

THE FUSION 2030 ROADMAP

A new opportunity for Canadian fusion
research

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Reconnecting the pieces



*Fusion Roadmap Workshop
May 31, 2016
Saskatoon*

Fusion 2030 genesis

- **What:** A roadmap developed by Canadian fusion experts with a shared vision of what Canada can contribute to global fusion R&D by 2030.
- **Vision:** Revitalized national fusion research program
 - industrial hub working collaboratively with network anchored by an academic centre of excellence

Participants



Universities

Not-for-Profit

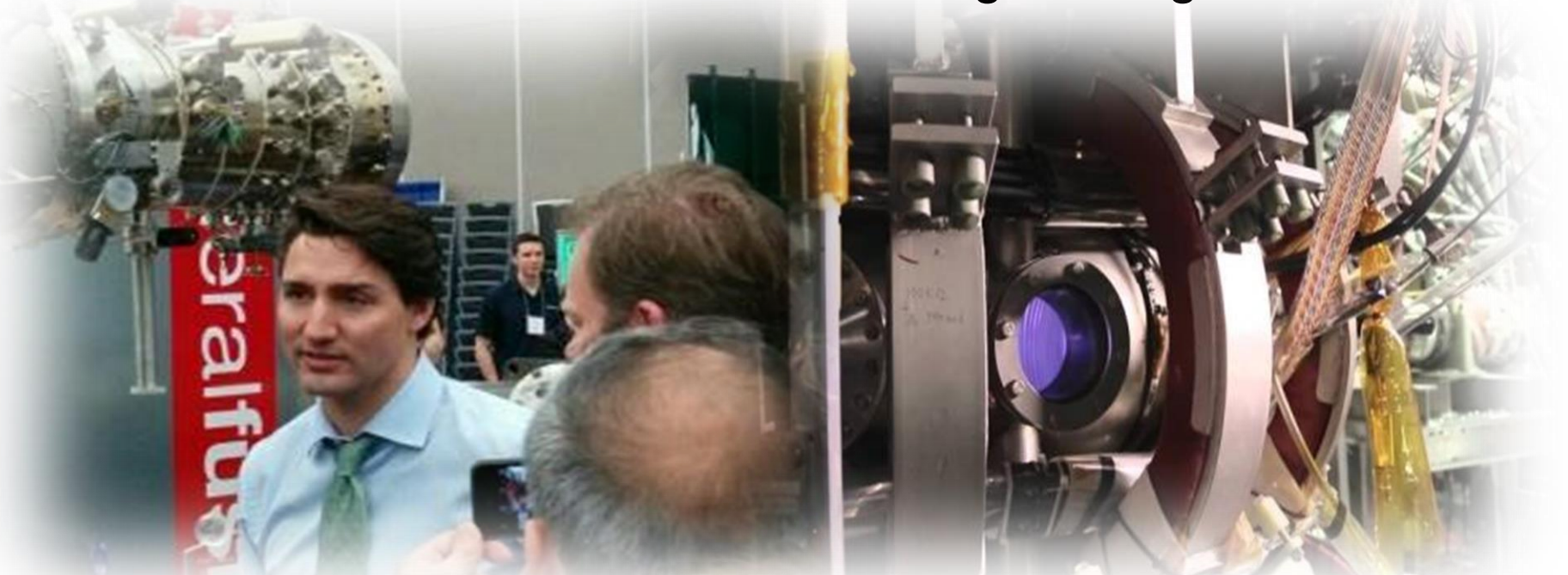
Industry



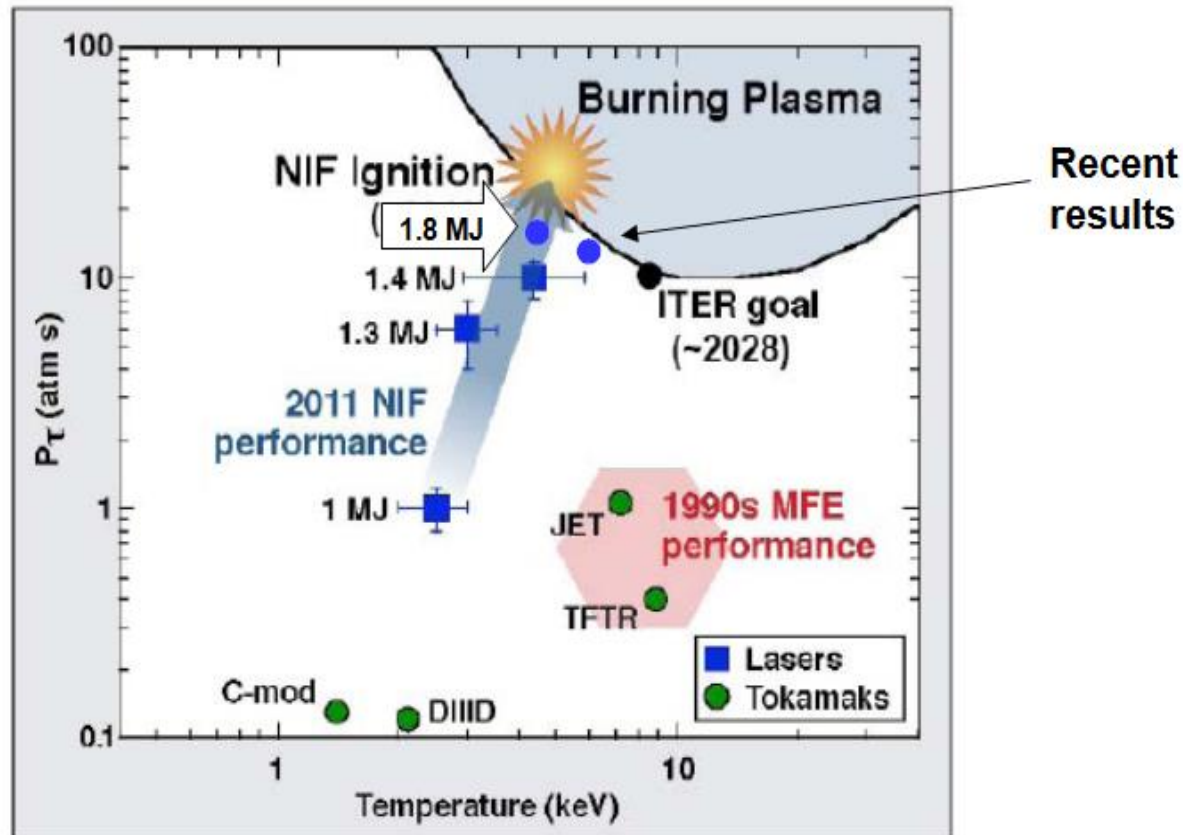
Vision:

