

# Green Ergonomics: Understanding MSD Hazard Exposures Within the Wind Energy Sector

CRE-MSD Webinar 28<sup>th</sup> May 2020



**canwea**

CANADIAN WIND  
ENERGY ASSOCIATION

ASSOCIATION CANADIENNE  
DE L'ÉNERGIE ÉOLIENNE

# About CanWEA

*“The Canadian Wind Energy Association is the voice of Canada's wind energy industry, actively promoting the responsible and sustainable growth of wind energy.”*

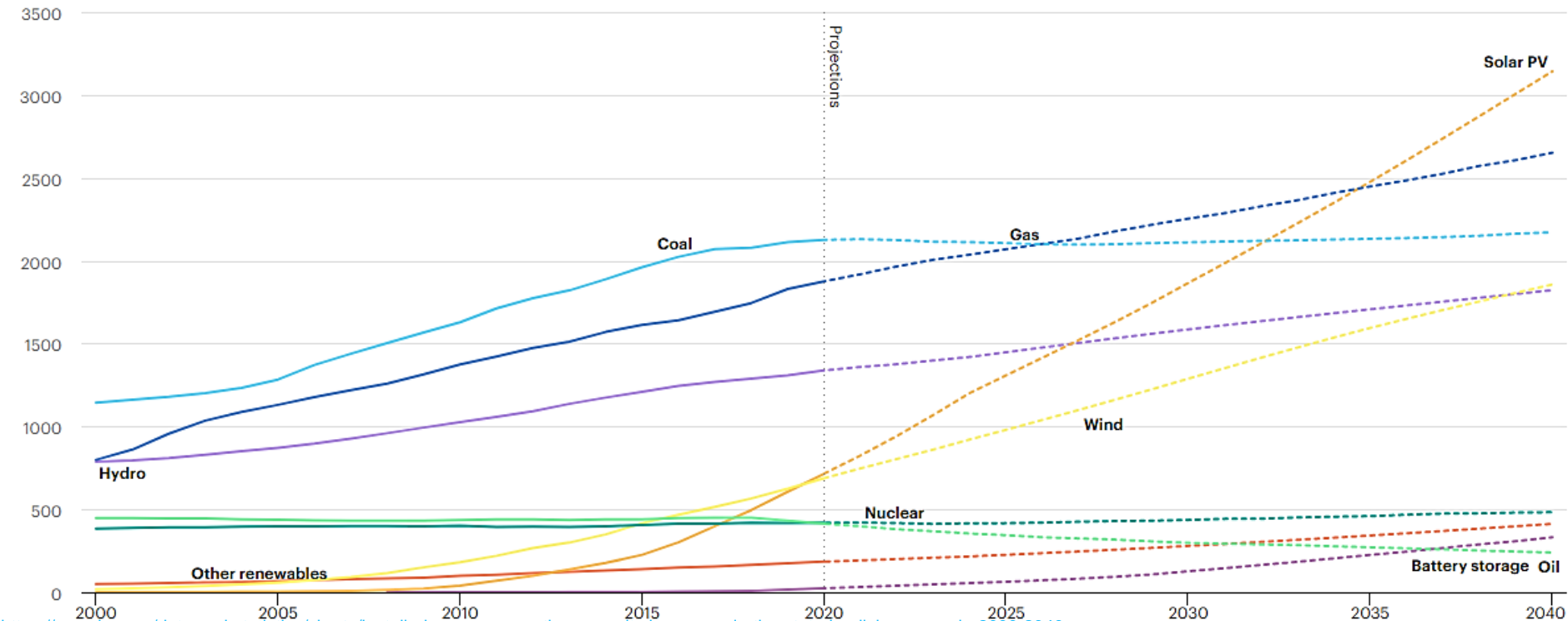
*“Effective July 1, 2020, the members of CanSIA and CanWEA will unite within the **Canadian Renewable Energy Association.**”*



# International Energy Agency: Power Generation By Source

Coal Gas Oil Nuclear Wind Solar PV Other renewables Hydro Battery storage

GW



# U.S. Trends

- [AWEA](#) anticipates a 108% increase in the wind technician role in the next 10 years.
- [SolarJobsCensus.org](#) shows an addition of 150K solar jobs in the U.S. from 2010- 2018.
- The [U.S. Energy Storage Association](#) surveyed 101 storage companies during the COVID-19 pandemic,  $\frac{3}{4}$  say they do not expect reduced employment.



