Technical Advisory Committee (TAC) Workshop Session #4

Longwood to Lakeshore Transmission Line Project

May 14, 2025

Land Acknowledgement

Hydro One acknowledges that the Longwood to Lakeshore Project is proposed on the ancestral lands of the Anishinaabe and is now home to many diverse First Nations, Inuit and Métis people.

Hydro One understands that Indigenous Nations have been here since time immemorial and are stewards of what many refer to as Turtle Island.

We are all Treaty People and with a commitment to friendship and our pursuit of reconciliation, we are thankful to be welcomed on these lands as partners in our shared future so we can improve on our past and energize our combined futures.

TAC Input

- All information collected during the TAC meeting and feedback survey will form part of the record of consultation and be summarized in report format.

- Identifying information will be redacted, but comments will be made available to other TAC members, for posting on the project website, as well as in EA documentation for the project.

Agenda

- Introduction / Safety Moment
- Project Update & Status of Class EA
- Route Evaluation Framework
- Presentation of Preferred Route
- TAC #3 Summary and Resulting Updates
- Comparative Evaluation: Final Results
- Next Steps

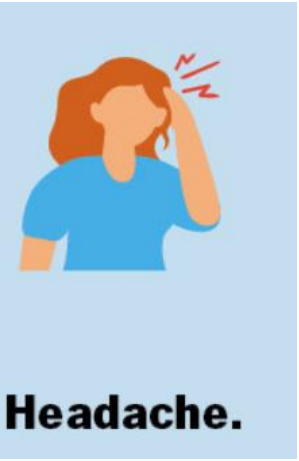
Heat Exhaustion Awareness and Prevention

Safety Moment

With May bringing the start of the summer months, we are getting closer to hot temperatures both inside and outdoors. One of the biggest consequences of working in heat includes heat exhaustion.

Heat exhaustion can occur when your body struggles to cool itself down. Some symptoms include:

Heavy sweating.



Headache.

Nausea or vomiting.

Dizziness.

Prevention:

- **Stay Hydrated:** Drink frequently, don't wait until you are thirsty to drink fluids
- **Wear loose fitting clothing:** Allows for air circulation and prevents overheating.
- **Plan for Cooler Hours:** Avoid intense activity during the hottest parts of the day (typically late morning and early afternoon).

Project Update

Class Environmental Assessment Timeline

2023	2023	Winter 2024	Spring/ Summer 2024	Fall 2024	Winter/Spring 2025	Early-mid 2025	Fall 2025	Early 2026
Project need identified	Define study area and identify viable route alternatives	Issue Notice of Commencement of Class EA	Collection of environmental data	Evaluate route alternatives	Select and announce preferred route **We Are Here★**	Prepare draft Environmental Study Report (ESR)	Release draft ESR for review and comment	Submit final ESR and complete the Class EA process

Ongoing Indigenous and stakeholder engagement

For More Information on Hydro One's Class Environmental Assessment Process visit:
Class EA for Minor Transmission Facilities

Weighted Multi-Criteria Decision Making Analysis

Step 1: Establish Need

Step 2: Route Alternatives — TAC Workshop #1

Step 3: Evaluation Criteria — TAC Workshop #2

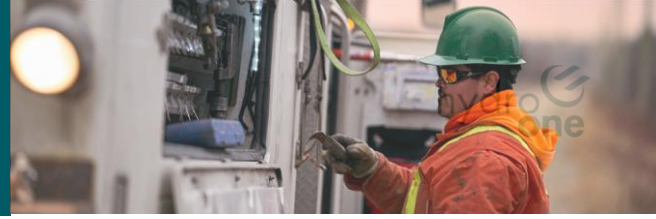
Step 4: Weight What's Important — TAC Workshop #3

