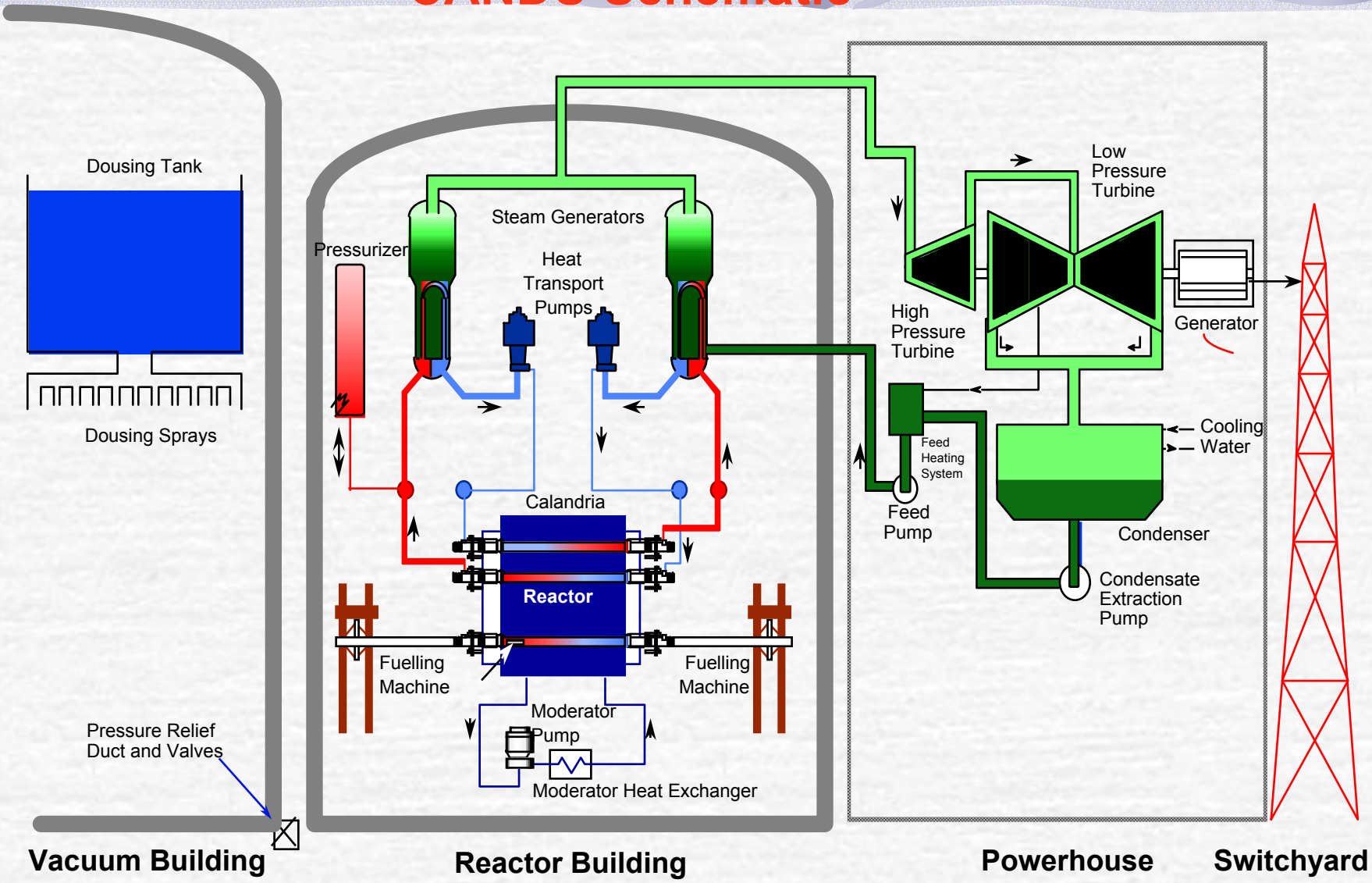


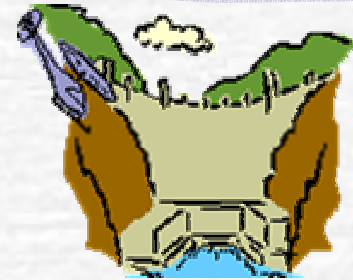


Nuclear Power Reactors



CANDU Schematic





What are some methods of producing large amounts of electrical energy?

