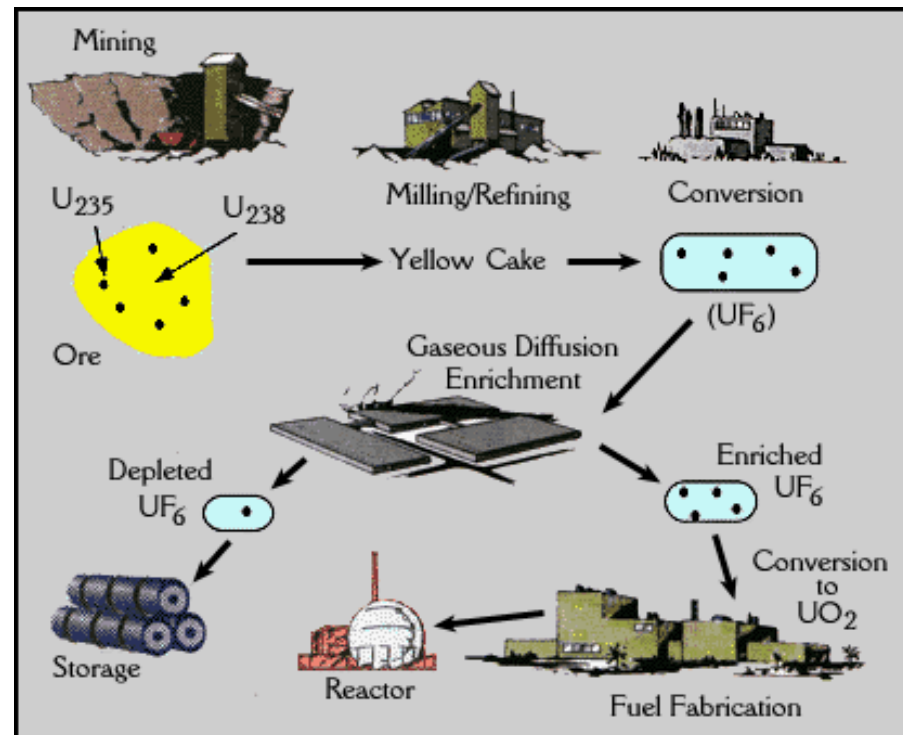


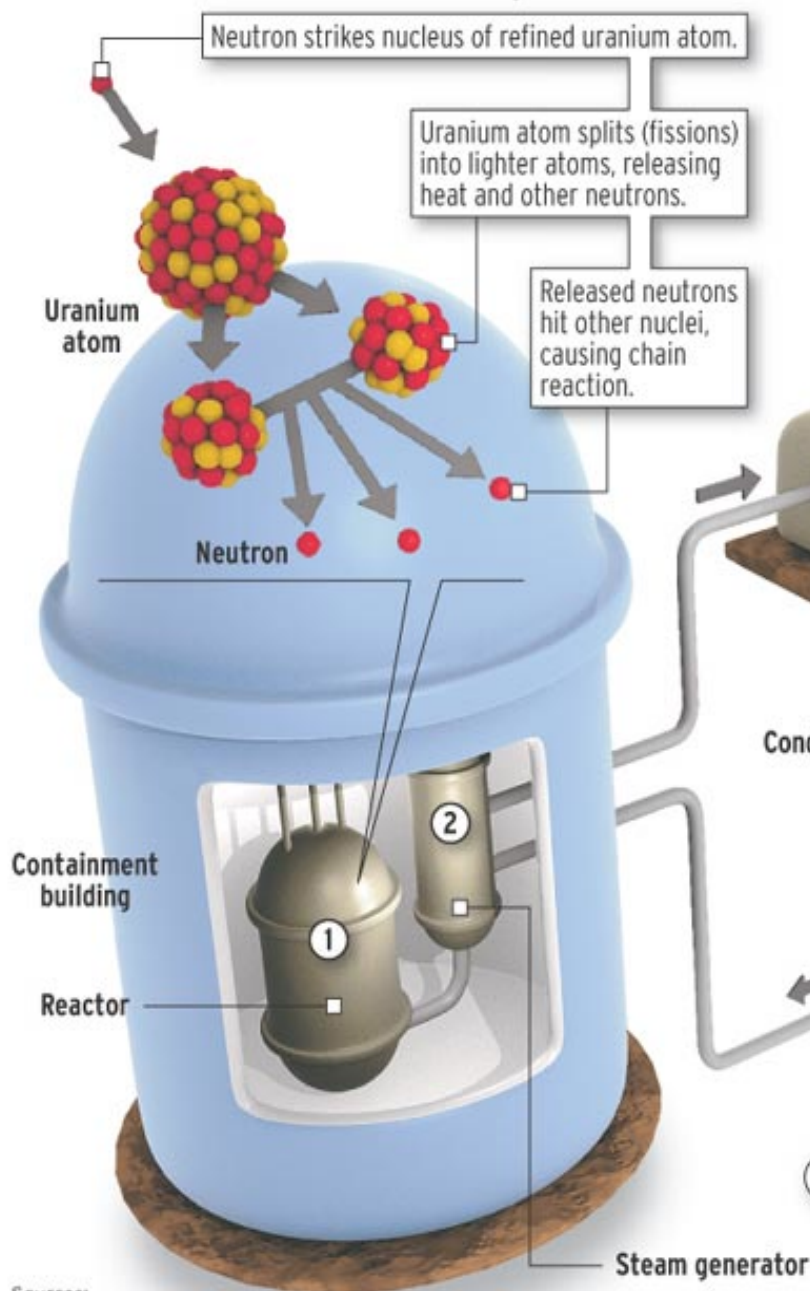
Clean Nuclear Energy

Current System- Uranium

- Splitting of Uranium atoms through fission
- Only 3%-5% U235 available
- Fuel is spent when burns to .3%
- Half lives for thousands of years