Step 5: Evaluate and Select — ★ We Are Here ★

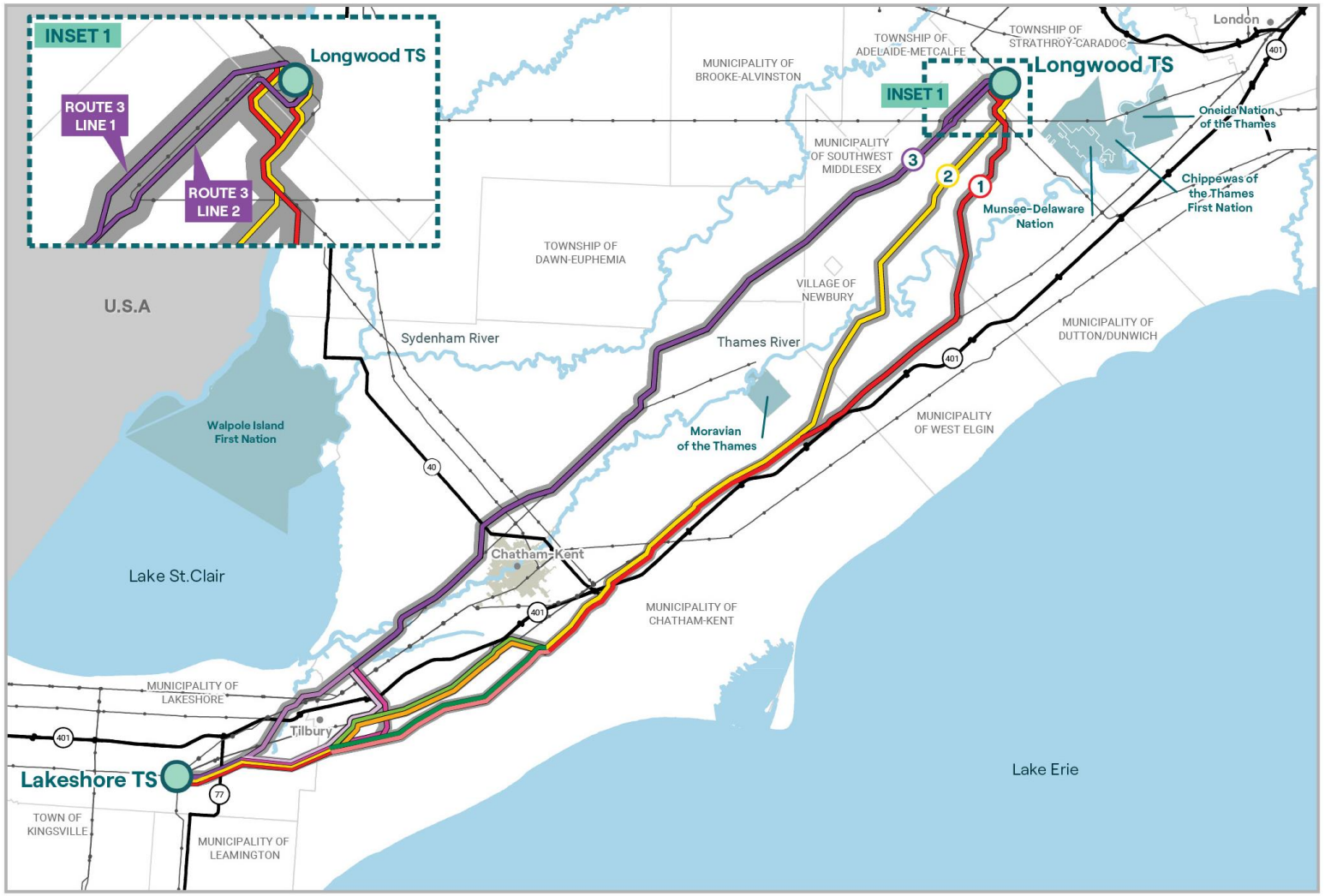
We have completed the analysis and selected the preferred route.

Preferred Route

Alternative Routes



Longwood to Lakeshore Project



Map Legend

- Transformer Station (TS)
- Route 1 (A/B Core Alignment)
  - Route 1A
  - Route 1B
- Route 2 (A/B Core Alignment)
  - Route 2A
  - Route 2B
- Route 3 (A/B/C Core Alignment)
  - Route 3A
  - Route 3B
  - Route 3C
- All Routes (1A/1B/2A/2B/3A/3B/3C)
- Local Study Area (500 m buffer on either side of the route alternatives)
- Existing Transmission Line
- Highway
- Municipal Boundary
- Waterbody
- First Nation
- Built Up Area

Note: With the exception of the section of Route 3 shown in inset 1, each route represents two transmission lines with parallel alignments. Each line has an assumed 60m right of way, pending detailed engineering.

0 5 10 km

N

Note: Please visit our online interactive map for a more detailed view and to provide your feedback: **HydroOne.com/Longwood-to-Lakeshore.**

Potentially Impacted Landowner Timeline

<u>March 2024:</u> Released Alternative Routes

- All potentially impacted landowners notified with mapping of alternative routes on their properties

<u>October 2024</u>: Released Route Refinements & Removed Route 1

- Any new potentially impacted landowners notified with mapping of alternative routes on their properties

May 2025 preferred route

hydro one

Longwood to Lakeshore project

Map Legend

- Transformer Station (TS)
- 3B — Preferred Route 3B
- Local Study Area (500 m buffer on either side of the route alternatives)
- Existing Transmission Line
- Highway
- Municipal Boundary
- Waterbody
- First Nation
- Built Up Area

Note: The illustrated route represents two transmission lines with parallel alignments, except near Longwood TS where the two lines are have slightly different alignments exiting the station.

