Hz to 20,000 Hz	Normal hearing	• Annoyance* • Sleep disturbance
Low Frequency Noise	20 Hz to 160 Hz	Normal hearing	• Annoyance* • Sleep disturbance
Infrasound	Below 20 Hz	Not heard but felt by whole body	• Sleep disturbance • Pressure in ears • Tinnitus • Headache • Nausea • Dizziness
Noise Characteristics	Cyclical Tonal	Pulsing sounds Whooshing sounds	• Increases impact of noise • 5 dB(A) penalty to compensate

*Note: Annoyance is used as medical term meaning chronic stress

Source: Presentation to Boone County Illinois Planning Board by Dr. Paul Schomer

New Zoning Rules for Wind Turbines

- **Prohibit wind turbines on Prime Agricultural Land**
- **Establish noise setback from other uses**
  - Recommending 2,000 metres
  - Protection for residential, industrial, institutional and agricultural uses.
  - Protects against audible and low frequency noises
- **Establish setback from property lines**
  - Recommending 1,200 metres
  - Limits impact of turbine failure and ice throw to site
- **Establish setbacks from designed growth areas**
  - Recommending 2,000 metres

Overview of Prowind Lease

20 year lease

- renewable every 5 years up to 50 years

Company's name attached to your deed

- Need their approval for a mortgage
- Potential liens on your property

Contracts are one-sided

- All control rests with developer, no exit once you have signed.
- Company permitted to build roads, access fields, erect fencing and lay underground cables.

Company determines turbine location.

- No closer than 300 metres from residence

Only 0.5 acre will be used

- Does not align with allowance for access roads, landing area etc.

$40,000 letter of credit for decommissioning

- Actual cost is $1 million

Sale of Land Requires permission of company

Permission needed to build new buildings

Risks vs Benefits
of
IWT's on Prime Farmland in our Community

The benefits are few

- Some passive income opportunities for some farmers and landowners
- It might give people the sense that they are contributing to get us to net zero emissions and save us from climate change. Although according to Minister Smith, that is not the case!
- There would be some incremental tax revenue for BB, not likely to be significant.

The risks are many

- Social disruption. These projects almost always polarize communities!
- Risk of water pollution, or changes to water levels. (What is going on in Chatham Kent project)
- Noise Pollution and associated health issues. Can be mitigated with proper setbacks.
- Electrical Pollution which can affect animal health.

Municipal Authorities

Green Energy Act - 2009

- Under original Green Energy Act; municipalities consulted but input ignored.

Repeal of the Green Energy Act - 2018

- PC government introduced significant changes.
- Municipal support is required for energy projects.
  - Municipalities can decide if turbines are allowed or not.
  - Municipalities can establish setbacks from residences, livestock and settlements

Recommendations to Council

~~Pass an Unwilling Host Resolution~~

- [Completed and Registered] **Indication that Council does not support turbines in the Municipality**

And

Modify MDS for Wind Projects

- Adjust bylaws to meet the multi municipal wind turbine working group recommendations for setbacks, take to county planning

