



# CLASSIFICATION OF POWER PLANTS

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# SOURCES OF ENERGY

## Primary energy sources

Coal, Oil, Nuclear fuels, Water

Wood → Heat

Candles, Oil lamps → Light

## Secondary energy sources

→ Electricity

Conventional sources of energy → Non-renewable sources of energy

Non-conventional sources of energy → Renewable sources of energy

Fossil fuels → Coal, Oil, Natural gas



# TYPES OF POWER PLANT

## 1. Non-conventional Energy Source

- a. Solar energy
- b. Wind energy
- c. Geothermal energy
- d. Tidal energy
- e. Biomass energy

## 2. Conventional Energy Sources

- a. Solid, Liquid and gaseous fuels
- b. Hydraulic energy





# CLASSIFICATION OF POWER PLANTS

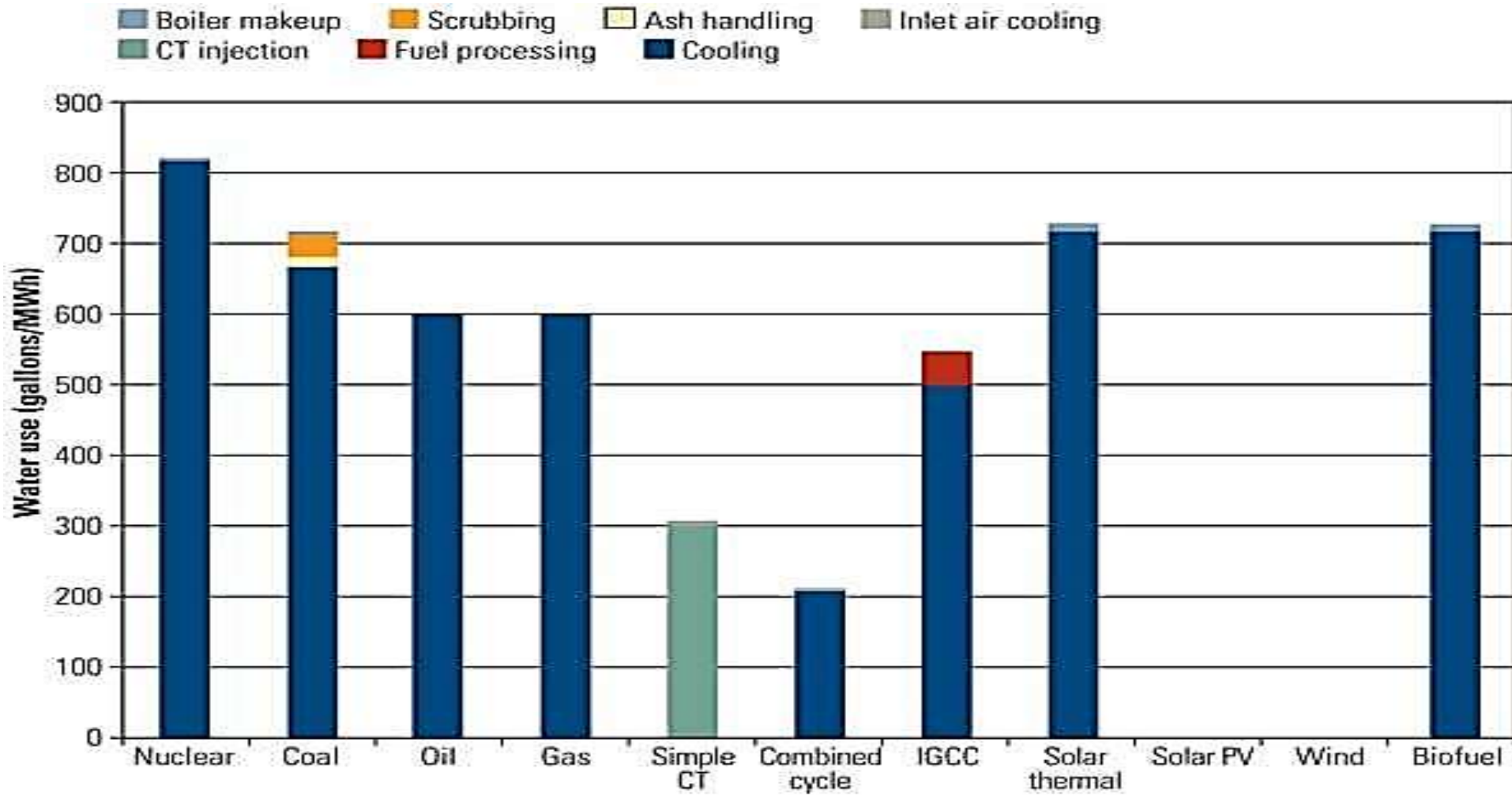


## ❑ Conventional

- ❖ Steam power plant
- ❖ Nuclear(Atomic) power plant
- ❖ Diesel power plant
- ❖ Gas power plant
- ❖ Hydro electric(Hydel) power plant

