

1. Is Nuclear Power a Viable Fuel Option?

Nuclear power is a **low-carbon** energy source that produces electricity without direct CO₂ emissions. However, it has drawbacks:

- **Pros:**
 - High energy output with minimal greenhouse gas emissions.
 - Reliable and not dependent on weather (unlike solar or wind).
 - Can help transition away from fossil fuels.
- **Cons:**
 - **Nuclear waste:** Long-lived radioactive waste requires secure disposal.
 - **High costs:** Building plants is expensive and time-consuming.
 - **Uranium mining:** Can be environmentally damaging and poses health risks.
 - **Safety concerns:** Potential for catastrophic accidents.

2. Negative Effects of Thorium Mining vs. Coal Mining

- **Thorium mining** is generally considered **less harmful** than coal mining because it produces less air pollution and fewer greenhouse gases.
- **Coal mining** has severe environmental impacts, including deforestation, air and water pollution, and high carbon emissions.
- However, thorium mining still involves **radiation risks** and environmental damage if not properly managed.

3. Safety Concerns: Chernobyl & Fukushima

- **Chernobyl (1986):** A poorly designed reactor and operator errors led to an explosion, releasing massive radiation.
- **Fukushima (2011):** A tsunami disabled cooling systems, leading to a meltdown.
- These disasters highlight:
 - The **risks of human error** and natural disasters.
 - The need for **better safety regulations** and **newer reactor designs** (like small modular reactors or thorium-based reactors) to reduce risks.

4. TEDx Talks Comparison

Both talks discuss nuclear energy, but with different perspectives:

- **"Nuclear Power as an Alternative to Fossil Fuels"** argues that nuclear is a necessary clean energy source.

- **"Why I Changed My Mind About Nuclear Power"** presents a case of skepticism turned into support due to climate concerns.
- **Similarities:** Both emphasize nuclear as a tool for reducing fossil fuel use.
- **Differences:** The second talk focuses more on overcoming fears and misinformation.

5. Policies for Countries Suspect in Nuclear Policy

- **International oversight** (via IAEA – International Atomic Energy Agency).
- **Stricter monitoring and transparency** for nuclear programs.
- **Sanctions or restrictions** for countries that misuse nuclear technology.
- **Support for peaceful nuclear energy programs** under strict regulations.