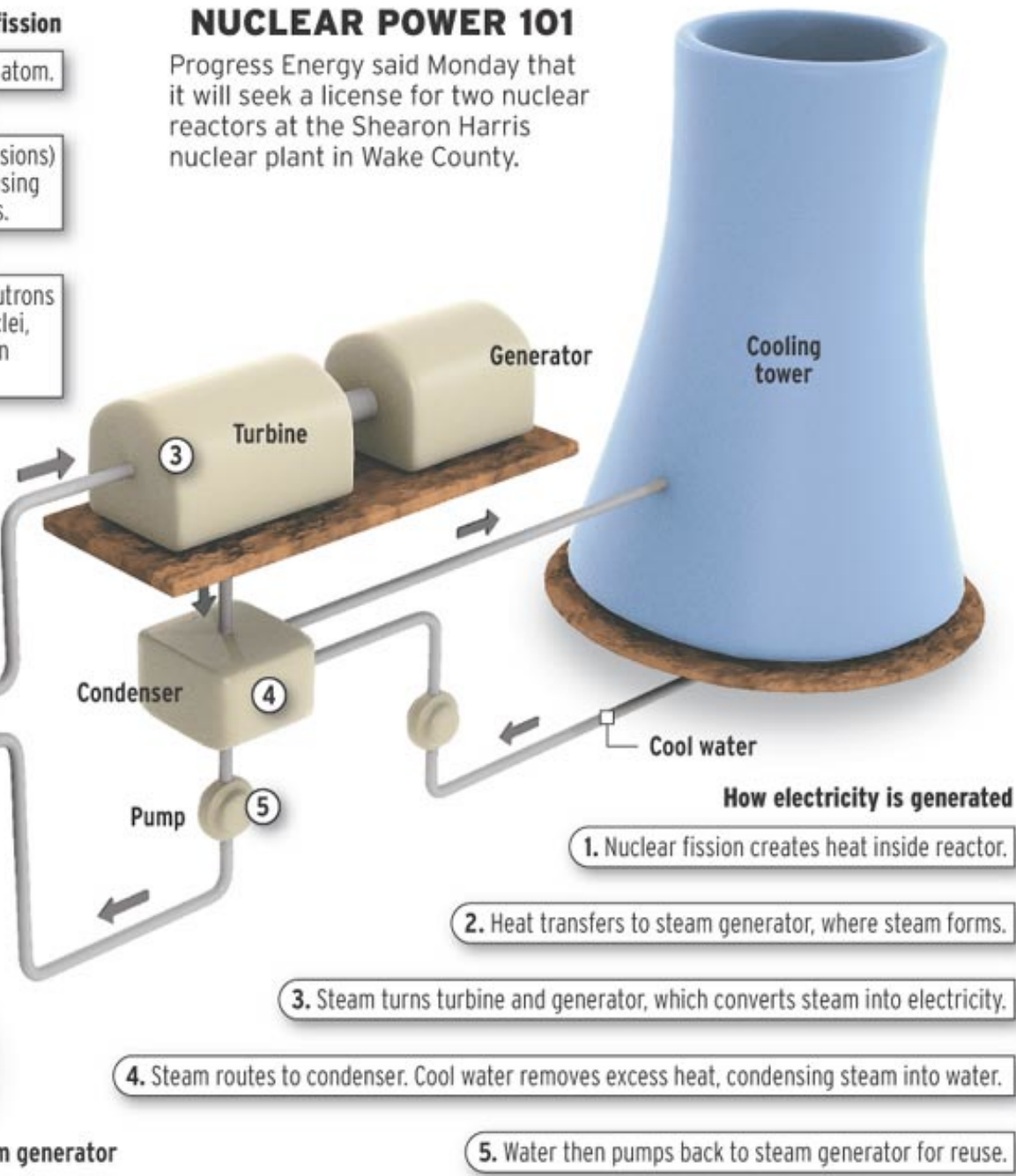


Workings of nuclear fission



NUCLEAR POWER 101

Progress Energy said Monday that it will seek a license for two nuclear reactors at the Shearon Harris nuclear plant in Wake County.



