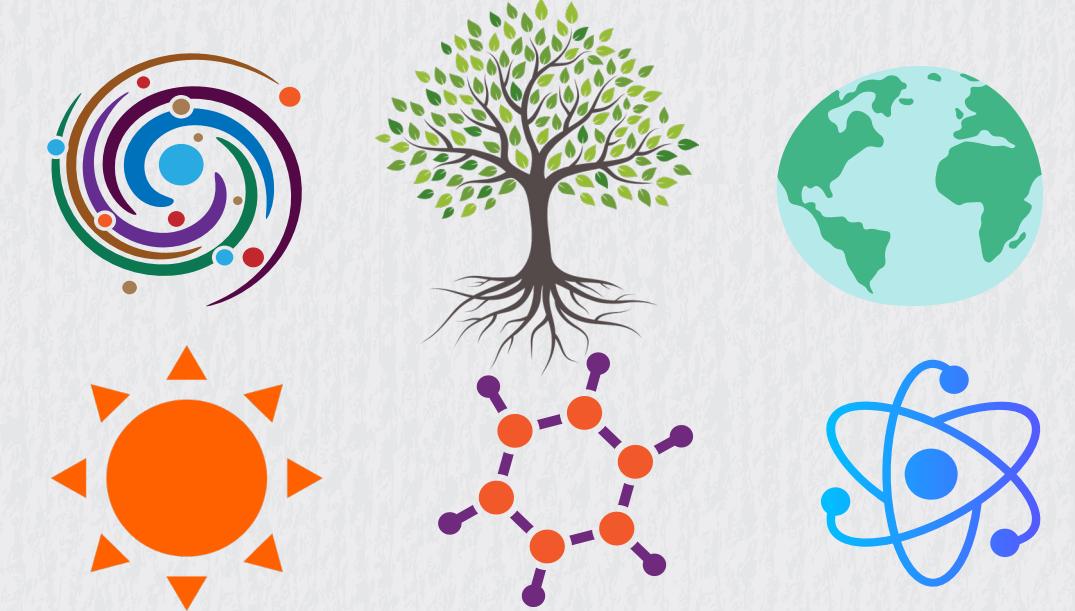


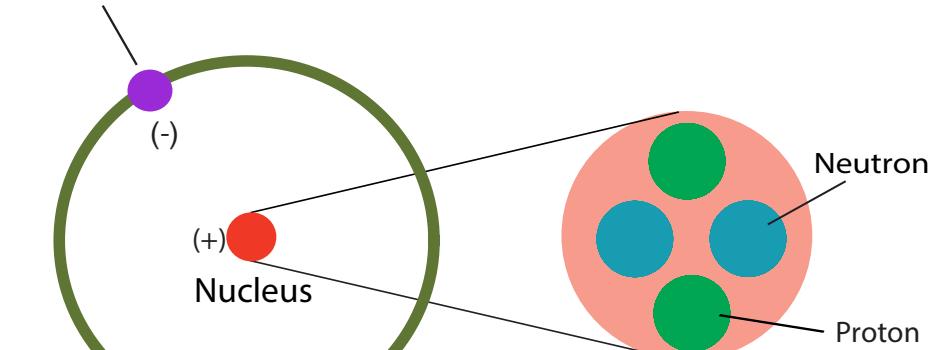
# Nuclear Science for Society

National Science Day

Manipal Centre for Natural Sciences

