

Canadian Workshop on Fusion Energy Science and Technology

Status of Fusion in Canada

24 October 2023

Axel Meisen, President

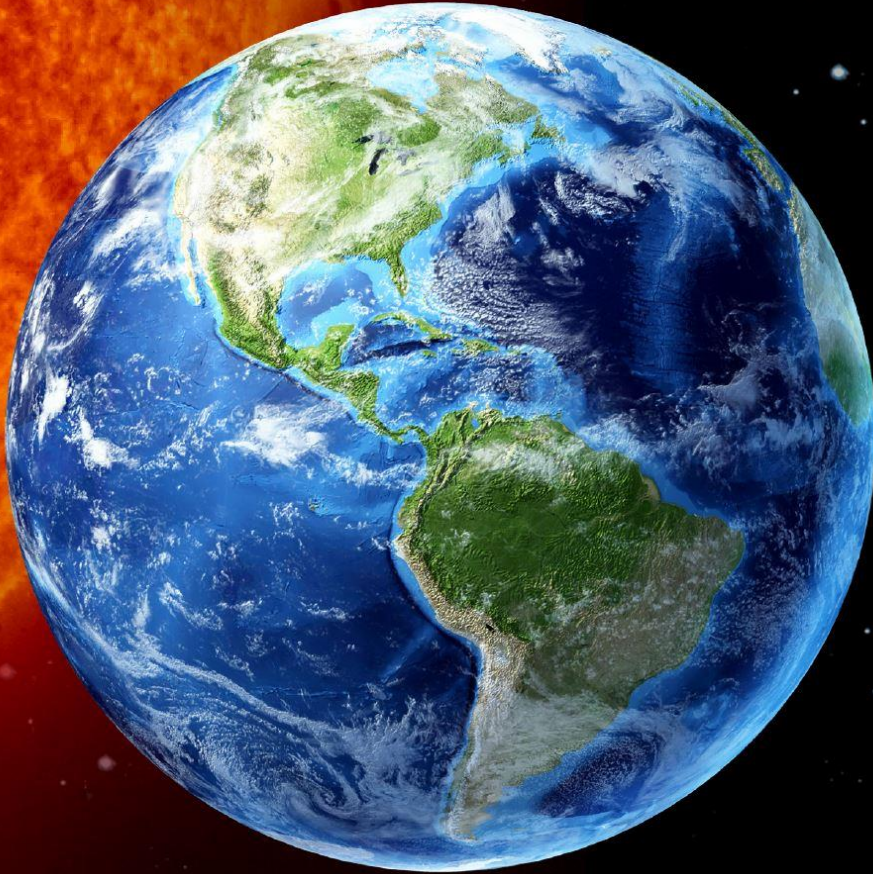
Fusion Energy
Council of Canada



Conseil canadien
de l'énergie de fusion



Vision & Mission



Vision

Canada is internationally recognized for its contributions to fusion energy production and uses

Mission

To mobilize human, financial, and other resources for the participation of Canadians and Canadian enterprises in first generation fusion energy systems and uses, with the objective of creating economic, environmental and social benefits

Fusion Energy Council of Canada

History



2011 Alberta Council of
Technology – Fusion Technology

2013 ABCTech special project
“review status of fusion energy”

*STATUS OF FUSION ENERGY: Impact &
Opportunity for Alberta*

2016 Fusion Energy 2030:
Roadmap for Canada

2016 Alberta/Canada Fusion
Energy Alliance – registered in AB

2020 Fusion Energy Council of
Canada – registered and
expanded its Board to 15 members
to ensure representation from
across Canada

2021 established Advisory Board

Fusion Energy Council of Canada

Activities



- Provided input to a draft fusion strategy document *report not yet published under the auspices of CNL*
- *Tritium Focus Group, Chalk River, ON – contributor to Tritium 2025 in Ottawa*
- *Fusion Fuel Cycle Workshop, Charlotte, NC*
- *FusionMatters Canada Newsletter – 12 September 2023*
- *AGM presenters*
- *IAEA Fusion Energy Conference, London, UK*



Advisory Board



Allan A. Offenberger, PhD

*Past President, Fusion Energy
Council of Canada
Professor Emeritus of Electrical &
Computer Engineering at the
University of Alberta*



Dennis G. Whyte

*Hitachi America Professor of
Engineering;
Director, MIT Plasma Science and
Fusion Center
Professor, Department of Nuclear
Science and Engineering*



Robert Fedosejevs, PhD, P.Eng

*Past Director, Fusion Energy Council of
Canada
Professor of Electrical & Computer
Engineering at the University of Alberta*



E. Michael Campbell

*Director, Laboratory for Laser
Energetics, University of Rochester*

Collaboration Canada

- *Canadian Nuclear Society*
- *Canadian Nuclear Laboratory*
- *General Fusion*
- *University of Alberta*
- *CANTrit 2025*