What are the pros and cons of each method?



Capacity Factor

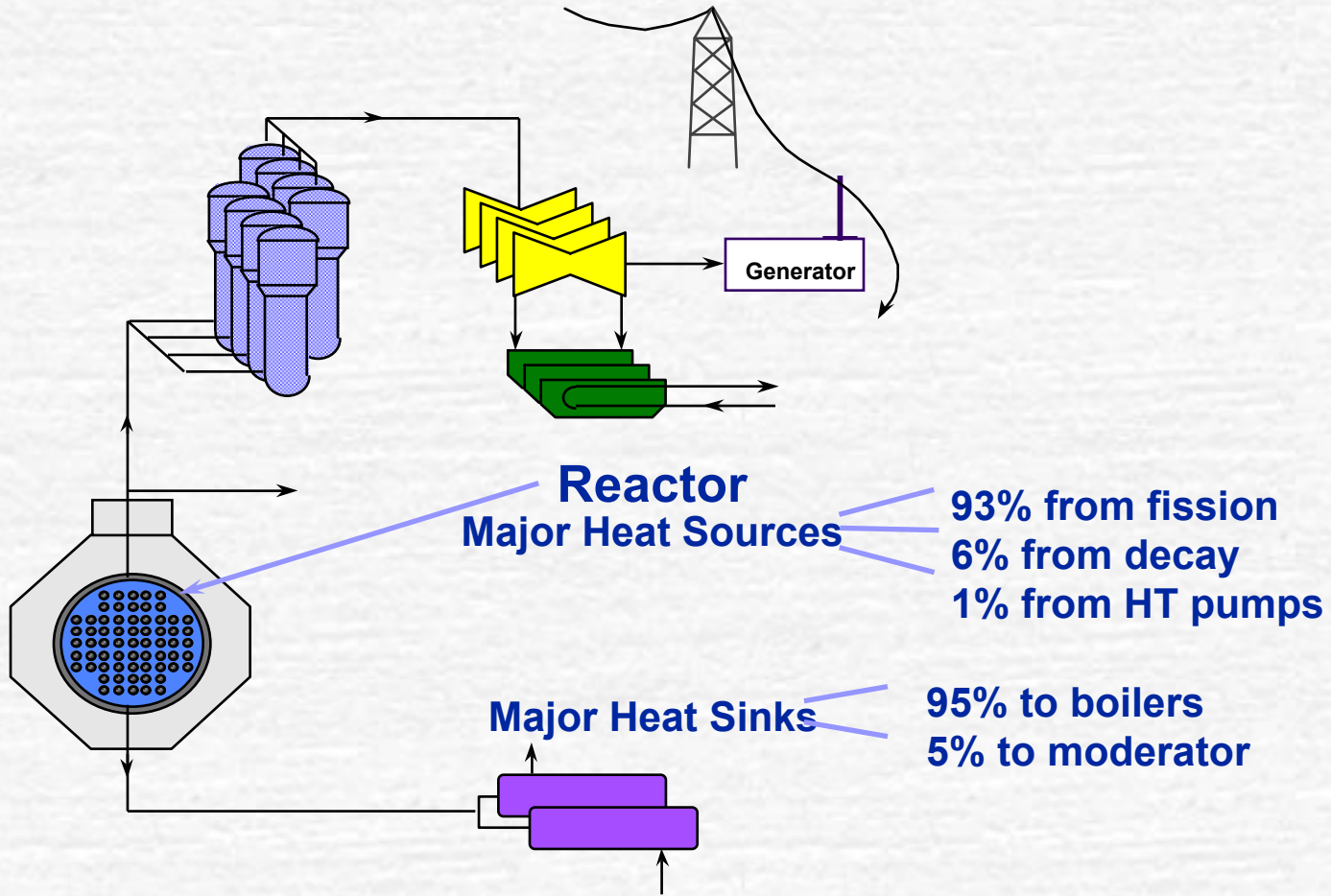
$$\frac{\text{Electricity produced in a year}}{\text{What could have been produced}} \times 100$$