## ❑ Non-conventional

- Solar thermal power plant
- Wind powered generation(aero-generation)
- Wave power plant
- Tidal power plant
- Geothermal power plant
- Bio-mass power plant
- Oceanthermal power plant





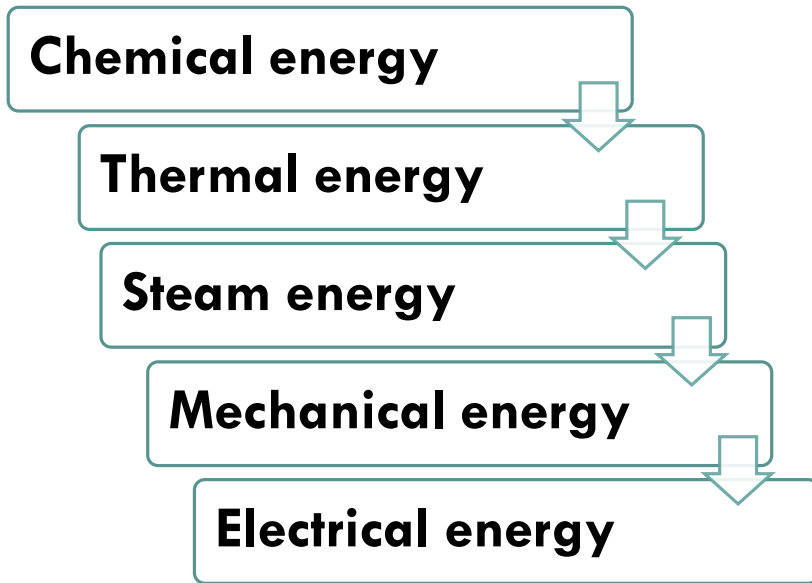
# WHAT IS A POWER PLANT?

- A **power plant** is a source to harness energy.
- A **power plant** (also referred to as a **generating station, power station, or powerhouse**) is an industrial facility for the generation of electrical energy.
- At the centre of nearly all power plants is a generator, a rotating machine that converts mechanical energy into electrical energy by creating relative motion between a magnetic field and a conductor.
- The energy source harnessed to turn the generator varies widely. It depends chiefly on which fuels are easily available and on the types of technology that the power company has access to.