Major Catastrophes

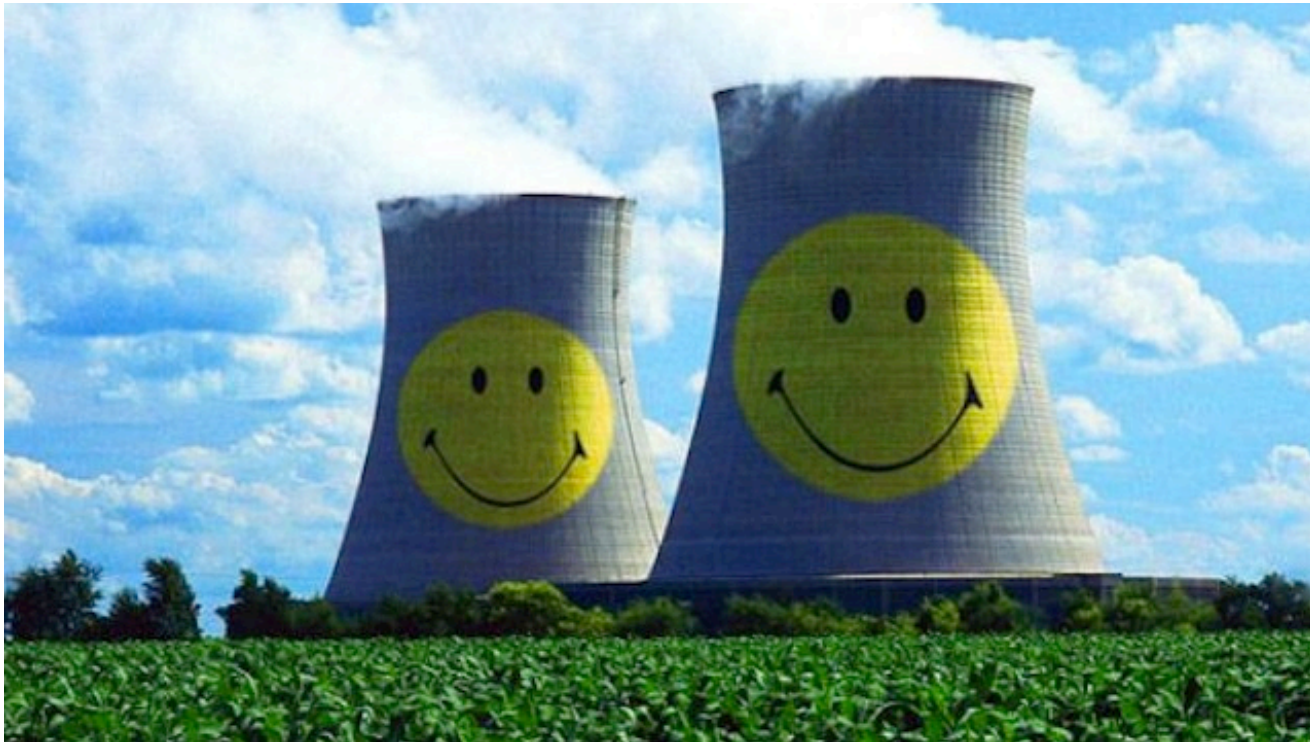


- Chernobyl, Ukraine, April 1986
- Fukushima, Japan, March 2011



Today

- 20% of power in the United States is Nuclear Energy
- Over 100 power plants
- France is world leader generating over 80% of their power from Nuclear



Why Still Uranium?



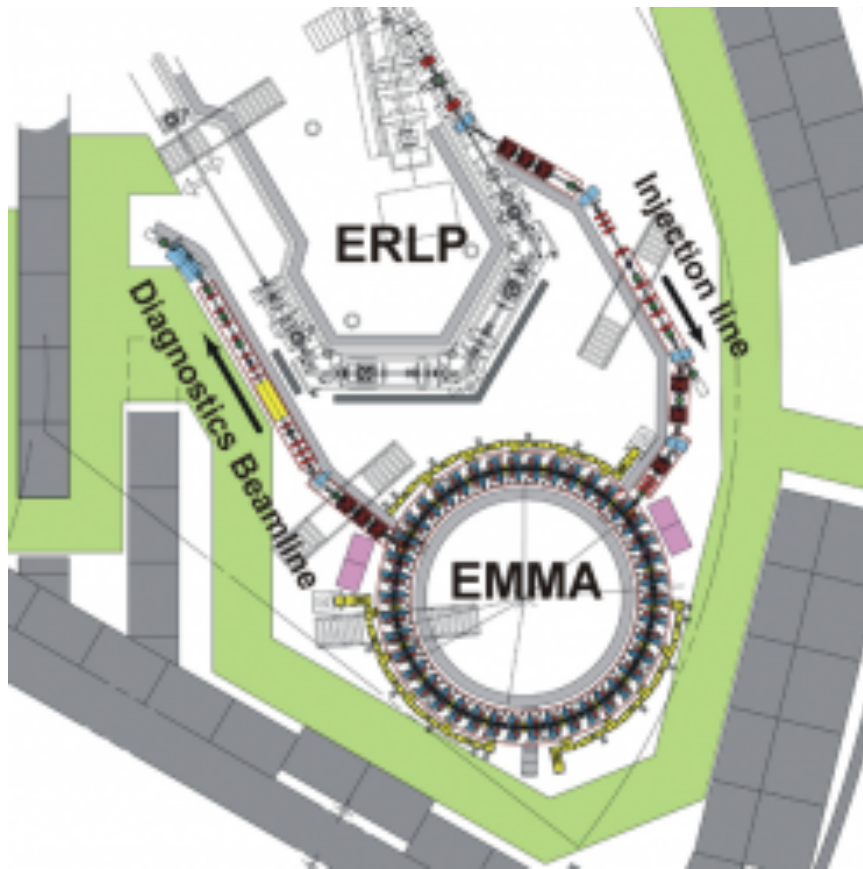
- Bombs
- Safer alternatives-Thorium

Thorium

- All TH232 can be used in nuclear reactors
- Not fissile on its own
- Fewer highly radioactive, long-lived byproducts
- Three times more abundant in nature



Future Technology



- Electron Machine with Many Applications (EMMA)
- Created by researches at Daresbury Science Park, Britain
- Oscillating Field particle accelerator
- Incapable of producing meltdown

EMMA

- 20 million electron volt prototype built in March 2011
- Cheaper, smaller, and less complex
- Promising applications for treating cancer as well as safe nuclear reactors

