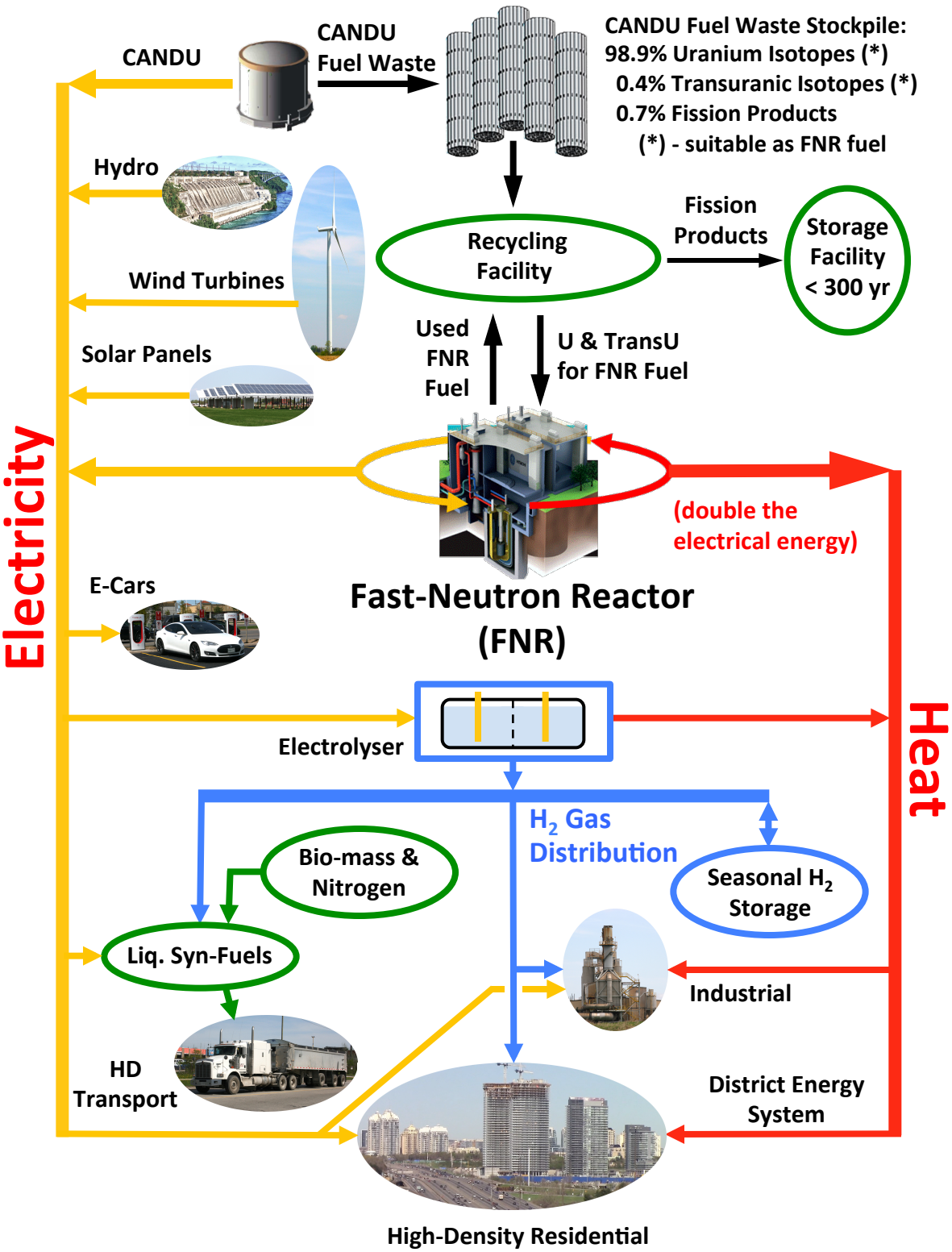
INZEM

Integrated Zero-Emission Energy System



Integrated Zero-Emission Energy System

Key Advantages of INZEM

1. Effectively unlimited, dependable and affordable non-fossil energy.
2. Achieves Canada's international emission reduction commitments.
3. Eliminates Canada's long lived transuranic radioactive waste.
4. Gracefully transitions jobs and investments from fossil fuels to clean energy in 50 years to minimize social disruption and investment losses.
5. Produces zero emission electricity and heat from radioactive fuel waste.
6. Distributes heat via urban district energy systems to industrial and high density residential consumers.
7. Produces hydrogen from surplus clean electricity and uses the hydrogen as a feedstock to produce carbon neutral, energy dense, liquid fuels for the heavy duty transportation sector.
8. Repurposes the natural gas system including hydrogen seasonal storage to meet peak winter demand for heat.
9. Uses small modular passively safe reactors installed closer to loads to economically recover waste heat from electricity production and to minimize use of the transmission system.
10. Modularity allows economies of factory production of FNRs, truck delivery, elimination of project regulatory, schedule and cost risks after the first unit is certified.
11. Enables recovery of rare earth metals from fission products in the future after their radioactivity has subsided to safe levels.
12. Ensures Canada's future energy system will be safe, clean, dependable, affordable and more competitive compared to our trading partners.
13. Establishes Canada as the world leader in zero emission energy systems.

INZEM by the Numbers

- Zero fossil fuel use in the energy sector by 2100.
- CANDU fuel waste can produce $1 billion of electricity per tonne.
- Fission products can yield $1.5 million of metals and minerals per tonne.
- 420,000 new jobs in clean energy production and delivery (approximately equal to the jobs in the fossil fuel sector today).
- $1.1 trillion dollars in investments by 2070 (approximately double that of the fossil fuel sector today).
- Peak investment rate of $40 billion dollars per year in 2040-2050 period.
- Required carbon price to achieve emission reduction goals only ¼ of that without INZEM ($200/tonne instead of over $800/tonne). Carbon price can be even lower with public support for emission regulations.