# The Canadian Wind Energy Industry



Canada's wind energy industry has...



Attracted more than **\$23 billion in investment**.



Created over **58,000 person years of employment** in construction and operations.



Directly benefited more than **299 communities in 12 provinces and territories**, including involvement with **over 35 Indigenous communities**.



Manufactured blades, towers and other components in the **wind turbine supply chain**.



# Estimated 1,400 technicians across Canada

	BC, AB	SK, MB	ON	QC	NB, NS, PE, NL	YT, NT, NU
Workforce Distribution	18%	4%	40%	30%	8%	0



# Diverse Skill Sets

- Experienced wind turbine technicians have a range of capabilities.
  - Electrical, mechanical, hydraulic and IT.
  - Computer workstations, vehicles, ladders, standing, kneeling, lifting, climbing over and around objects.
  - Repetitive and non-repetitive work, troubleshooting, unique daily task expectations, weather sensitive, safety sensitive positions.

*Recognizing this diversity, employers place **safety as the primary focus** of the business.*





# CanWEA OH&S Committee

The industry has established a network of members focused on health and safety collaboration. This has led to some globally leading research into ergonomic hazards in the wind sector.

- **Collection of existing industry studies** through partners like WSPS, Human Factors North, Taylor'd Ergonomics Inc., Insite Health, and Entrac.
- **Gap analysis of existing studies and global literature** - HFN
- **Wind tech survey, analysis and literature study** - CRE-MSD



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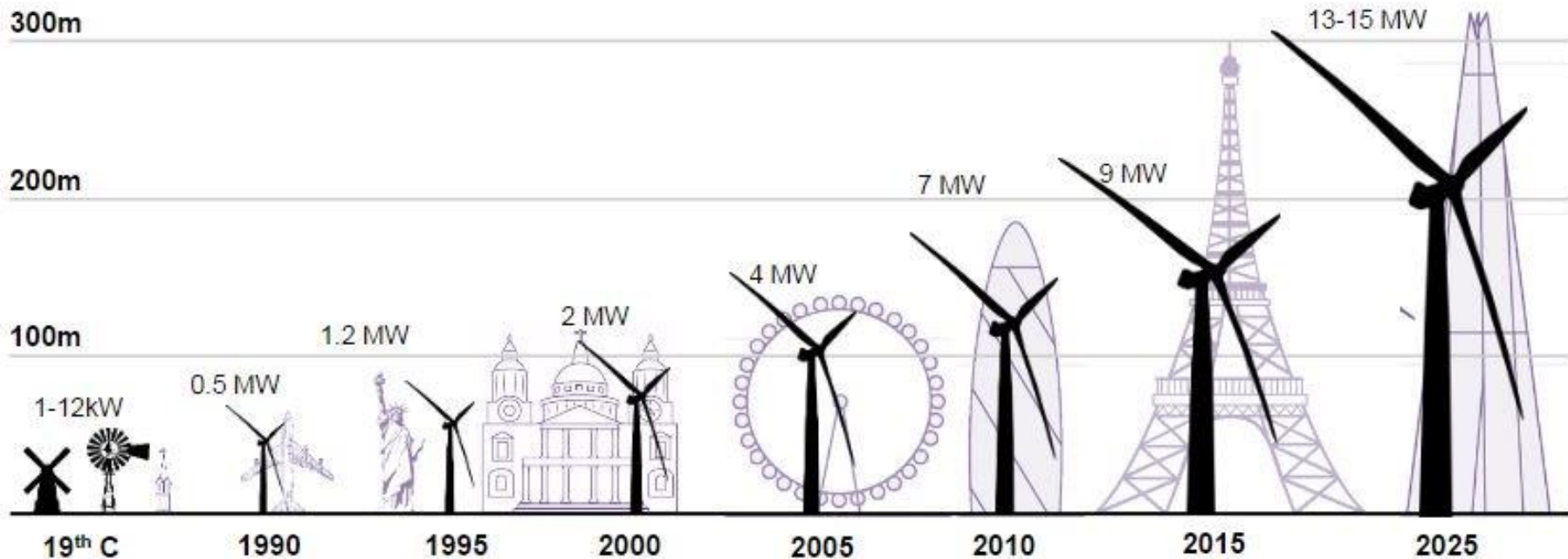
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# Evolution of wind turbine heights and output