0 5 10 km

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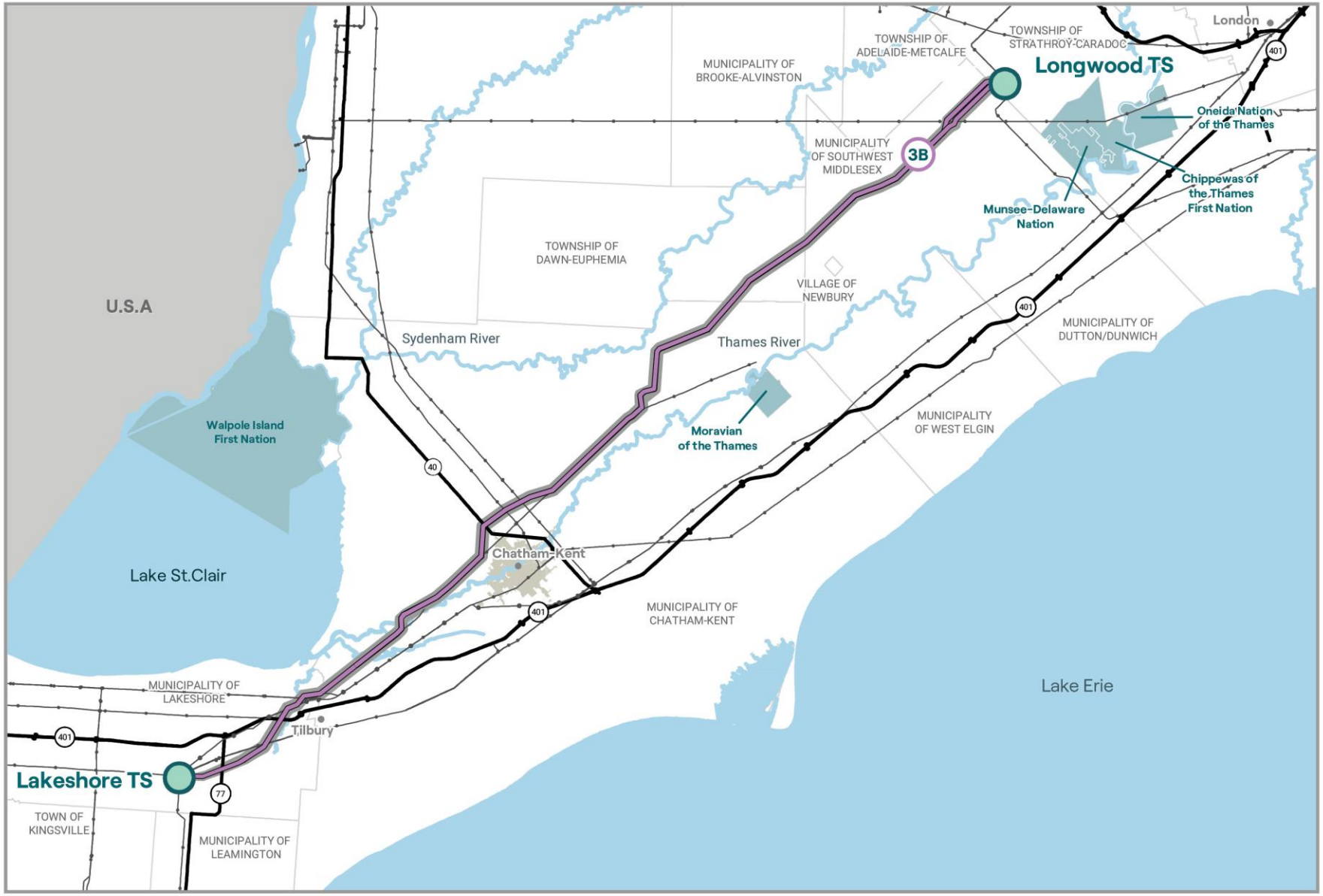


Note: Please visit our online interactive map for a more detailed view and to provide your feedback: **HydroOne.com/Longwood-to-Lakeshore.**

Change to Line 2 RoW: Where Line 2 is adjacent to Line 1, the Line 2 RoW width has decreased to 50m. The ROW width for Line 2 where it is not adjacent to Line 1 remains 60m, the same as the RoW width for Line 1.

Evaluation highlights

About the preferred route and evaluation results

- The preferred route maximizes the re-use of existing transmission corridors, including approximately 27 kilometres of idle transmission corridor.
- Route 3B is the shortest of the alternative routes and requires the least amount of land for the project.
- The preferred route minimizes impacts on residential properties.
- Compared to all route alternatives, Route 3B involves the least potential disruption to species at risk and their habitats, smallest amount of vegetation removal, and lowest impact to surface water resources.