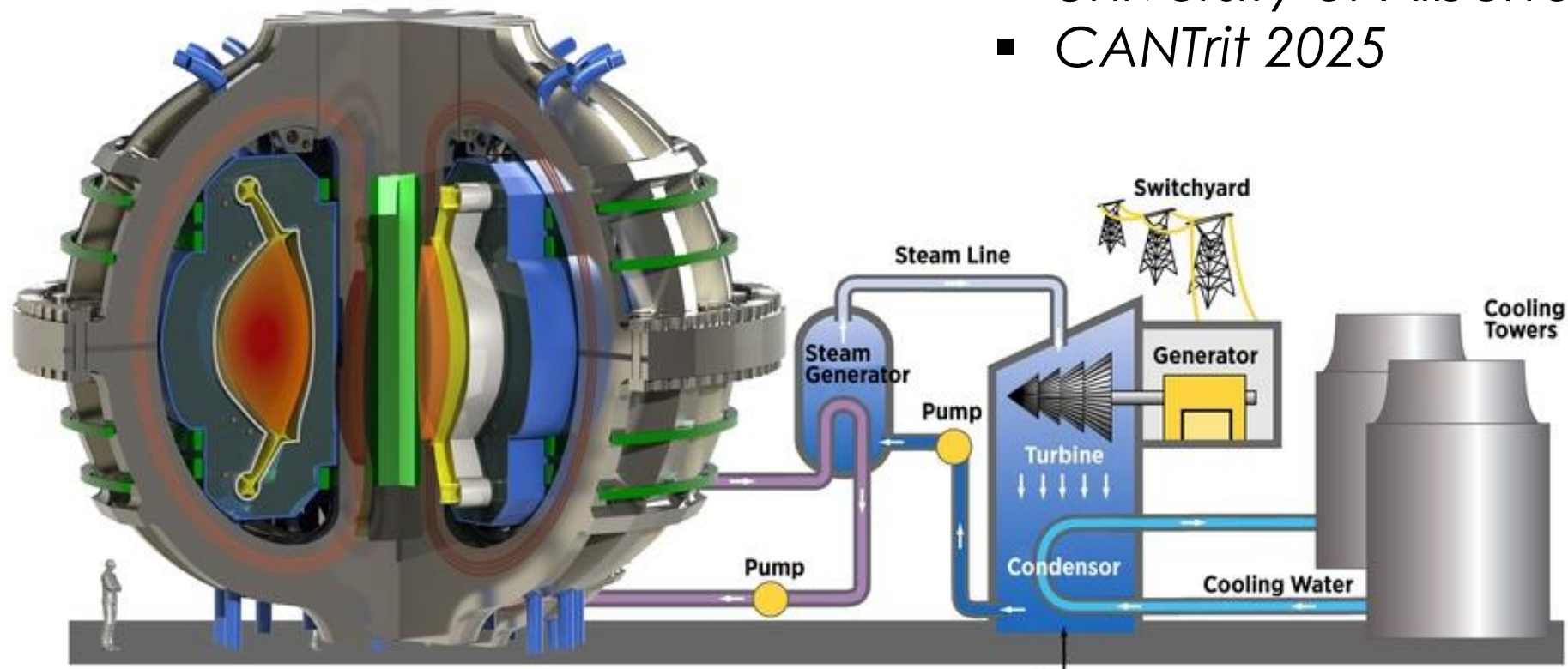



Image downloaded from <https://news.mit.edu/2018/nas-report-right-path-fusion-energy-1221>

Collaboration International

A world map is shown in the background, overlaid with a complex network of nodes and lines. The nodes are represented by small black dots, and the lines are thin gray lines connecting these dots. The network is dense, particularly in the North Atlantic and Europe, and more sparse in the South Atlantic and Africa. The map is oriented with North at the top.

- *United States*
- *United Kingdom*
- *European Union*
- *Japan*
- *Korea*

Creativity & Deployment

“Creativity is intelligence having fun!”

Albert Einstein

- Deuterium-tritium fuel cycle
- Procurement of feedstock for DT fusion critical for start-up
- Supply chain procurement
- Conversion to heat / electricity
- Role of Utilities
- Safety
- Security
- Sustainability
- AI (Canadian Hubs)
- Social economic realities
- Etc.

Human Resources

*To be successful the fusion energy **ecosystem** needs researchers, students, government policy makers and funders, entrepreneurs, investors, and a robust supply chain*





The Path Forward

- *Scale-up fusion processes with emphasis on long term operation*
- *Collaboration at international levels*
- *Developing creative and talented people*
- *Engage with private sector companies globally, Canadian governments at all levels and academia*

If we don't come to
work every day and
think about the future ...

there will be plenty of
time to reminisce
about the past

*We invite private sector
companies, organizations and
individuals to join us*

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