

NUCLEAR POWER

A CARBON SOLUTION
AFFORDABLE
NOW SCALABLE

NU The
Future
is NU.
Canadian Nuclear Association



CANADIAN NUCLEAR ASSOCIATION

- Over 100 member organizations
- All aspects of nuclear technology
 - Uranium mining
 - Fuel manufacturing
 - Power utilities
 - Engineering & consulting
 - R&D and academic organizations



BIG PICTURE TRENDS

- Global shift to lower carbon energy
 - Renewable energy in demand
 - Nuclear technology is proven
 - Economic benefits are clear
 - Waste solutions are proven
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- Policy makers & influencers should renew consideration



A FRESH EVALUATION

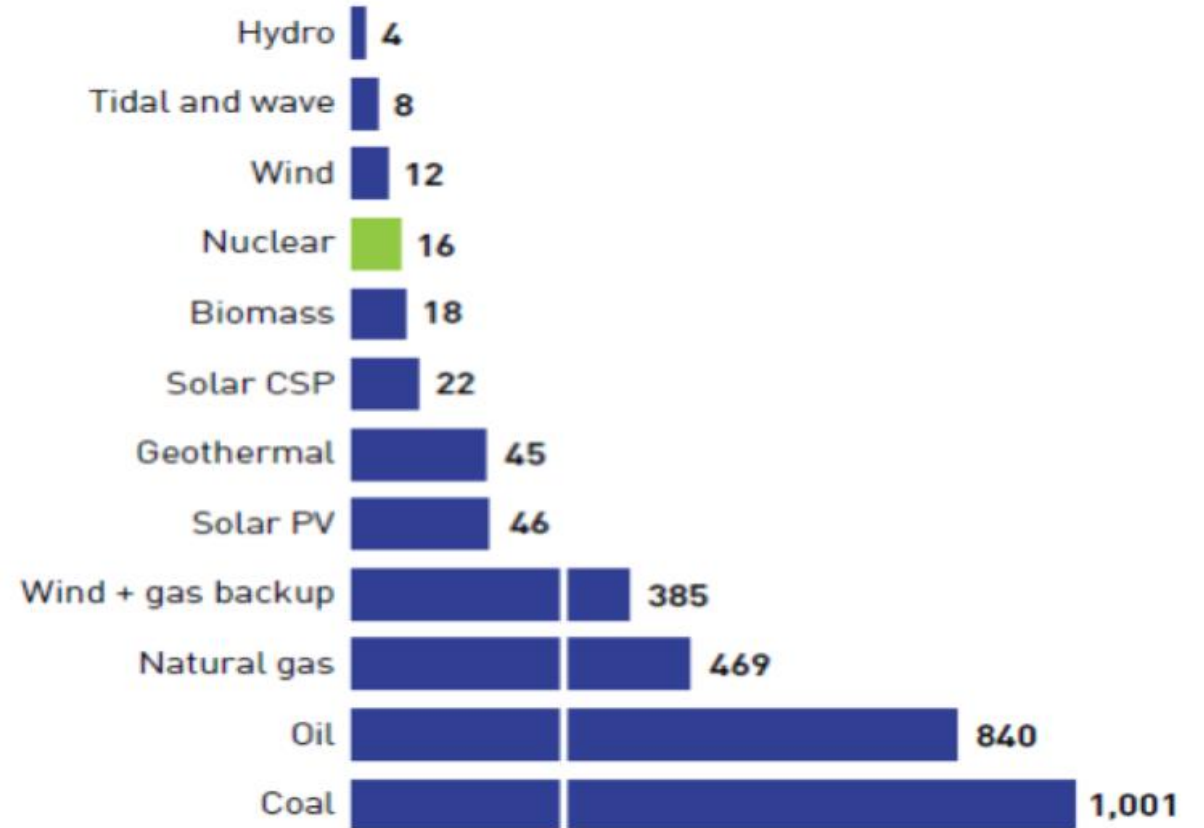
- All energy sources have impacts
- A 360 analysis of nuclear shows:
 - Low emissions
 - Tiny footprint
 - Manages waste successfully
 - Catalyzes technology advances
 - Can solve northern/remote challenges such as clean energy infrastructure, water treatment, food production



THE CARBON STORY

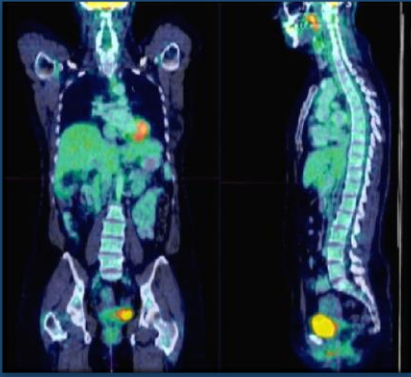


CO₂ EMISSIONS BY ENERGY SOURCE



Lifecycle Greenhouse Gas Emissions (g CO₂ equivalent/kWh)

SOURCE: Intergovernmental Panel on Climate Change.⁷



Human Benefits of Nuclear

- Medical diagnosis
- Materials analysis
- Medical therapies
- Lightweight vehicles
- Safer food
- Clean water
- Better crops
- Finding aquifers
- Fewer pests
- Clean electricity
- Radiological detection



Making Transition Happen

How to get off coal (or oil or gas) on a HUGE scale?

Without needing fossil fuel backup?

- Technology that you KNOW delivers
- Price-competitive in a carbon-constrained economy
- Sweden and France in the 70s
- Ontario shift off coal





Why we can't risk failure

Electricity supports other clean & resilient systems

- Decarbonizing the transport grid
- Decarbonizing buildings
- Information & communications
- Medicine and public health
- The power system must remain robust, resilient, accessible and affordable for everything else to work!
- We can't take chances with it
- Do it wrong and our opportunity to avert a 2 degree world could be lost





Innovation and Progress

- Nuclear anchors a resilient, sustainable grid & enables renewable technologies
- Supply ultra-low-GHG base load
 - Displace coal
 - Anchor the testing, proving & scaling up of wind and solar
 - Anchor experiments with distributed generation & smart grid technologies



Thank You!

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