TAC Workshop #3
Summary and Resulting Updates

TAC #3 Feedback and Resulting Updates

Agricultural Resources and Operations Criteria & Metrics: Presented at TAC#3		
Criteria	Weighting	Metrics for Measure
Agricultural Resources and Operations (Non-Livestock)	9.8%	Agricultural Land Area Only [RoW; HA] - Non-Livestock
		Repurpose of existing TxLine on Ag. Land [RoW; KM]
		Ag. Building Removal [RoW; Count] - Non-Livestock buildings
Agricultural Resources and Operations (Livestock)	10.7%	Agricultural Land Area Only [RoW; HA] - Livestock
		Ag Building Removal [RoW; Count] - Livestock

Agricultural Resources and Operations Criteria & Metrics: Final		
Criteria	Weighting	Metrics for Measure
Agricultural Resources and Operations	20%	Agricultural Land Area Only [RoW; HA]
		Repurpose of existing TxLine on Ag Land [RoW; KM]
		Ag Building Removal [RoW; Count]
		Agricultural Land Area Only [RoW; HA] - Designated for Livestock
		Ag Building Removal [RoW; Count] - Designated for Livestock

- HONI identified by adding a separate criteria for livestock specific agricultural operations, as requested at TAC #2, the criteria weighting for all agricultural operations decreased
- At TAC #3, TAC members agreed the addition of the livestock specific criteria did not have the intended effect
- For the Final Evaluation, HONI reverted to one agricultural criteria with metrics for livestock operations that provided them a slightly higher weighting than non-livestock agricultural properties