Bottom Line

Nuclear maintains a cost advantage so long as a high capacity factors is maintained.



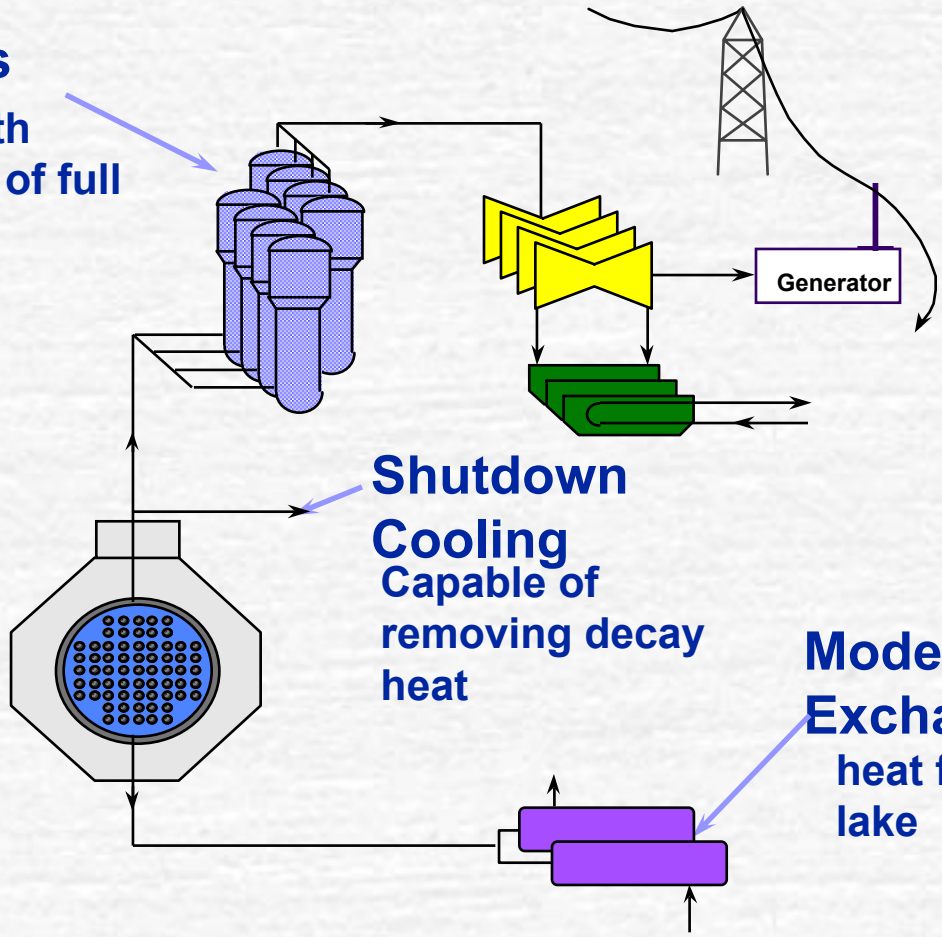
Major Heat Flow



Major Heat Flow

Boilers

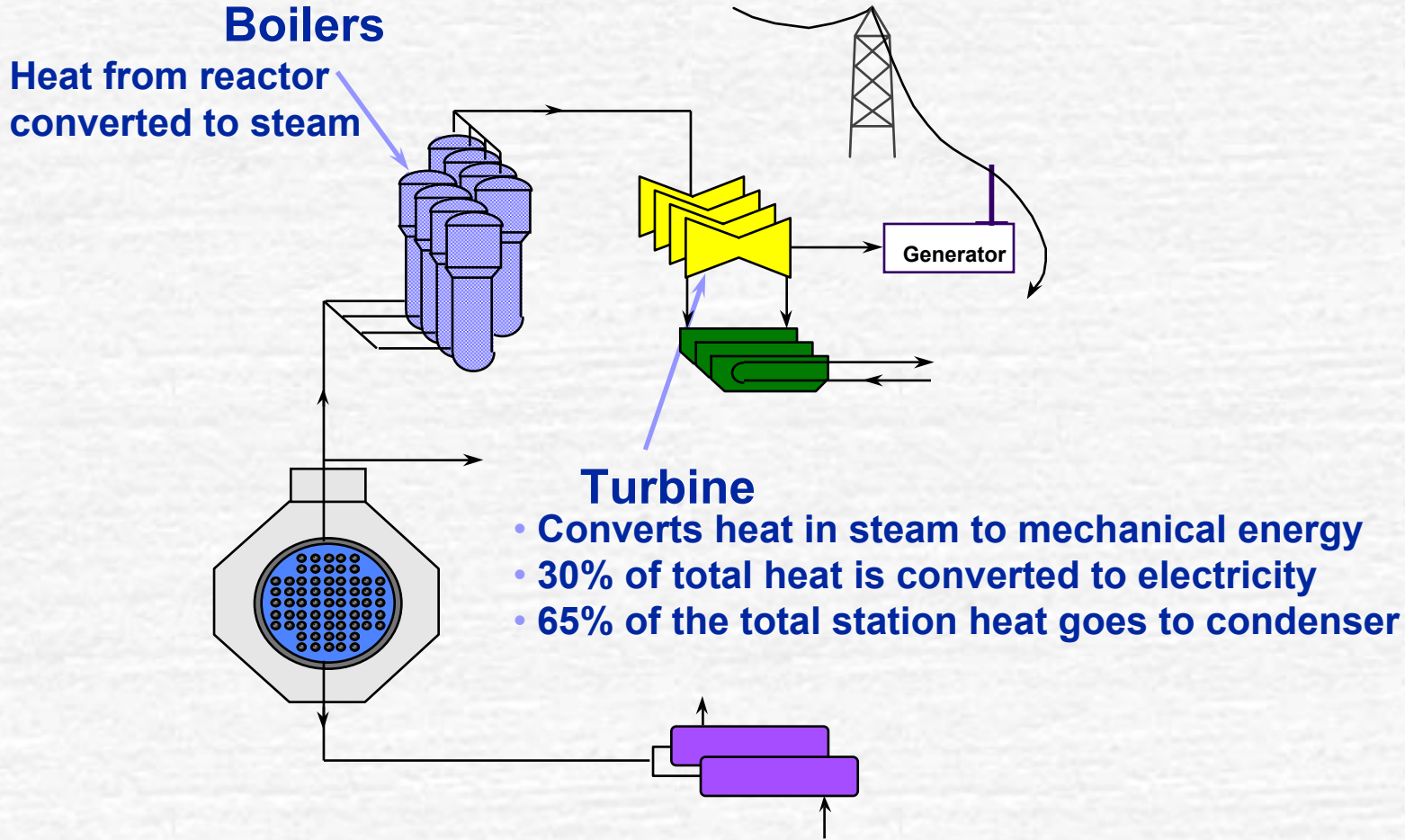