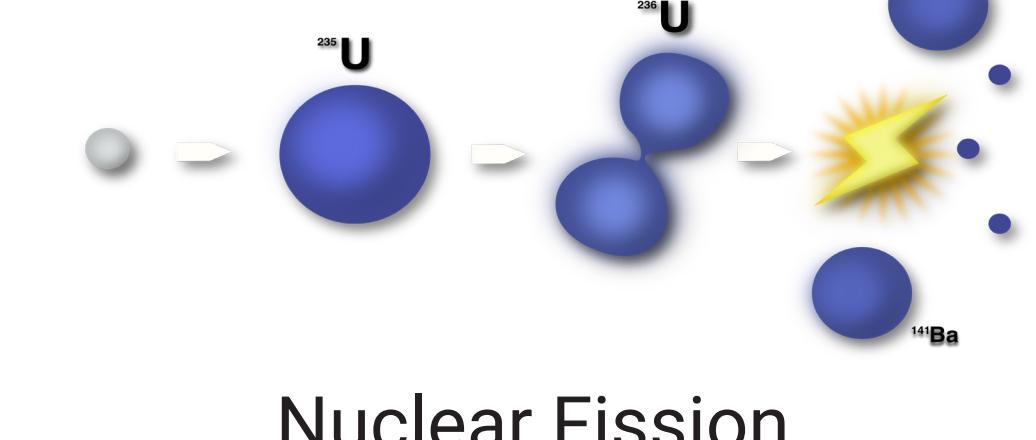


## What is in a NUCLEUS...?

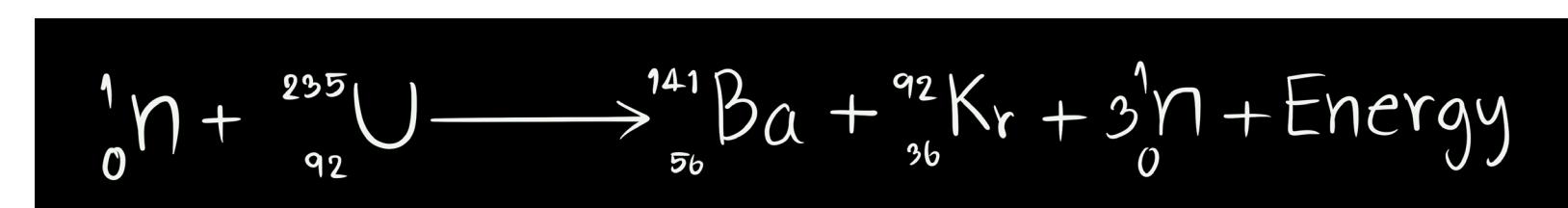


Atom is 99% empty space

## Break the Nucleus to get the Energy NUCLEAR