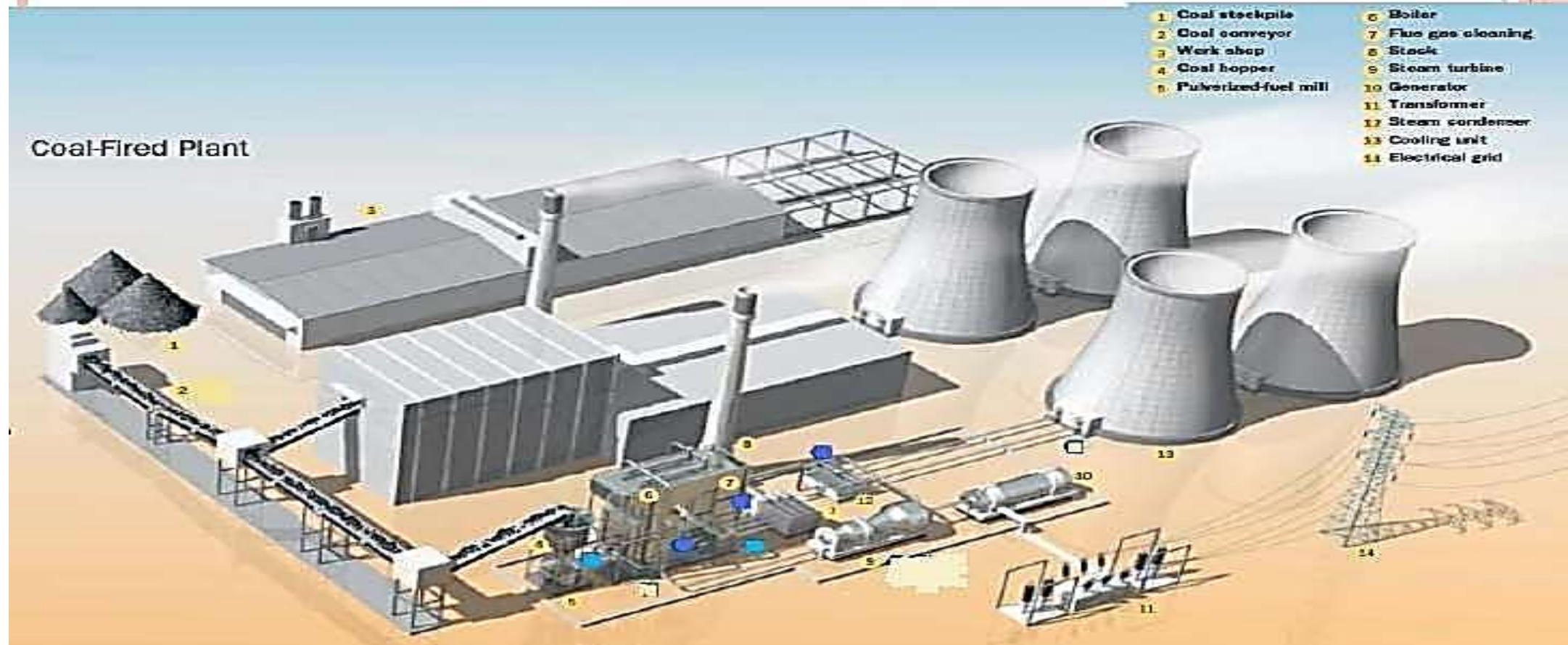




# Steam power plant



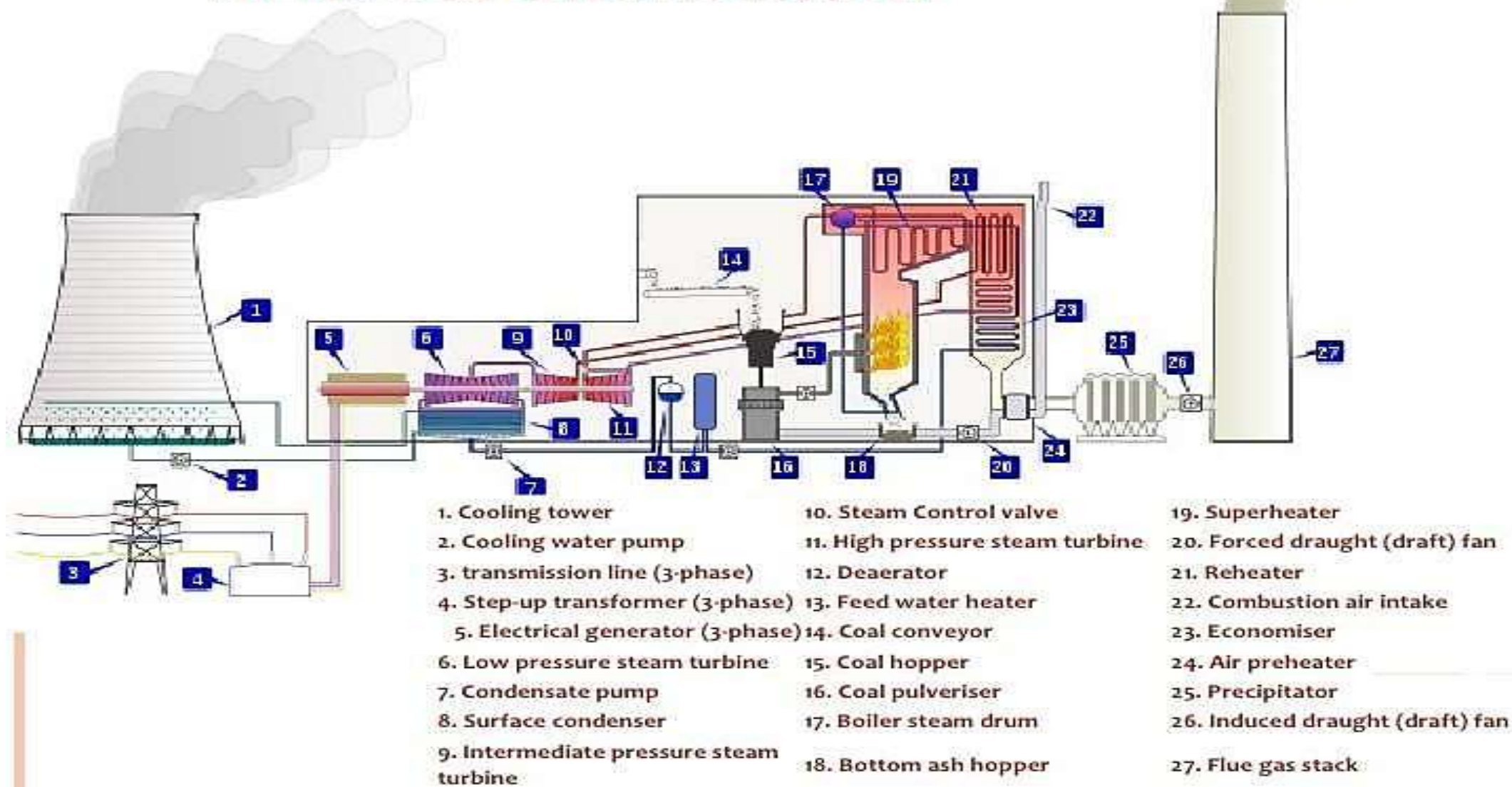
# DIAGRAM OF A TYPICAL COAL-FIRED