Offshore



Sources: Various; Bloomberg New Energy Finance



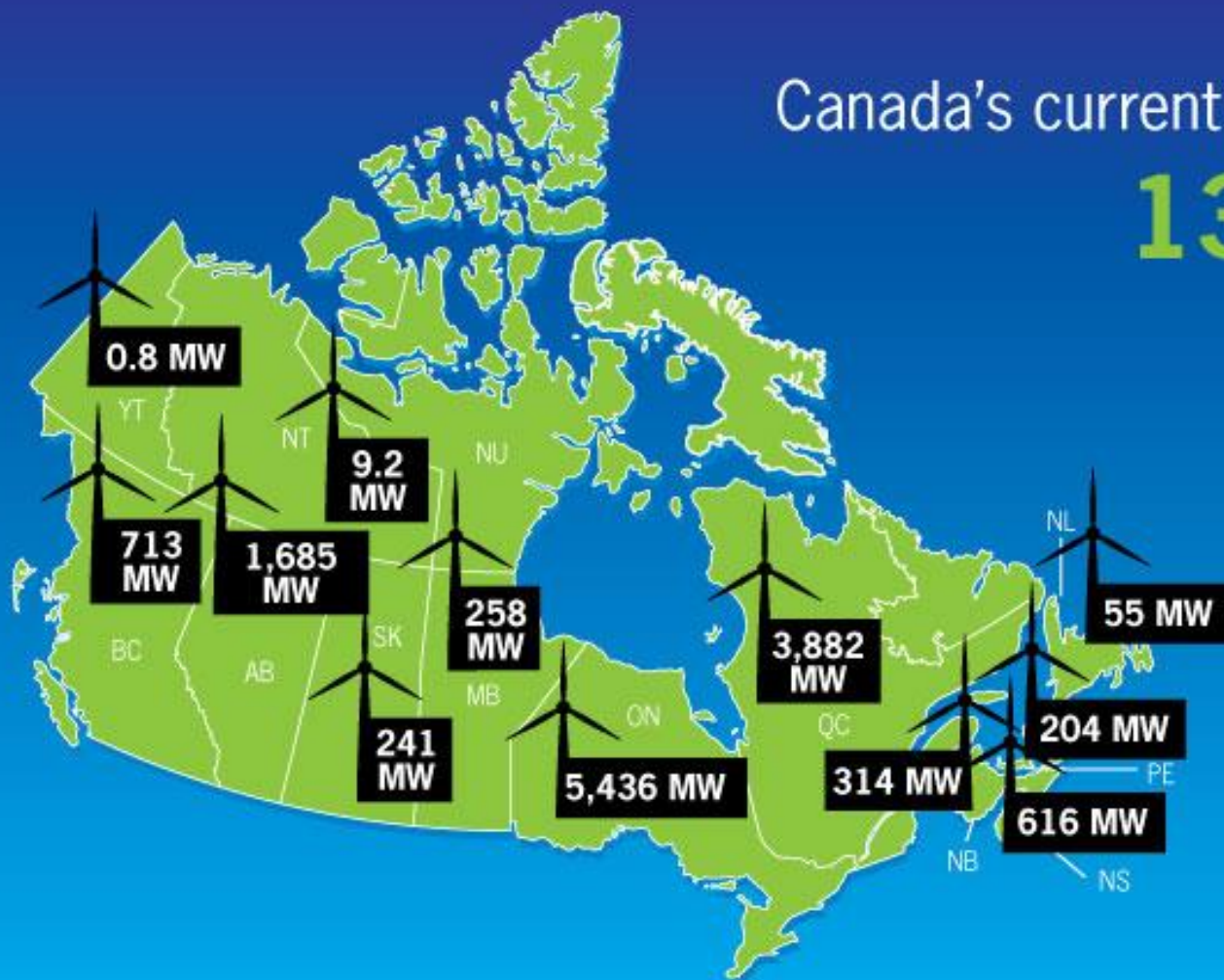
# Wind Energy Workforce

- There is a need for more research, solutions and collaboration.
- Part of a bigger global discussion around clean energy with more ergonomic designs coming down the product pipeline, bigger spaces, more service lifts, etc.
- We are looking to make our contribution with the existing fleet and contributing to future design considerations.



Canada's current installed capacity:

**13,413 MW**



(as of December 2019)  
May not sum to total due to rounding

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Please enter your questions  
into the chat box.

Thanks for joining us!

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