Comparative Evaluation: Final Results

Category Weighting

Natural Environment - 25%

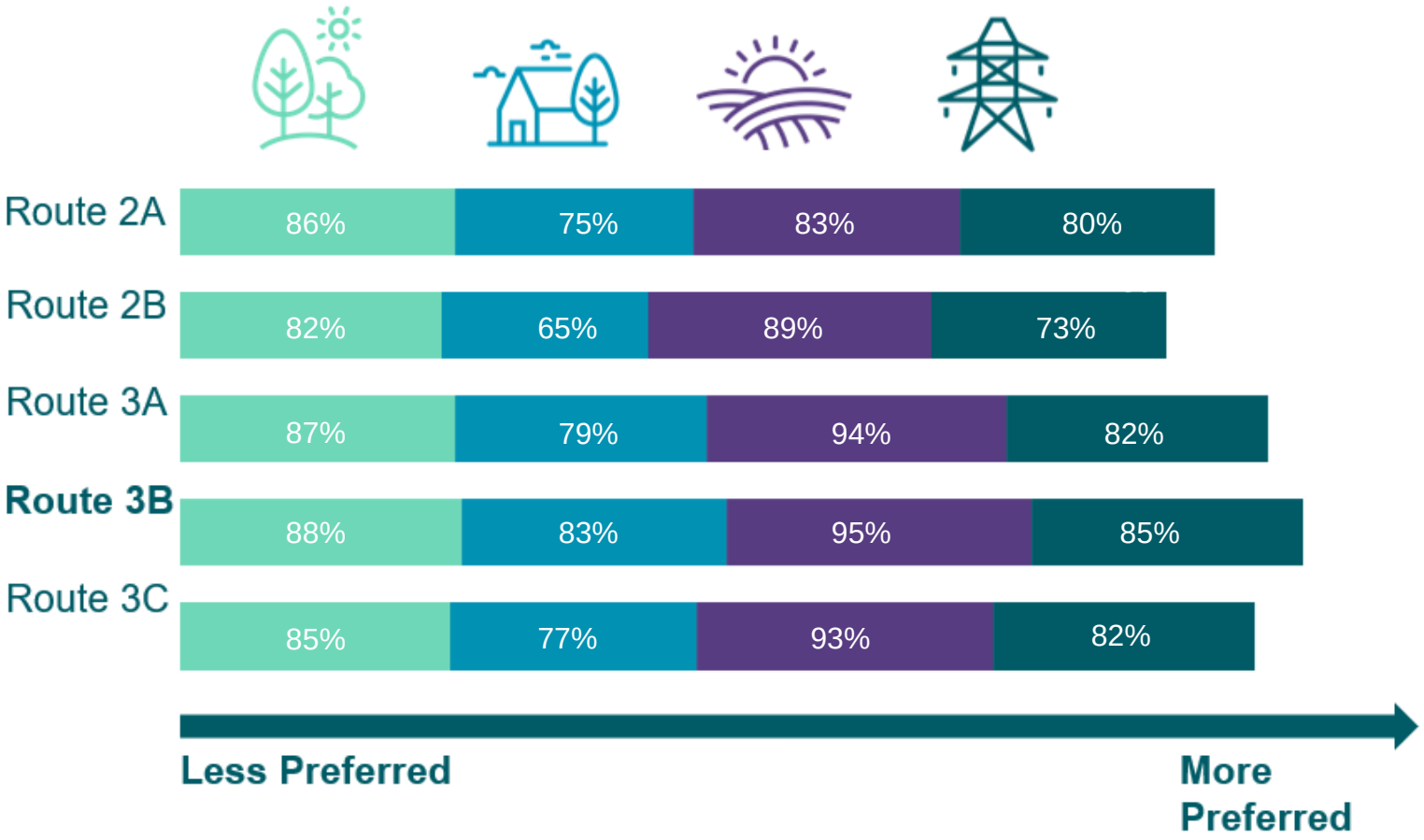
Socio-Economic Environment – 25%

Indigenous Culture, Values and Land Use – 25%

Technical & Cost – 25%

Evaluation results

The evaluation concluded **Route 3B** has overall more advantages compared to the other route alternatives identified through the environmental assessment.



Natural Environment Results

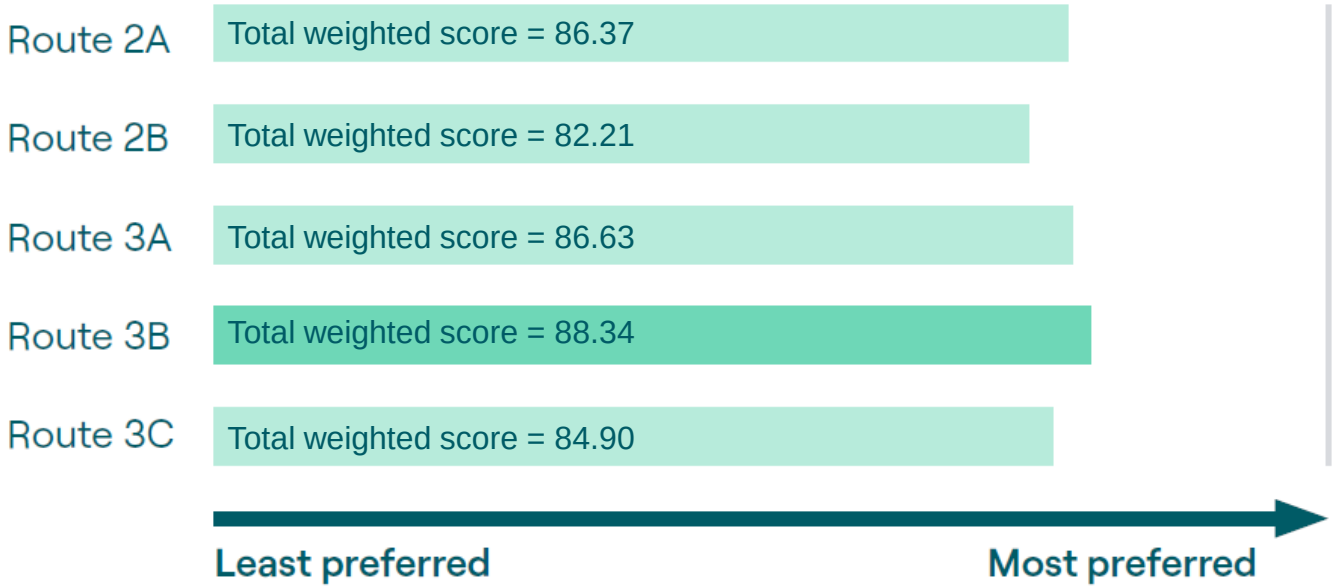
Criteria	Criteria Weight	Route 2A	Route 2B	Route 3A	Route 3B	Route 3C
Surface Water Resources and Aquatic Habitat	15%	11.97	12.23	13.44	15.00	13.89
Vegetation and Vegetation Communities	17%	14.13	13.61	16.39	17.00	15.70
Wildlife and Wildlife Habitat	16%	16.00	15.34	14.45	14.31	14.05
Species at Risk	18%	15.09	14.52	17.69	18.00	16.60
Wetlands, Natural Hazards and Floodplain Areas	17%	17.00	16.71	11.61	11.02	11.62
Designated Natural Areas and Identified Habitat Restoration Areas	17%	12.18	9.80	13.04	13.01	13.04
Total Weighted Criteria Score		86.37	82.21	86.63	88.34	84.90
Natural Environment Category Score		21.59	20.55	21.66	22.09	21.22
Natural Environment Category Rank		3	5	2	1	4

Natural Environment

Natural environment

Route 3B scored best overall in the natural environment category, as it:

- Minimizes vegetation removal. For example, there are less trees along this route predicted to interfere with transmission infrastructure.
- Is least impactful to surface water resources and aquatic habitats.
- Has lower potential effects to species at-risk and other species of conservation concern and their habitats.