THERMAL POWER STATION







# DIAGRAM OF A TYPICAL COAL-FIRED THERMAL POWER STATION





# Nuclear(Atomic) power plant

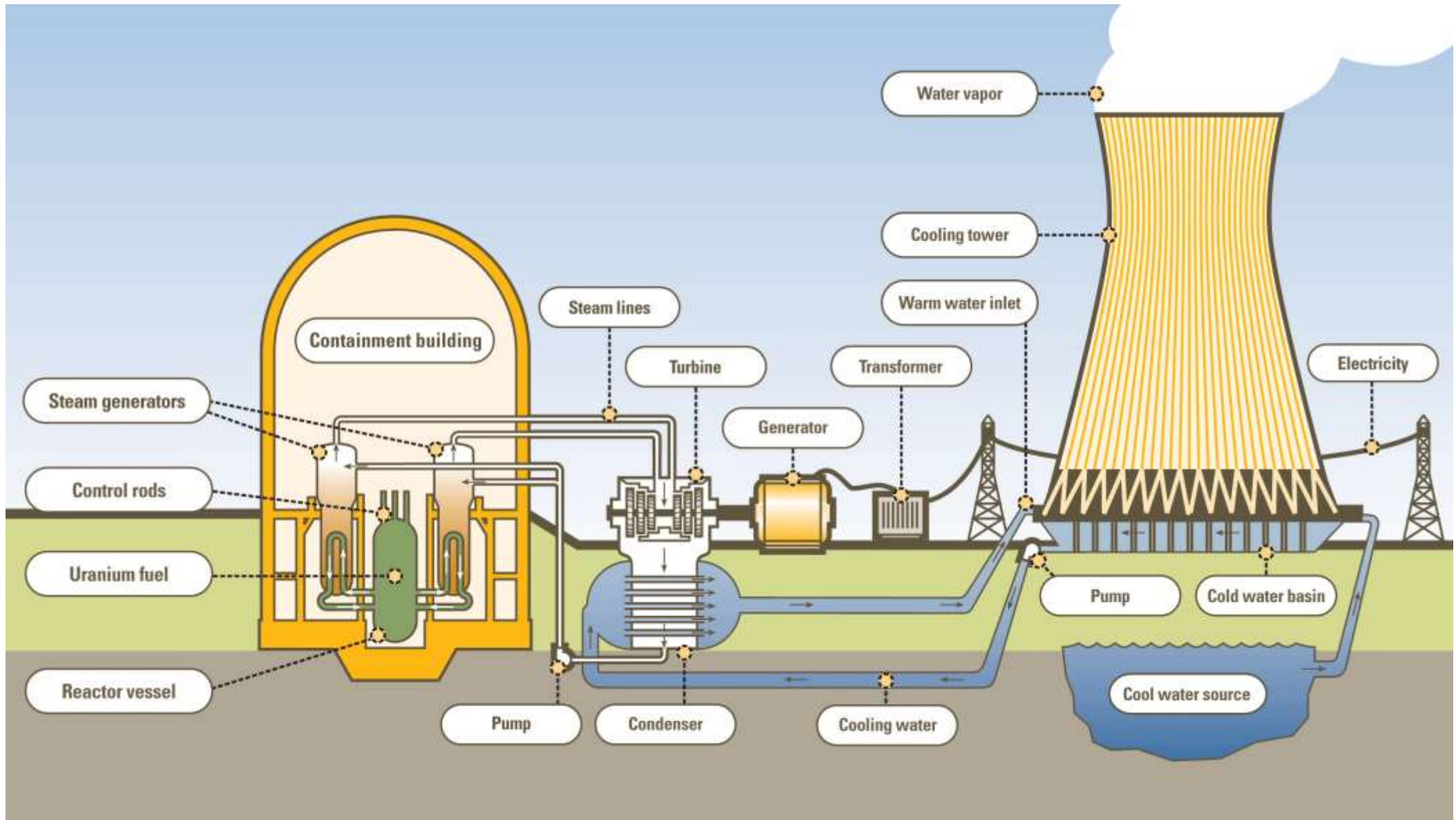