FISSION

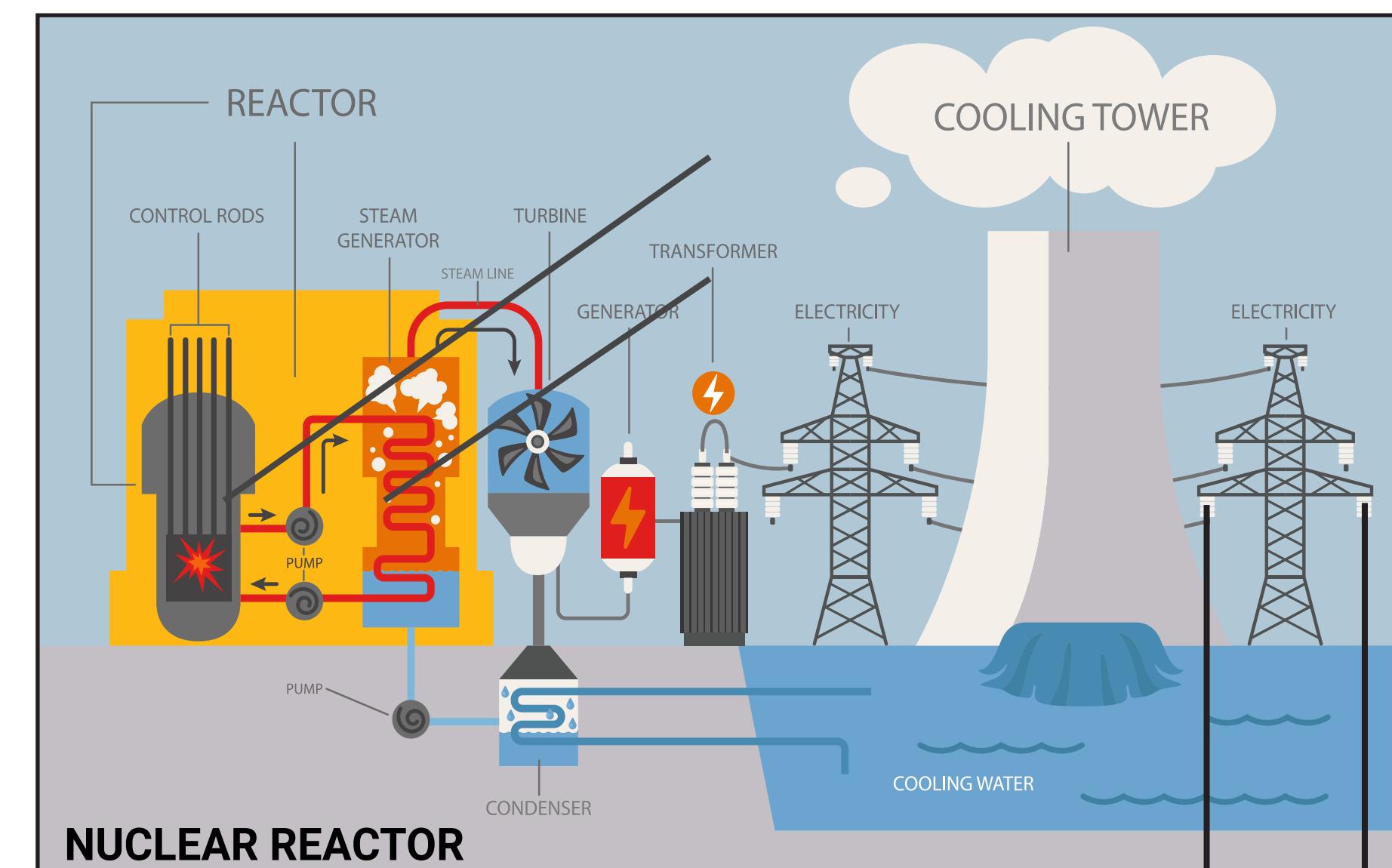


Nuclear Fission



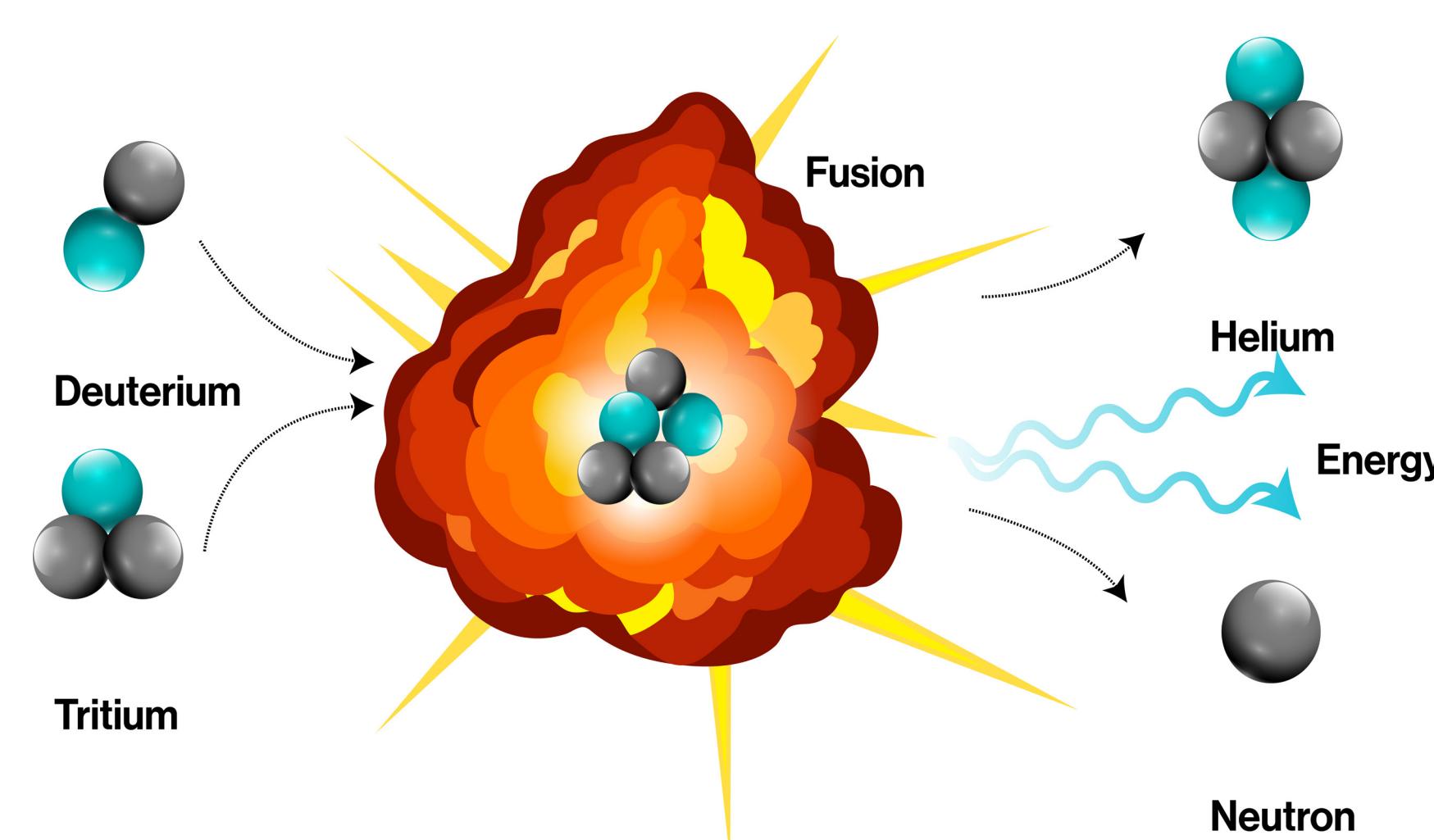
TRILLIONS! of Nuclear fission reactions takes place in a Nuclear reactor

