

**Actions to move  
Northern Ontario forward**

**RESPONSE TO THE DRAFT 2041 NORTHERN ONTARIO  
MULTIMODAL TRANSPORTATION STRATEGY**

**Winter Roads into the Far North**

**By Dr. Barry Prentice | No. 1 | November 2017**

In July, 2017, The Ministry of Transportation (MTO) and the Ministry of Northern Development and Mines (MNDM) released a Draft 2041 Northern Ontario Multimodal Transportation Strategy to align with the 2011 Growth Plan for Northern Ontario.

Northern Policy Institute (NPI) recognizes the importance of an innovative, diverse transportation strategy that takes all communities into account. As part of our role to propose evidence based, practical solutions that support the sustainable development of Ontario's northern regions, we've put forward this series of action items that outline concrete next steps that the public and private sectors can use to inform the implementation and management of transportation policies.

*These action items relate directly to directions outlined in the draft strategy.*

### **DIRECTION 3.3:**

Enhance the quality of winter roads and extend their operating season through improved infrastructure, programs, maintenance and training.

### **DIRECTION 3.6:**

Collaboratively pursue the expansion of the all-season road network in partnership with interested First Nation communities and other levels of government and partners.

#### **Summary of Proposed Action Items:**

MNDM and MTO should:

1) Consider the three key challenges that impact the NOMTS' plan to address transportation issues in the Far North: the requirement for collaboration between the Federal, Provincial and First Nations governments, the high cost of building all-season roads, and the need for a timeline to ensure that progress is made, before the impacts of climate change become even more significant.

2) Develop a timeline with concrete goals to set forth a plan that implements the recommendations in the NOMTS with regards to winter roads.

3) Establish a "Plan B" to ensure that if the speed of climate change begins to outpace the strategic planning horizon, changes to the existing plan can be made.

# BACKGROUND

The NOMTS devotes one chapter to the transportation challenges of the Far North and remote communities. The situation for this region is serious because residents in northern communities face difficult futures in the face of climate change. They depend on winter roads and small airplanes to supply food, fuel and materials. As a result, the cost of everything in the Far North is double or triple the prices compared to the rest of Ontario. The NOMTS is the first strategic transportation study to really probe the depths of the problems faced in the Far North.

The threat of climate change to the winter road system is significant. Small airplanes operating out of gravel runways cannot replace the volume and nature of goods that are presently transported via the winter road network, and aviation is not without its challenges. The winter roads are becoming less reliable and increasingly vulnerable at water crossings and as precipitation changes occur. Some ideas are proposed in the NOMTS to ameliorate the loss of the winter road season. Laybys could be created for trucks to stop or reduce loads for continuance. Better training could be offered and some routes could be realigned to avoid trouble spots and extend the over-land portions.

Three issues confront the NOMTS in the development of its plan to deal with the Far North. The first is political. As noted, the First Nations are a federal responsibility and this means that the Province of Ontario will be looking to the Government of Canada to finance a major portion of any infrastructure improvements, either directly or indirectly through the funding of the First Nation communities. Ontario could act alone, but even then, only with the blessing and cooperation of the First Nations who have land claims in the area.

The second issue is the sheer scale of the problem. The NOMTS notes that approximately 24,000 residents are served by 3,160 kilometers (km) of winter roads. While the cost of building all-season gravel-roads varies based on terrain and the number of water crossings, experience in other jurisdictions (Manitoba and Northwest Territories), suggest that \$3 million per km is the average cost.<sup>1</sup> These mathematics means that \$9.5 billion would have to be invested to convert the winter road system of the Far North in Ontario to a system of all-season roads. On a per capita basis, this amounts to \$392,000 per person living in the Far North. It is unclear that either the Government of Canada or the Province of Ontario are prepared to commit such large sums of taxpayer money to solve the transportation problems of so few residents.

The third issue is the timeframe to implement the new transportation strategy. Over the past 20 years, the winter road system has lost about half its season length. If this trend continues, only a quarter of the winter road season would be left before the NOMTS horizon is completed. Furthermore, there is reason to believe that the progress of climate change is non-linear and accelerating. The Arctic Ice Cap is retreating faster than expected, with predictions that open sailing across the Arctic Ocean in the summer time will be possible within 15 to 20 years. If this pace of change occurs in the Far North, the current winter road network could be unsafe or uneconomic to build within a decade.

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changes occur.**

The tone of the NOMTS chapter on Remote and Far North Challenges could be described as “business as usual”, with recommendations that have no targets for implementation. A Plan B is needed that recognizes the implications of a more rapid climate change process. In a nod towards this direction, the NOMTS recommends that new and innovative methods of transportation, like cargo airships and hoverbarges, should be facilitated, but no timeframes are suggested, or urgency expressed.

A risk in any strategic plan is that the focus on solutions to a problem replaces the actual problem that needs to be addressed. The socio-economic conditions in the Far North are already grim because the transportation options are few and current costs of access are so high. Even without the threat of climate change, the transportation system needs significant investment to improve the standard of living in remote communities and to open up the Far North to resource development. Aspirational statements are insufficient. A timeline with concrete goals is needed to set forth a plan that implements the recommendations of the NOMTS, and a Plan B if the speed of climate change begins to outpace the strategic planning horizon.

<sup>1</sup> Prentice, Barry E., Nirbir Grewal, Bryce Doell and Matt Adaman “Cargo Airships Versus All-Weather Roads - A Cost Comparison.” Canadian Transportation Research Forum.

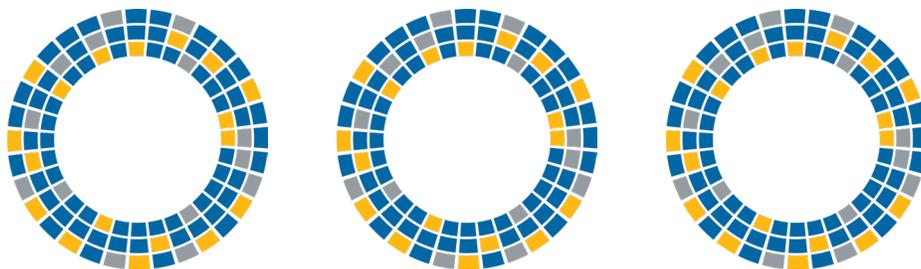


## ABOUT THE AUTHOR

**Dr. Barry Prentice** is a Professor of Supply Chain Management, at the I.H. Asper School of Business, University of Manitoba and the former Director (1996-2005) of the Transport Institute. His major research and teaching interests include logistics, transportation economics, urban transport and trade policy. Dr. Prentice holds a degree in economics from University of Western Ontario (1973) and graduate degrees in agricultural economics from University of Guelph (1979) and University of Manitoba (1986).

Through the Transport Institute, Dr. Prentice has organized national and international conferences on sustainable transportation (Railways and the Environment), supply chain logistics (Planes, Trains & Ships), agribusiness logistics (Fields on Wheels), the potential use of airships for northern transportation (Airships to the Arctic) and food trade between Canada and Mexico (La Cadena de Frio).

Dr. Prentice is a Fellow in Transportation at Northern Policy Institute and the President of ISO Polar Airships that he co-founded in 2005 as a not-for-profit research institute to promote the use of airships as sustainable transport for the northern latitudes.





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Northern Policy Institute is Northern Ontario's independent think tank. We perform research, collect and disseminate evidence, and identify policy opportunities to support the growth of sustainable Northern Ontario communities. Our operations are located in Thunder Bay, Sault Ste. Marie and Sudbury to enhance Northern Ontario's capacity to take the lead position on socio-economic policy that impacts Northern Ontario and Canada as a whole.

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