Socio-Economic Environment Results

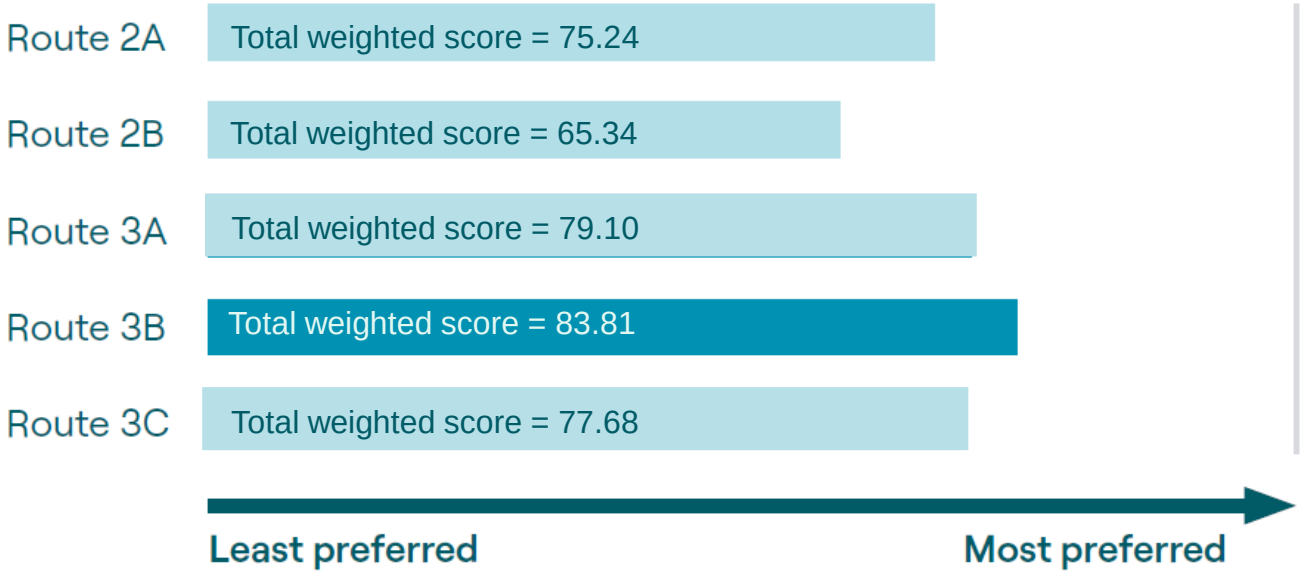
Criteria	Criteria Weight	Route 2A	Route 2B	Route 3A	Route 3B	Route 3C
Co-Location and Repurpose of Existing Infrastructure	12%	4.02	6.57	6.17	7.08	6.28
Future Land Use Designations	7%	7.0	6.0	4.2	4.1	4.0
Agricultural Resources and Operations	20%	17.98	13.31	16.41	17.53	16.19
Petroleum Operations	4%	3.67	4.00	1.37	1.29	1.47
Residential Properties	18%	14.12	9.72	17.43	17.51	16.16
Commercial, Industrial, Institutional, Recreational, Business and Facilities	8%	6.11	6.11	5.72	7.79	5.78
Source Water Protection and Groundwater Wells	12%	8.57	6.67	10.00	9.53	10.00
Built Heritage Resources and Cultural Heritage Landscapes	9%	5.40	4.98	8.11	9.00	8.10
Archaeological Resources	10%	8.37	7.97	9.70	9.96	9.73
Aggregate Resource Extraction Areas / Operations (Pits/Quarries)	0%	0.00	0.00	0.00	0.00	0.00
Total Weighted Criteria Score		**75.24**	**65.34**	**79.10**	**83.81**	**77.68**
Socio-Economic Category Score		**18.81**	**16.33**	**19.78**	**20.95**	**19.42**
Socio-Economic Category Rank		**4**	**5**	**2**	**1**	**3**

Socio-economic Environment

Socio-economic environment

Route 3B scored best overall in the socio-economic category because it:

- Maximizes the re-use of existing transmission corridors.
- Has the least impact on residential and commercial properties.
- Interacts least with potential archaeological and cultural heritage areas.



