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LiUNA!

May 14, 2023

Ministry of Energy, Energy Supply Policy Division
7th floor, 77 Grenville Street
Toronto, ON
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Canada

Subject: Responding to Government Consultation on the findings of the IESO's Pathways to Decarbonization P2D Study

Dear Ministry of Energy Supply Policy Division:

The Laborers' International Union of North America (LiUNA) is pleased to comment and provide recommendations on the Ministry of Energy's Environmental Registry of Ontario (ERO) request for "feedback on the findings of the Pathways to Decarbonization (P2D study)."

For the first time in almost two decades, Ontario finds itself in a precarious position of not having sufficient electricity to fuel our growing economy, while maintaining the low-carbon and affordable energy that is a key driver for attracting investment and creating jobs. As electricity demand is forecasted to increase by an annual average of nearly two per cent over the next 20 years and may indeed accelerate faster than that to meet real and increasing environmental, social and governance (ESG), the current generating infrastructure is aging and will be insufficient to meet Ontario's predicted needs.

The IESO's Pathways to Decarbonization study addressed how Ontario's electricity system might reduce carbon emissions while working to maintain reliability and affordability for customers. In response to the IESO's "no regrets" recommendations, this submission seeks to highlight support for the study's identified pathways while urging the government to be mindful of the critical investment into our skilled trades workforce. Indeed, meeting the need for clean, reliable, and affordable resources to support customers cannot be achieved without the hard working people that will build those assets.

About LiUNA

United by collective bargaining agreements, LiUNA is a powerhouse of workers who are proud to build Ontario, Canada, and the U.S. at large. Our members are a skilled and experienced union workforce trained to work safely in the construction and energy industries. A half-million strong, with over 120,000 in Ontario, LiUNA's skilled workforce will play an incremental role in spearheading the province's decarbonization efforts.

LiUNA members currently work in every area of the energy sector, helping to build transmission and distribution facilities, power plants and oil pipelines, as well as being skilled in the maintenance of nuclear and other electricity generation facilities.

Feel the Power

Skilled Trades Workers Paving Ontario's Pathway to Decarbonization

We applaud the government for its commitment and role in Ontario's transition to a low-carbon economy. Decarbonization and transition into the low-carbon economy will lead to the creation of new Canadian industries that support green jobs and growth.

As a union publicly known for supporting an "all-of-the-above" energy policy,[1] we were reassured to see that nuclear, wind, and hydrogen (all areas in which LiUNA workers are currently trained) made up the largest additional new supply in the IESO's 2050 scenario.

In the study, the IESO forecasted the need for 17,800 MW of new nuclear, or more than double what is in operation today, with an additional 17,600 MW of new wind resources, 15,000 MW of new hydrogen powered facilities, 2,000 MW of long duration energy storage, amongst other assets. LiUNA contends that the study needs refinement to capture the value that waterpower resources can bring to the system, in particular, we appreciate the compelling nature of the recent Ontario Power Generation ("OPG") review of hydroelectric potential in the province. With the projected increase in mining loads and the electrification of steelmaking in the north, ensuring that we can fuel the electrification of steelmaking, new mining and forestry opportunities, alongside new EV manufacturing, building and transit projects in the south, is essential.

LiUNA is overall supportive of building critical infrastructure, and commencing the process to bring those assets to fruition as quickly as possible. The projected plan totals a $400 billion investment which we believe would face significant execution challenges, and we need to collectively work together to ensure that the labour is available when we'll need it. Skilled trades workers are ready to meet the challenge. But the government and IESO need to respect that Ontario is facing a growing labour shortage.

The labour market in Ontario is "the tightest it's been in half a century."[2] While this issue is not unique to Ontario, the ramifications it holds for the province are large as government remains focused on an unprecedented level of historic investments that will require labour from the skilled trades. For example, building just one nuclear power reactor employs up to 7,000 workers at peak construction.[3] While investment into nuclear remains a priority LiUNA strongly supports due to its ability to drive down emissions, we are weary of the province being unable to complete these projects due to an inability to retain skilled workers and sustain demand.