**Nuclear energy**

**Steam energy**

**Mechanical energy**

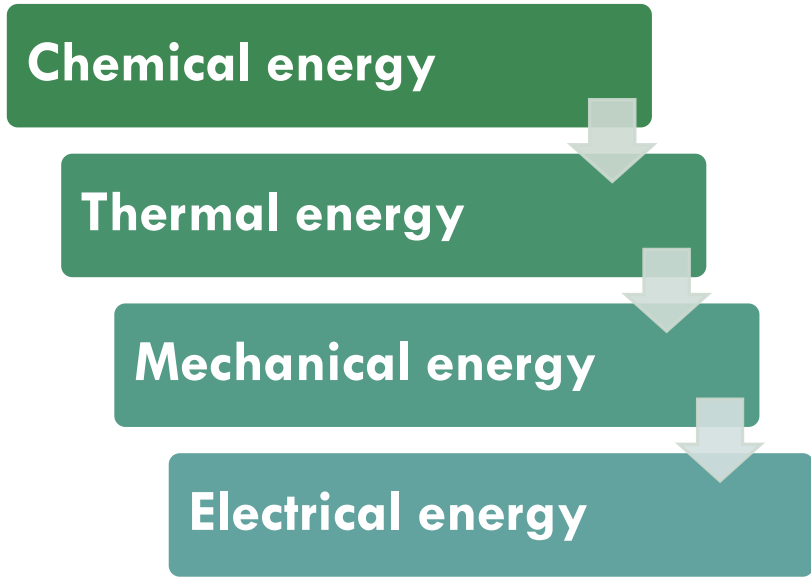
**Electrical energy**