Indigenous Culture, Values, and Land Use Results

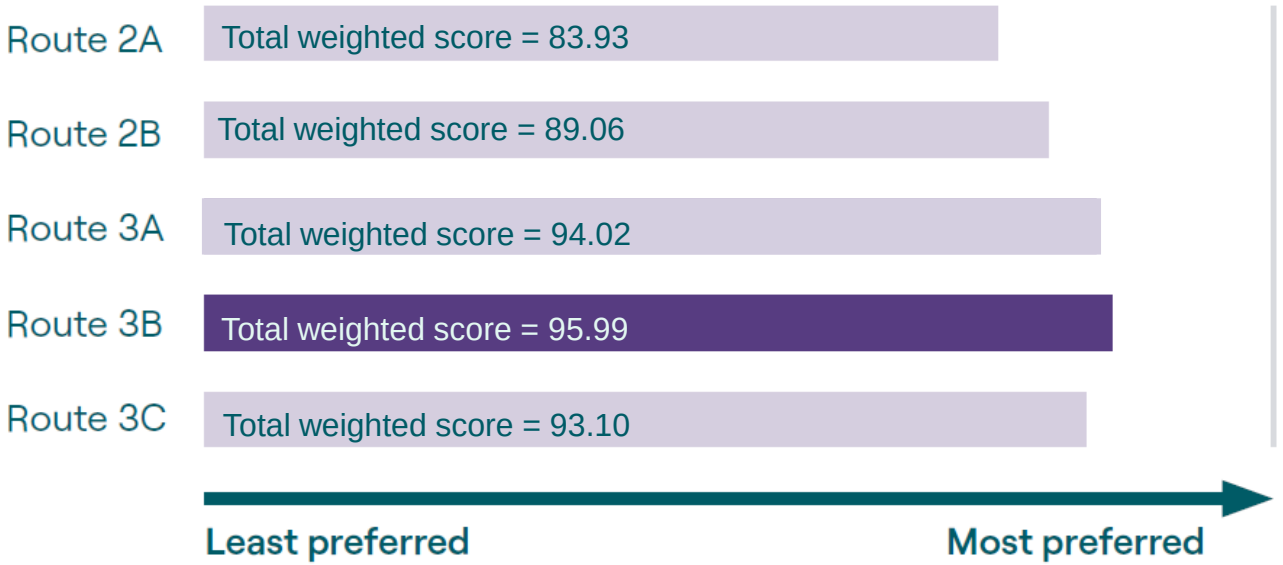
Criteria	Criteria Weight	Route 2A	Route 2B	Route 3A	Route 3B	Route 3C
Identified Areas of Historical Significance	0%					
Identified Traditional Territory Land Claims and Reserve Lands	0%					
Identified System Benefits and Impacts to Indigenous Communities	0%					
Areas that Support Hunting, Trapping and/or Harvesting Grounds	17%	15.12	14.79	17.00	16.97	16.36
Areas that Support Fish Bearing Waters with Identified or Inferred Habitat of Game Fish Species	16%	12.91	13.32	14.34	16.00	14.80
Effects to Rare, Undisturbed Native Habitats/Ecosystems	19%	18.77	19.00	17.83	17.12	17.83
Effects to Rare/Sensitive Species	17%	14.98	14.37	16.79	17.00	15.82
Co-Location of Existing Infrastructure	14%	8.45	14.00	11.06	12.60	11.28
Regeneration of Land & Regeneration Potential	17%	13.70	13.57	17.00	16.29	17.00
Total Weighted Criteria Score		**83.93**	**89.06**	**94.02**	**95.99**	**93.10**
Indigenous Culture, Values, and Land Use Category Score		**20.98**	**22.26**	**23.51**	**24.00**	**23.28**
Indigenous Culture, Value, and Land Use Category Rank		**5**	**4**	**2**	**1**	**3**

Indigenous culture, values and land use

Indigenous culture, values and land use

Route 3B scored best in the Indigenous, culture, values and land use category because it:

- Has the lowest potential effect on native/rare species and their habitats.
- Crosses less areas that support fish bearing waters.