By 2030, Canada will support the deployment of a demonstration fusion power plant.

- Ultimate sustainable energy source
- No long-lived spent fuel to manage
- Pushes boundaries of science and engineering



“But fusion is always 30 years away”



...Not anymore

“But fusion is always 30 years away”



Wendelstein stellarator begins upgrades after fusion success

11th July 2016 12:00 pm

The Wendelstein 7-X stellarator has successfully completed its first stages of research, heating plasmas to temperatures of 100 million degrees Celsius and achieving pulse lengths of six seconds.



July, 2016

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A first for direct-drive fusion

September 6, 2016



The OMEGA laser's 20-cm disk amplifiers at the University of Rochester's Laboratory for Laser Energetics. (Photo by Adam Fenster/University of Rochester)

September, 2016

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Korean fusion reactor achieves record plasma

14 December 2016

The Korean Superconducting Tokamak Advanced Research (KSTAR) tokamak-type nuclear fusion reactor has achieved a world record of 70 seconds in high-performance plasma operation, South Korea's National Fusion Research Institute (NFRI) has announced.

Related Stories

- New schedule agreed for ITER fusion project
- German fusion reactor achieves first plasma
- KSTAR unveiled



The KSTAR tokamak (Image: NFRI)

The institute, based at Daejeon, 160 km south of Seoul, said a fully non-inductive operation mode - called a "high poloidal beta scenario" - has been

WNA Links

- Nuclear Fusion Power
- Nuclear Power in South Korea

Related Links

- National Fusion Research Institute

December, 2016

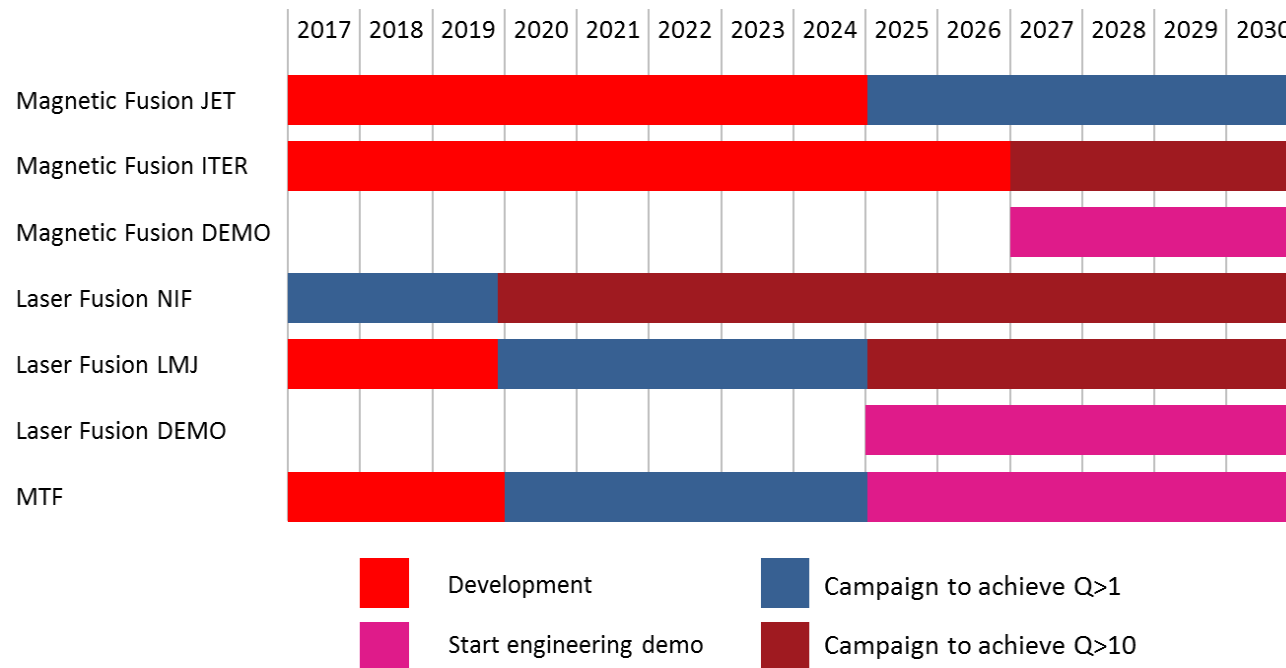
...Not anymore

“But fusion is always 30 years away”



CURRENT WORLD TIMELINE FOR FUSION ENERGY DEVELOPMENT

PROJECTED ESTIMATES FOR LEADING PROJECTS



...Not anymore