Only path capable of full power



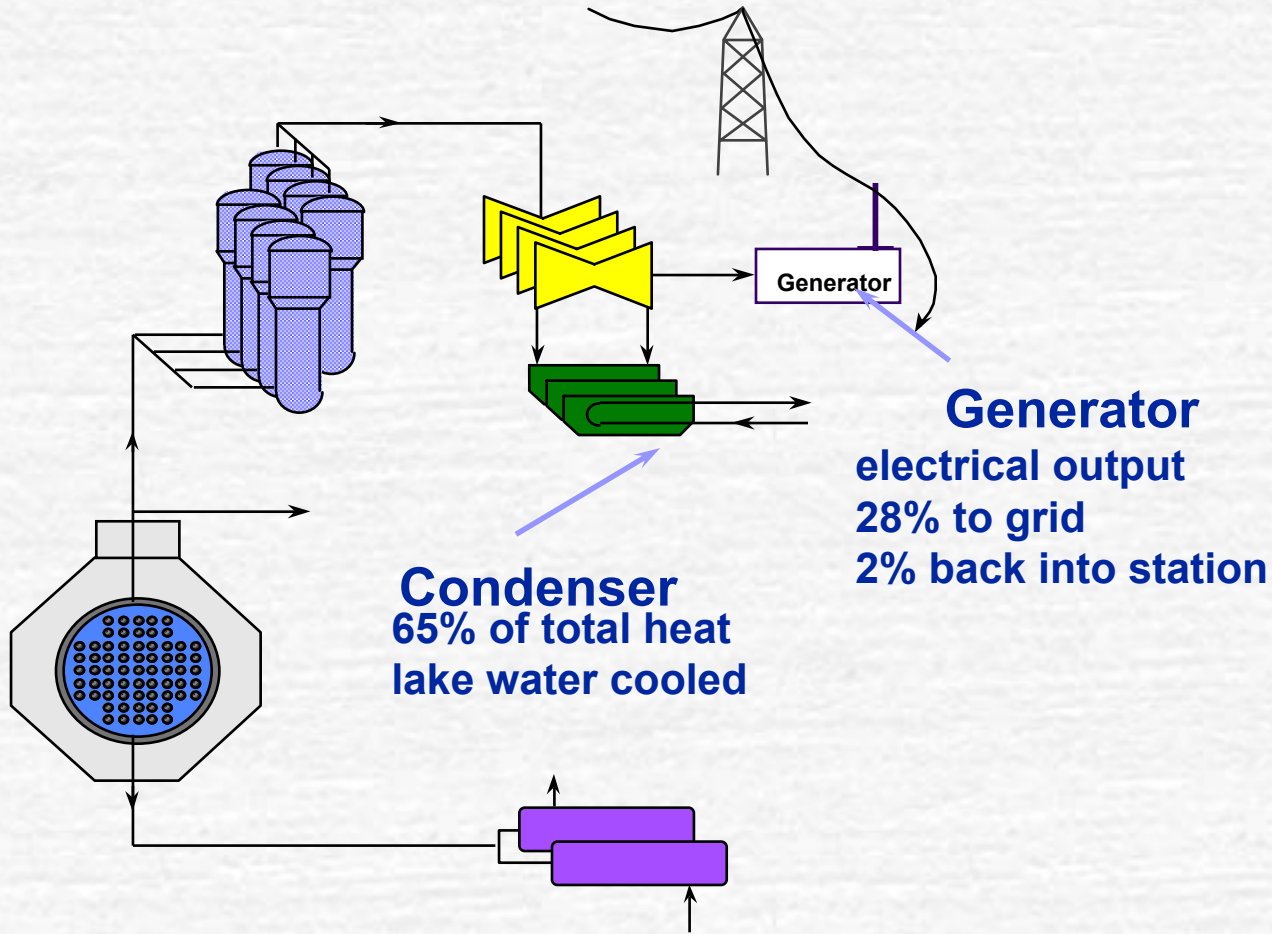
Shutdown Cooling
Capable of removing decay heat

Moderator Heat Exchangers
heat from moderator to lake

Major Heat Flow



Major Heat Flow



Efficiency

- Gross reactor fission power
 - Power from fission
- Reactor thermal power
 - Power to the boilers
- Gross electrical power
 - Power from generator
- Unit thermal efficiency
- Overall Efficiency