A Typical Nuclear power plant can supply power to LAKHS of houses



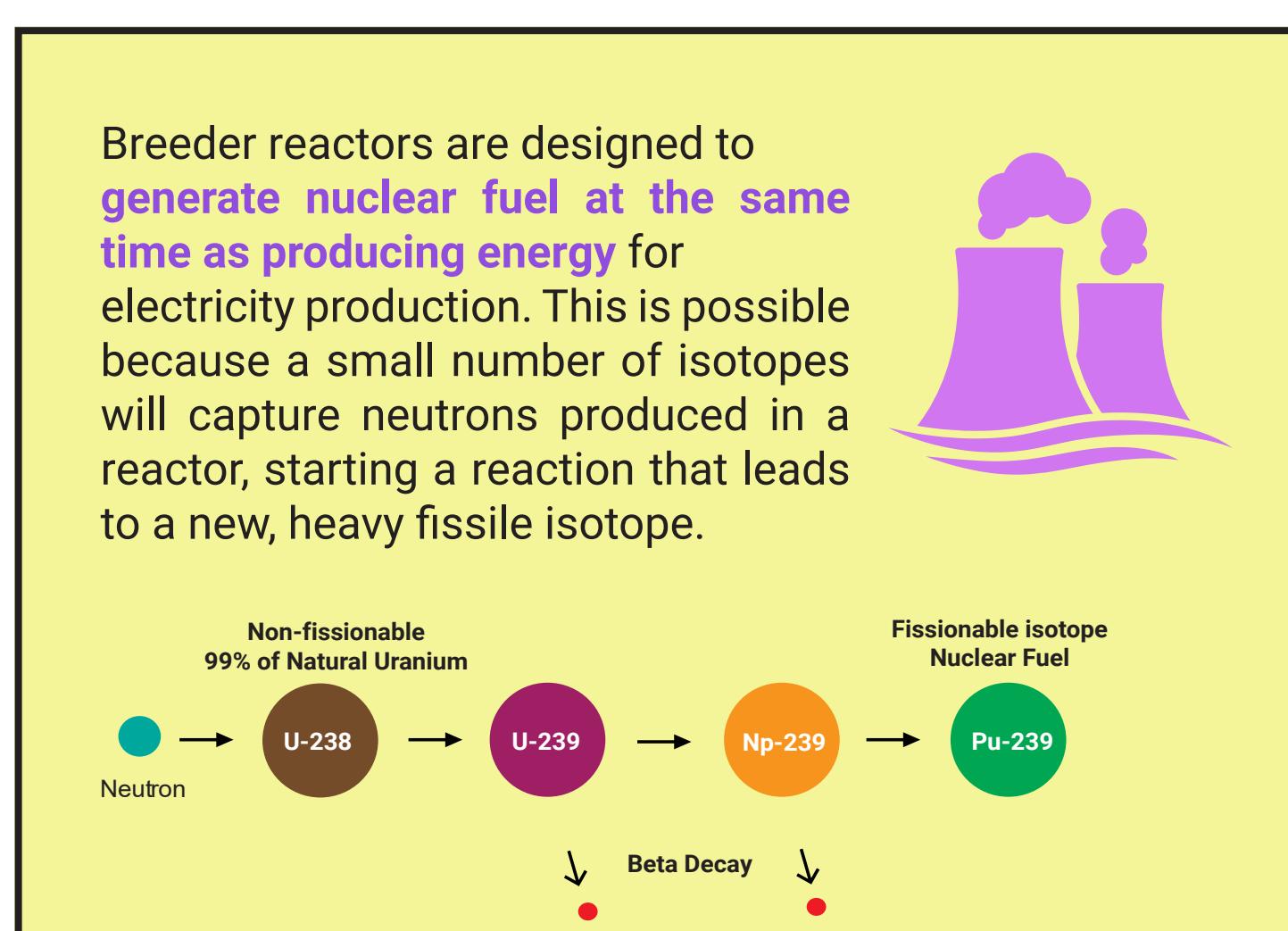
Reaction that illuminates stars

## NUCLEAR FUSION



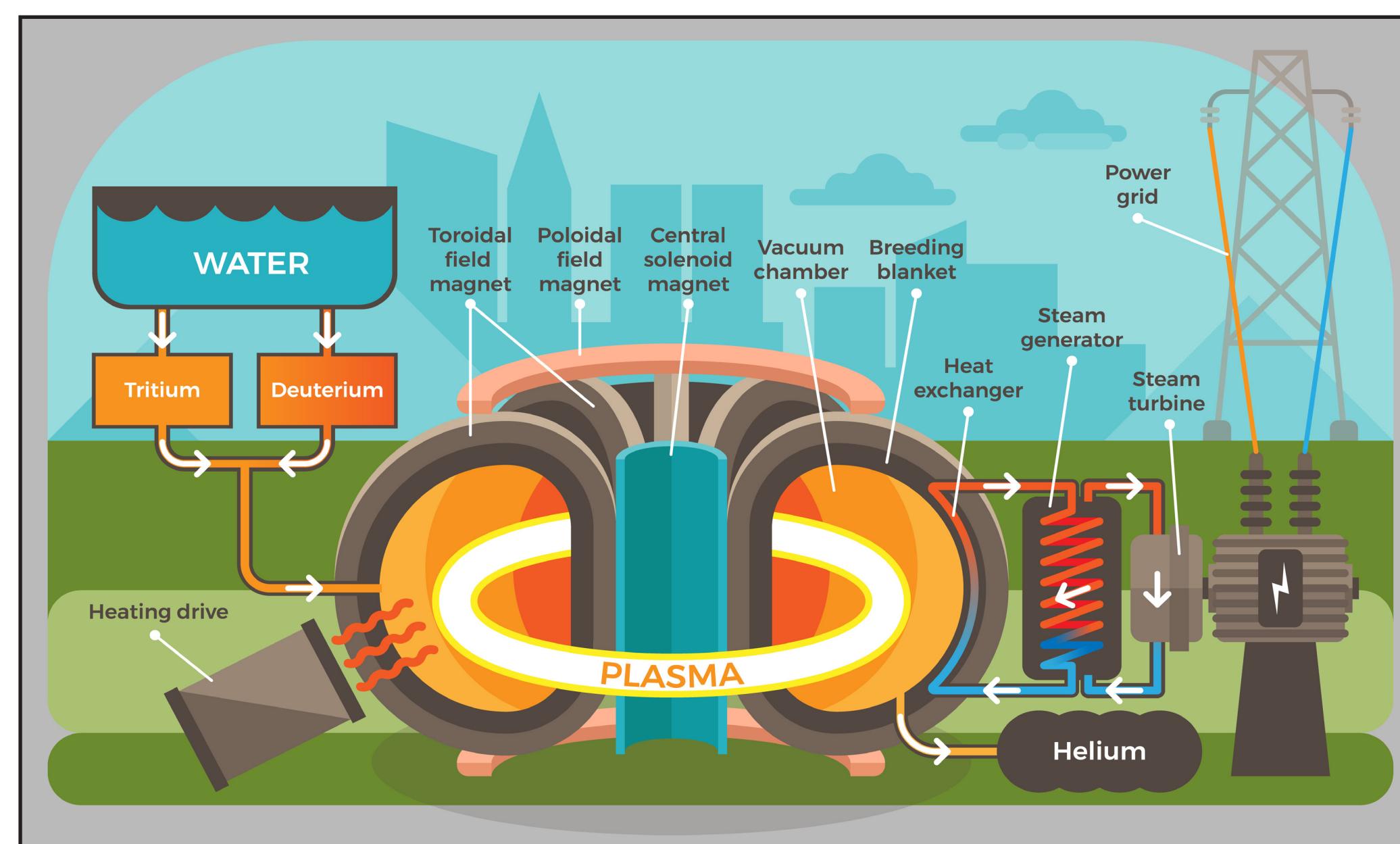
Reactor that generates its own Fuel

## BREEDER REACTOR



Artificial sun for the future energy needs