Wind Turbines – Base

Current Wind Turbines

- **Power** - 3.4 MW
- **Tower Height** – 130 m
- **Blade Length** – 69 m

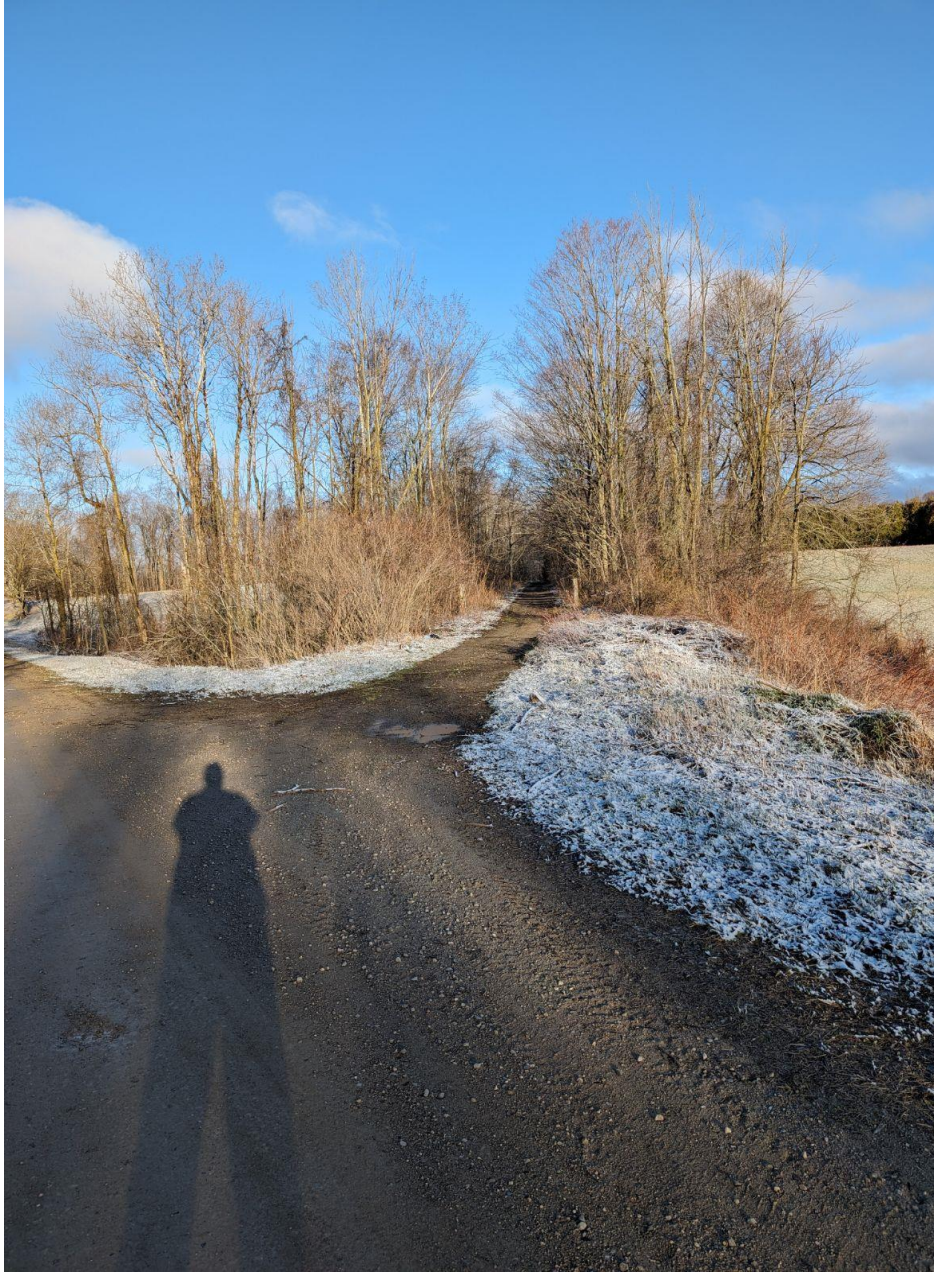
Foundations

- **Width** – 4 m to 20 m
- **Depth** – 4 m to 11 m
- **Cement** – 55 to 65 truck loads – 500 cubic metres
- (Gunn's Hill)


OVERSIZE LOAD
Vestas
Vestas
ARROW


COLLETT
HEAVY TRANSPORT

Obsolescence Discussion



Our key points summarize why this issue is critical and underscore the importance of making informed, responsible decisions:

- The construction of turbines is encroaching upon valuable agricultural lands, necessitating extensive service roads and potentially using 0.5 to 5 acres per turbine.
- The current minimum distance separation for residences and livestock barns is as low as 300 meters. This is a concern for the health and well-being of our community and its environment. It necessitates urgent attention and action.
- The division among our community members caused by the turbine installations is more than just a property line—it's a wedge driving deep into the heart of lifelong friendships and neighborly bonds. We'd like to avoid this for future generations.
- We cannot overlook the issues of vibrations caused by wind turbines, which lead to well contamination and water granularity problems—affecting the very lifeline of rural existence.
- Lastly, the matters of decommissioning, safety, and obsolescence are not just hypothetical concerns. They pose immediate and long-term risks to our community's safety and financial well-being, and they require proactive measures from the township.

We also want to bring attention to the 2015 resolution declaring Blandford-Blenheim as an "unwilling host" for wind turbine projects. This previous effort was uncovered recently and brought to light, and has since been registered with the governing bodies—this resolution is the first step in protecting our community from future Wind Projects.

In order to fortify this measure and take a stand that reflects global best practices, we are proposing a further resolution to revise zoning bylaws. This change aims to increase the minimum distance separation to 2000 meters from residences or livestock and 1500 meters from property lines. These amended bylaws are crucial and need to be established before taking this to Oxford County planning. With your support, our next step will be to present this proposal to the Oxford County Council.

Thank you for your attention to these pressing concerns. We are committed to a dialogue that will lead us to solutions beneficial for the entire community, safeguarding our farmland and our way of life.