At the end of April, Build Force Canada published its *2023-2032 Construction Maintenance Looking Forward report for Ontario*. Published annually, this report underscores the need for skilled workers and growing labour force requirements by identifying the trades and occupations the industry is most likely to need across the next 10 years. Between now and 2032, it is projected that the industry will need to add an additional 36,300 workers just to keep up with construction demands. [4] Acknowledging that this report fails to consider the labour required to fulfill the projects necessary for Ontario to decarbonize by 2050 and does not consider the level of workers required to simply stay in pace with growth in the industry and the rapidly growing level of retirements, LiUNA reaffirms its commitment to continue working in tandem with the government to implement a focused and proactive plan to advance Ontario's skilled trades strategy and strengthen our workforce, including the implementation of innovative training to adapt to new technology. Ongoing collaboration through the Skills Development Fund will be imperative to continue investing in training, apprenticeship, outreach and retention for Ontario's skilled workforce.

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[1] "LiUNA Energy Projects", LiUNA, May 1, 2023, https://www.liunawc.ca/energy-projects.
[2] https://www.cbc.ca/news/canada/toronto/ontario-workers-shortage-1.6727310.
[3] "Nuclear Power Jobs." Nuclear Energy Institute, May 1, 2023. https://www.nei.org/advantages/jobs.
[4] "Construction & Maintenance Looking Forward. Build Force Canada, May 1, 2023. https://www.buildforce.ca/system/files/forecast_summary_reports/2023%20ON%20Constr%20Maint%20Looking%20Forward.pdf

In the interim, to provide value to you as you seek feedback on the IESO's pathways to decarbonization report and its "no regrets" recommendations, LiUNA retained the Canadian Centre for Economic Analysis (CANCEA) and conducted an economic study to provide a high-level estimation of the labour force required to construct the projected $400 billion worth of infrastructure by 2050.

Prefacing that this economic study is very high-level, LiUNA would welcome the opportunity to work with government to provide a more thorough analysis of the level of investment in the labour workforce that is required to ensure these projects can be executed.

LiUNA's Findings

It is important to note that the $400 billion investment is in addition to current and committed investments, resulting in an increased demand for labour beyond the status quo. We have assumed a total of $400 billion in current constant dollars, invested on a per-population basis from 2023 to 2050 (requiring an average $14.2 billion of capital investment annually, starting at $12.5 billion in 2023 and increasing to $15.8 billion by 2050). This conservative distribution of investment spreads the expenditure over 27 years, mitigating the potential impact of a "shock" investment on the available labour force in any specific year.

Based on these assumptions, the additional labour force required in Ontario's electric power engineering construction sector would need to increase by an average of 270%, or **2.7 times over current levels** and be sustained for the next 27 years. The electric power engineering construction sector, which currently represents about 16% of the total engineering construction sector would be required to grow by 2.3 times in the first year. Equivalent to 37% of the total engineering construction sector, this number would need to triple by 2050.

In the first five years of construction (assumed to be up to 2027), an additional 27,400 workers, or **2.4 times the current level**, would be required across the 377 occupations within Ontario's electric power engineering construction sector. This includes an additional 3,330 construction trades helpers and labourers, as well as an additional 2,300 carpenters and 1,540 electricians. A list of the top 20 occupations by additional workers required on average per annum for the first 5 years provided by CANCEA can be found in Appendix A.[5]

We also evaluated the possibility of uneven investment throughout the 27-year period. In the case of peak investment being twice as high as assumed in a particular year, the labour force required in that year would average 470% or **4.7 times over the estimated labour force available**. However, labour requirements in other years would be lower as increased peak investment would reduce investments in subsequent years.

Conclusion

Acknowledging that these projects can take anywhere from 10 to 15 years to commission and complete, a forward-thinking, innovative approach to ensure the province does not face delays in the implementation of new projects due to failure to tap into labour resources is important. As the largest construction union in Ontario and Canada at large, LiUNA would like to work with government to identify the gaps that exist within Ontario's skilled trades workforce and address the current challenges the growing need to decarbonize will bring to our shrinking skilled trades workforce. Programs that allow

[5] Paul Smetanin, *Pathways to Decarbonization Study: Labour Force Estimation for Infrastructure Construction.* Canadian Centre for Economic Analysis. 2023.