## FUSION REACTOR

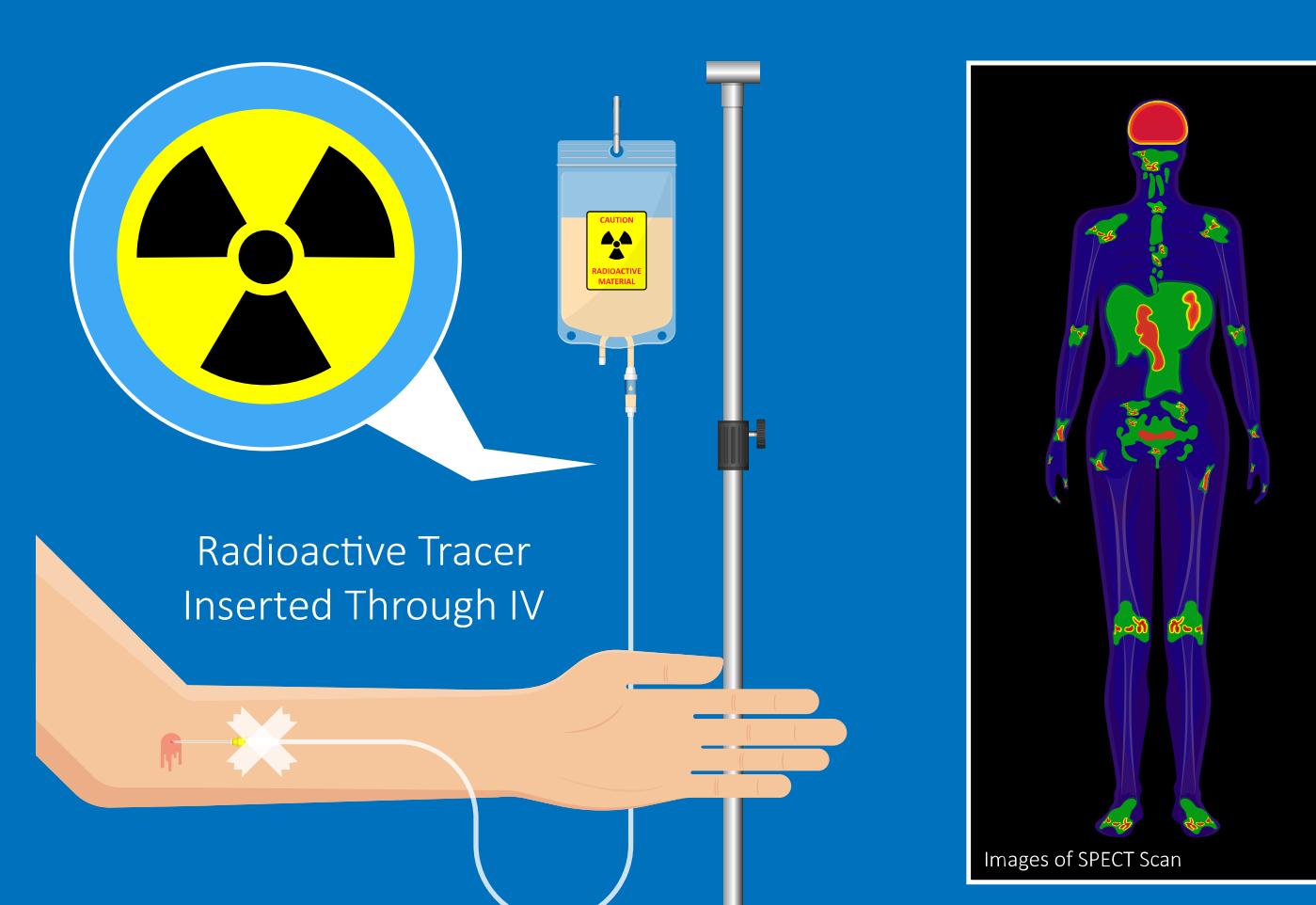


Helping the Humanity

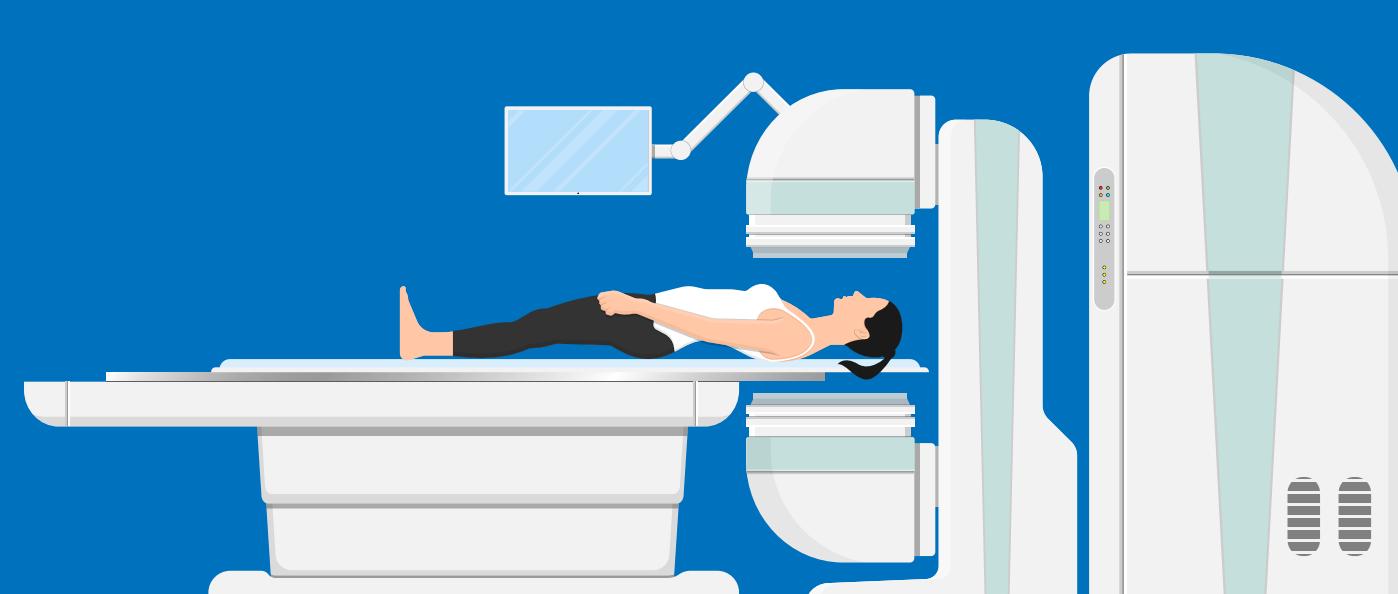
## NUCLEAR MEDICINE

**Radioisotope:** An unstable form of a chemical element that releases radiation as it breaks down and becomes