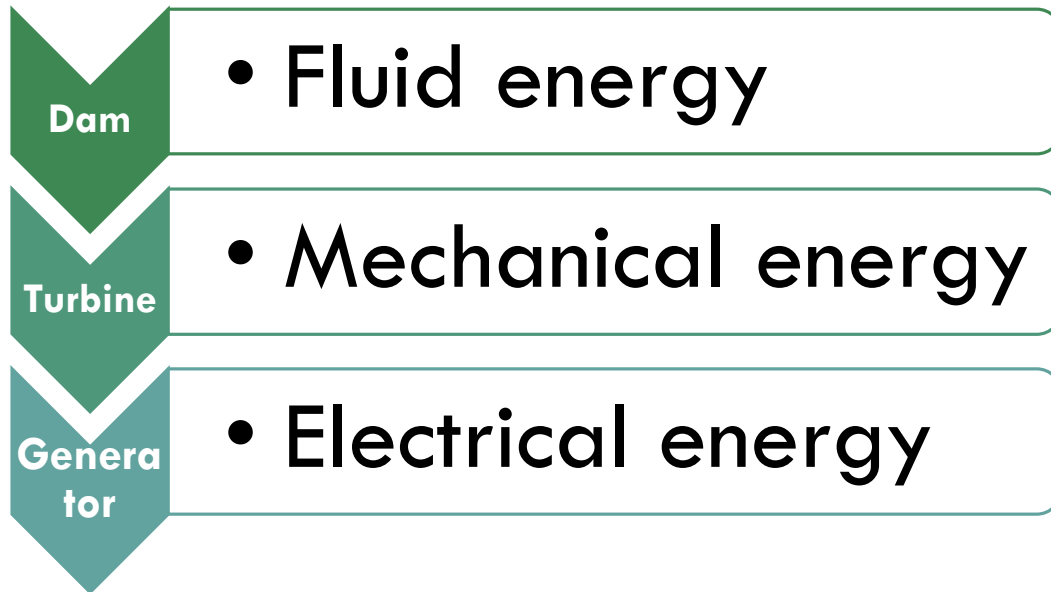


# Diesel power plant



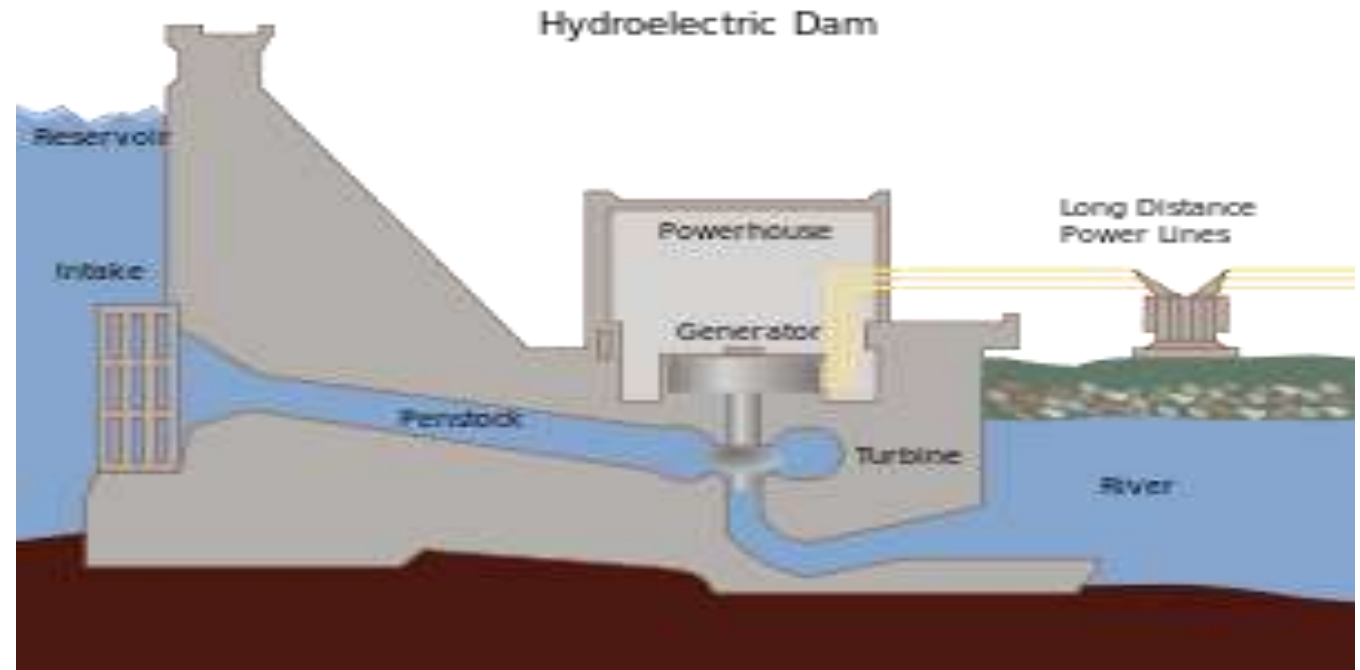
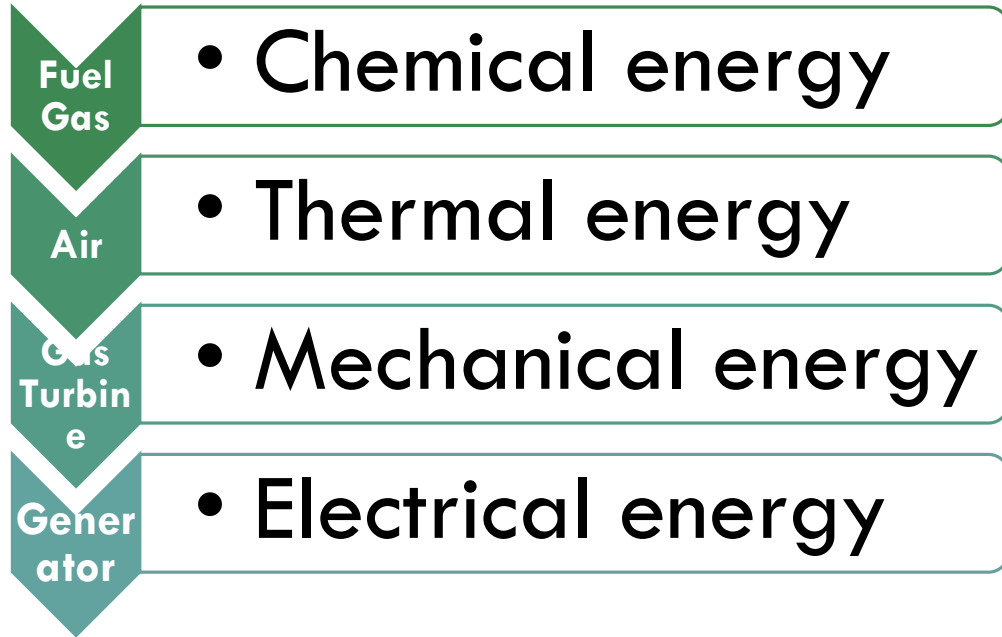