Technical & Cost Results

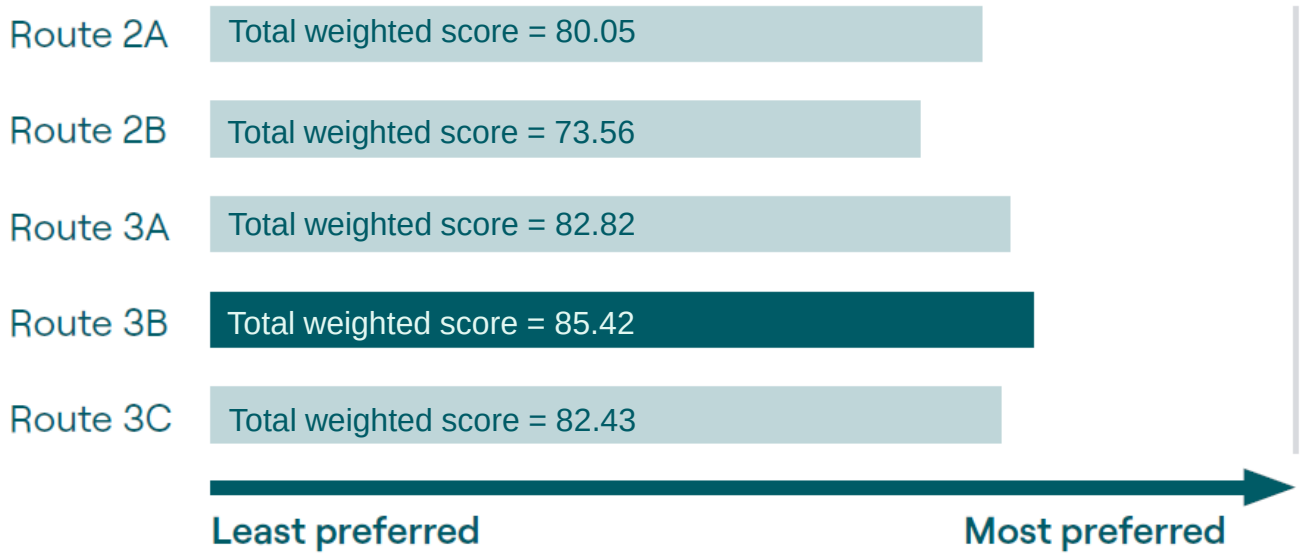
Criteria	Criteria Weight	Route 2A	Route 2B	Route 3A	Route 3B	Route 3C
Line Length	20%	19.38	19.24	18.81	20.00	19.00
Light angle and heavy angle structures	12%	9.84	9.24	11.28	11.68	10.40
Non Tx Crossings	10%	8.60	8.50	7.18	6.66	7.18
Tx Crossings	15%	10.00	5.80	10.91	10.41	10.91
Co-Location and Repurpose of Existing Infrastructure	5%	1.67	2.74	2.57	2.95	2.62
Non Tx Infrastructure Parallel	3%	3.00	3.00	0.58	0.58	0.58
Other Facilities/Infrastructure Considered	5%	2.23	2.58	4.25	5.00	4.34
Real Estate Considerations	25%	20.94	18.83	23.23	24.13	23.40
Overall Constructability	5%	4.38	3.63	4.00	4.00	4.00
Total Weighted Criteria Score		**80.05**	**73.56**	**82.82**	**85.42**	**82.43**
Technical & Cost Category Score		**20.01**	**18.39**	**20.70**	**21.35**	**20.61**
Technical & Cost Category Rank		**4**	**5**	**2**	**1**	**3**

Technical and cost

Technical and cost

Route 3B scored the best overall in the technical and cost category because it:

- Maximizes the re-use of existing transmission corridors.
- Has the least impact to active industrial and commercial facilities.
- Has the fewest angle (turning) structures
- Has the shortest line length, which will result in lower material costs and hectares of land impacted.



Next Steps

Next Steps

- Details of the evaluation process and the preferred route will be presented at the **virtual Community Open House on May 15 and in-person Community Open Houses June 4, 5, 11, and 12th.**
- The project team will be focusing on the preferred route, and further investigating potential environmental effects and high-level avoidance, mitigation and restoration measures that may be utilized to address these potential effects
- **We welcome requests for meetings to discuss specific concerns or input relevant to next steps in the project development.**
- The project team will complete the draft Environmental Study Report and release it for an Indigenous community, public and agency review and comment period.

Project development timeline*

Ongoing Engagement

2023
Initial open houses, data collection and development of route alternatives

March - April 2024
Notice of Commencement of Class EA, release of route alternatives and open houses

2024
Consultation and data collection in support of EA

Early to mid-2025
Selection of preferred route

Mid- to late-2025
Release the Draft Environmental Study Report (ESR) for review and comment

Late 2025 to Early 2026
Submit Final ESR and complete the Class EA process

2025 - 2026
Completion of detailed design and other permits and approvals, including Leave to Construct (Section 92) approval from the Ontario Energy Board

2027
Start of construction on Line 1

2030
Line 1 in service

Line 2 construction and in-service date will be determined upon further planning by the IESO

*Timelines are subject to change

**Leave to Construct under Section 92 of the Ontario Energy Board Act is a regulatory process to obtain approval from the Ontario Energy Board to build and operate a transmission line.

Thank you!

For any follow up questions, please call or email:

1.877.345.6799

Community.Relations@HydroOne.com

For the most up-to-date project information and project updates, visit our project website:

HydroOne.com/LongwoodtoLakeshore