skilled workers to transition from high carbon to low carbon careers and public policy actions that support the growth of our sector are areas where LiUNA can work with government to accelerate the implementation of a path to decarbonization. For this reason, LiUNA is recommending:

1) Move forward on critical infrastructure projects without any further delay. This includes new nuclear, transmission, clean fuels, and pumped storage projects. Significant benefits will be realized in moving forward now on expanded development at Bruce Power and OPG Darlington, the refurbishments and return to service OPG Pickering, the Ontario Pumped Storage project in Meaford, and new transmission projects across the province to connect supply to storage to customers. These are indeed "no regret" projects that will benefit residents and businesses for years to come.

2) Government focuses on long-term planning, policy stability and a pro-active labour force by mapping out a forward-thinking, innovative approach to addressing Ontario's labour shortage.

3) Working together with LiUNA to identify the skilled talent required to promote the scaling of new low carbon energy infrastructure projects.

As the skilled trades provides Ontarians with good paying jobs that offer job security, benefits, and pensions, there are a multitude of reasons why our government should be focused on the growth, expansion, and reskilling of the sector at large. We appreciate the opportunity to comment on the Ministry's posting and would welcome the opportunity to discuss our recommendations in greater detail.

Our Feedback on Select ERO Questions

2. The IESO's Pathways Study recommends beginning planning and siting for new resources like new long-lived energy storage (e.g., pump storage), nuclear generation and waterpower facilities.

   What are your expectations for early engagement and public or Indigenous consultations regarding the planning and siting of new generation and storage facilities?

   LiUNA is supportive of the IESO's recommendation to begin planning and siting for new resources like new long-lived energy storage (e.g., pump storage, nuclear generation, and waterpower facilities). We believe that early engagement in the form of public or Indigenous consultations for the planning and siting of new generation and storage facilities will enable the province to move forward on its decarbonization agenda. Early engagement will ensure the voices in each community are heard – an action that will assist in the avoidance of future disputes and delays in the planning and approval process.

   As Canada's largest building trades union, we have fostered relationships with many Indigenous communities within Ontario and across Canada. As highlighted in our initial comments and analysis, with construction skills in high demand, we have helped a variety of Indigenous communities tap into a number of construction and energy projects signing a Memorandum of Understanding "MOU" with the First Nations Major Projects Coalition Society, First Nations Summit and Assembly of First Nations. LiUNA can be an ally to government as the province moves forward on the planning and siting of new generation and storage facilities given our experience and relationship working together and training members who belong to the communities of our Indigenous partners.

However, while we are supportive of early engagement to streamline the planning and siting process for new large scale energy infrastructure projects, we would encourage the government to provide investment and commitment to growing our skilled trades workforce in advance or at the same time that early engagement takes place. Failure to build out our skilled trades workforce and address the growing labour shortage in the province will impact the scale in which these projects are able to role out, regardless of the level of support and community buy-in a project may hold.

APPENDIX A:

Top 40 Occupations (by National Occupation Codes)	Additional Workers, per annum average, first 5 years
7611 Construction trades helpers and labourers	3,331
7271 Carpenters	2,267
7241 Electricians (except industrial and power system)	1,541
0711 Construction managers	1,398
0712 Home building and renovation managers	1,362
7251 Plumbers	887
7294 Painters and decorators (except interior decorators)	863
7205 Contractors and supervisors, other construction trades, installers, repairers and servicers	764
7521 Heavy equipment operators (except crane)	704
7441 Residential and commercial installers and servicers	687
7284 Plasterers, drywall installers and finishers and lathers	580
7302 Contractors and supervisors, heavy equipment operator crews	545
7313 Heating, refrigeration and air conditioning mechanics	542
1221 Administrative officers	517
7511 Transport truck drivers	469
7281 Bricklayers	445
7204 Contractors and supervisors, carpentry trades	415
1411 General office support workers	364
0016 Senior managers - construction, transportation, production and utilities	363
1241 Administrative assistants	336

Yours truly,

Jack Oliveira
Business Manager, LiUNA OPDC

cc: Joseph S. Mancinelli, LiUNA Canadian Director, International Vice President, and Central & Eastern Canada Regional Manager