# Hydro electric(Hydel) power plant





# Gas power plant

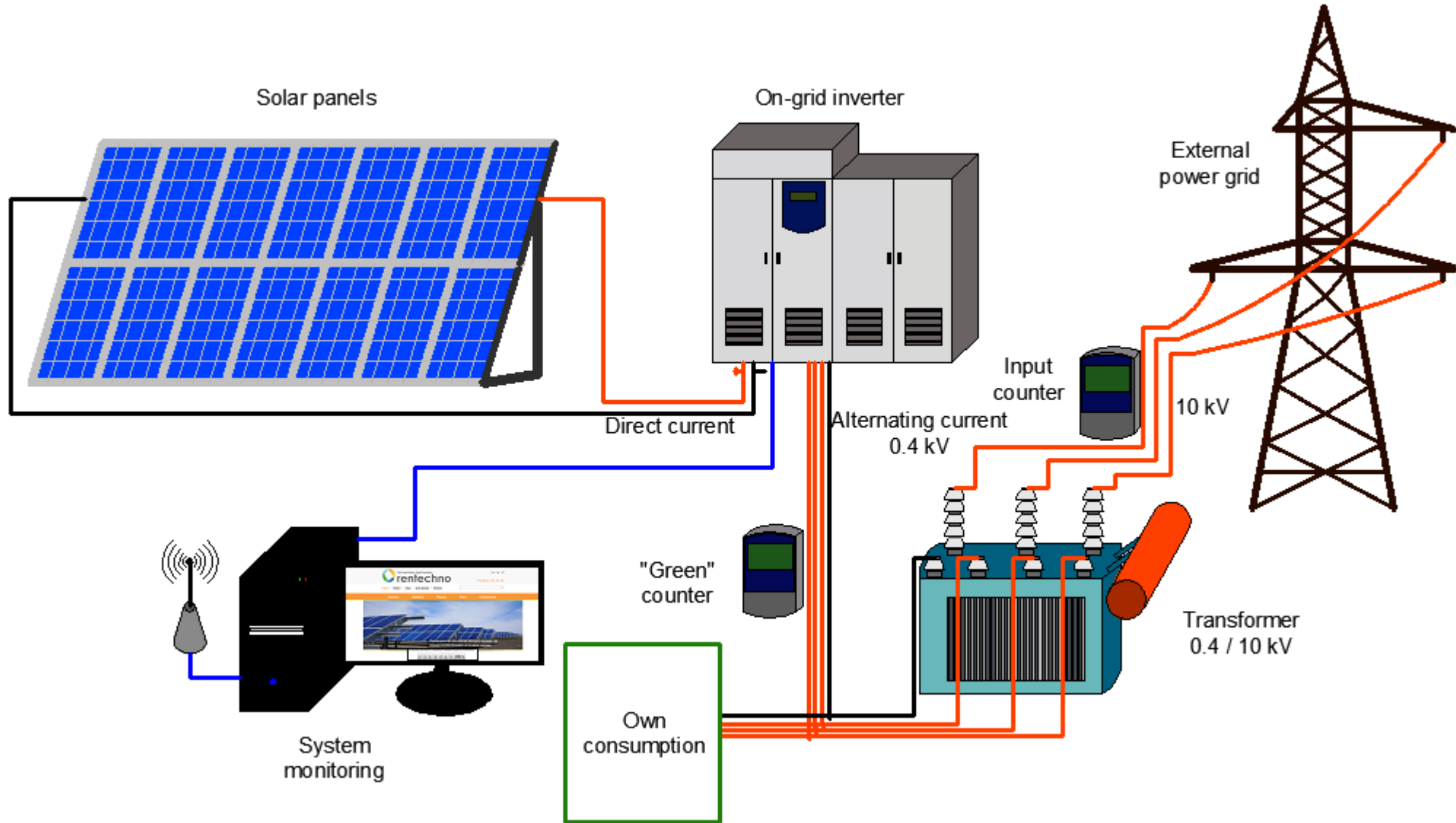


# SOLAR POWER PLANT





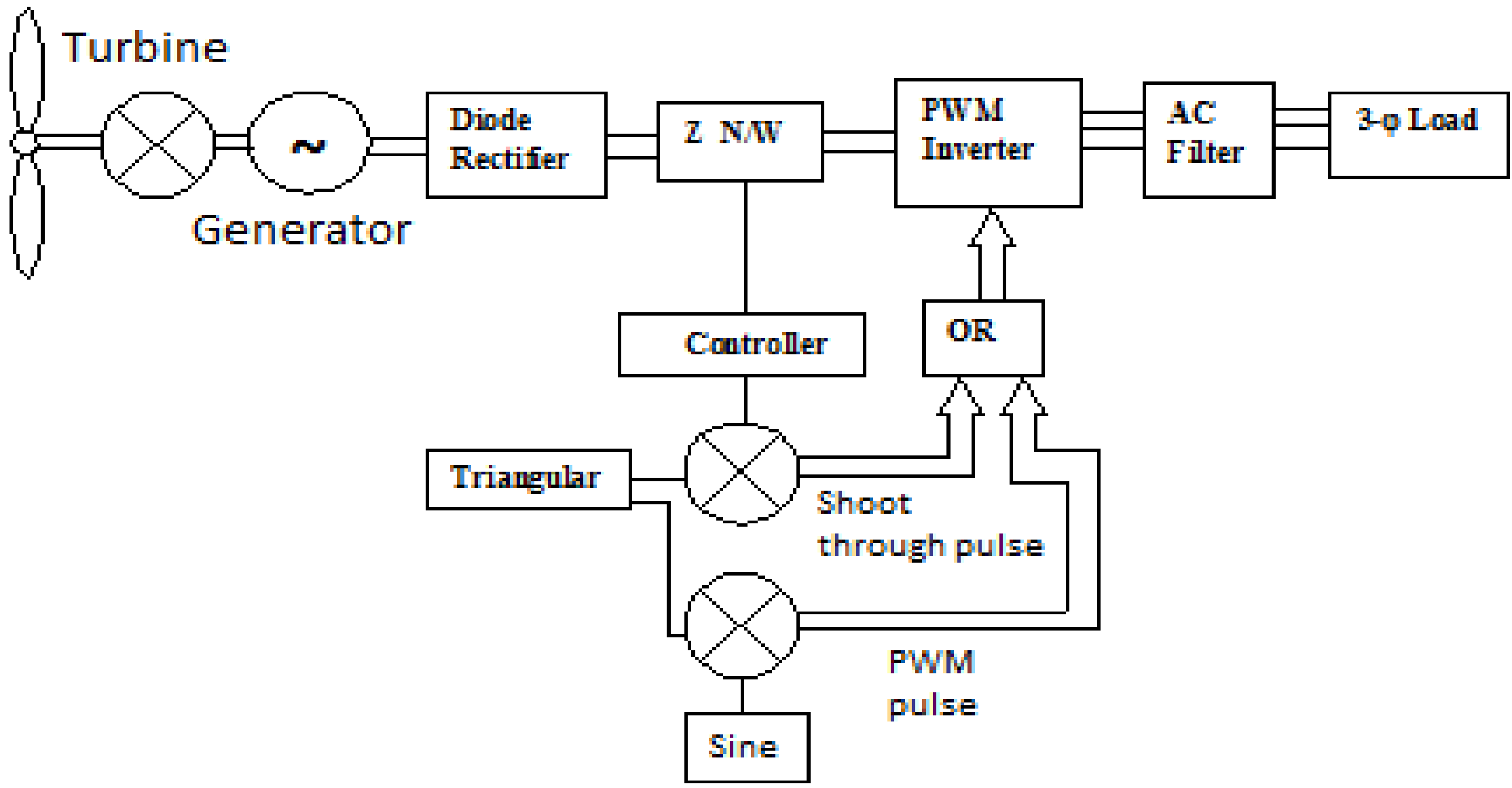
# Solar thermal power plant





# WIND POWER PLANT







[Types of power plants and how they Generating Electricity? - YouTube](#)