more stable. The process of shedding the radiation is called radioactive decay.

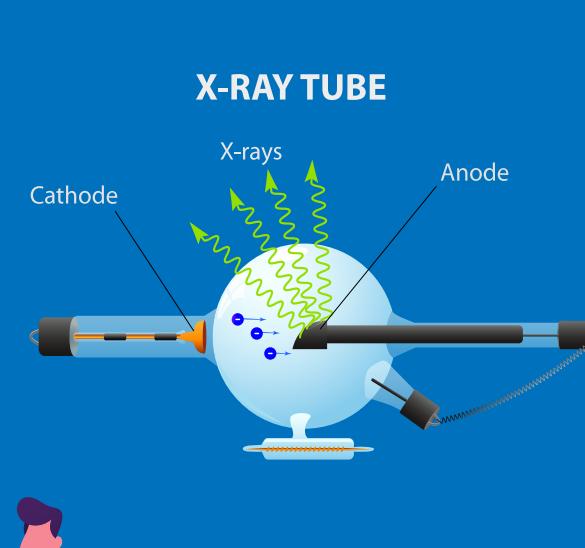
Nuclear medicine uses small amounts of radiation to provide information about a person's body and the functioning of specific organs, ongoing biological processes, or the disease state of a specific illness. In most cases the information is used by physicians to make an accurate diagnosis. In certain cases radiation can be used to treat diseased organs or tumours.



SPECT Scan  
(Single Photon Emission Computed Tomography)



## X-RAY Scan



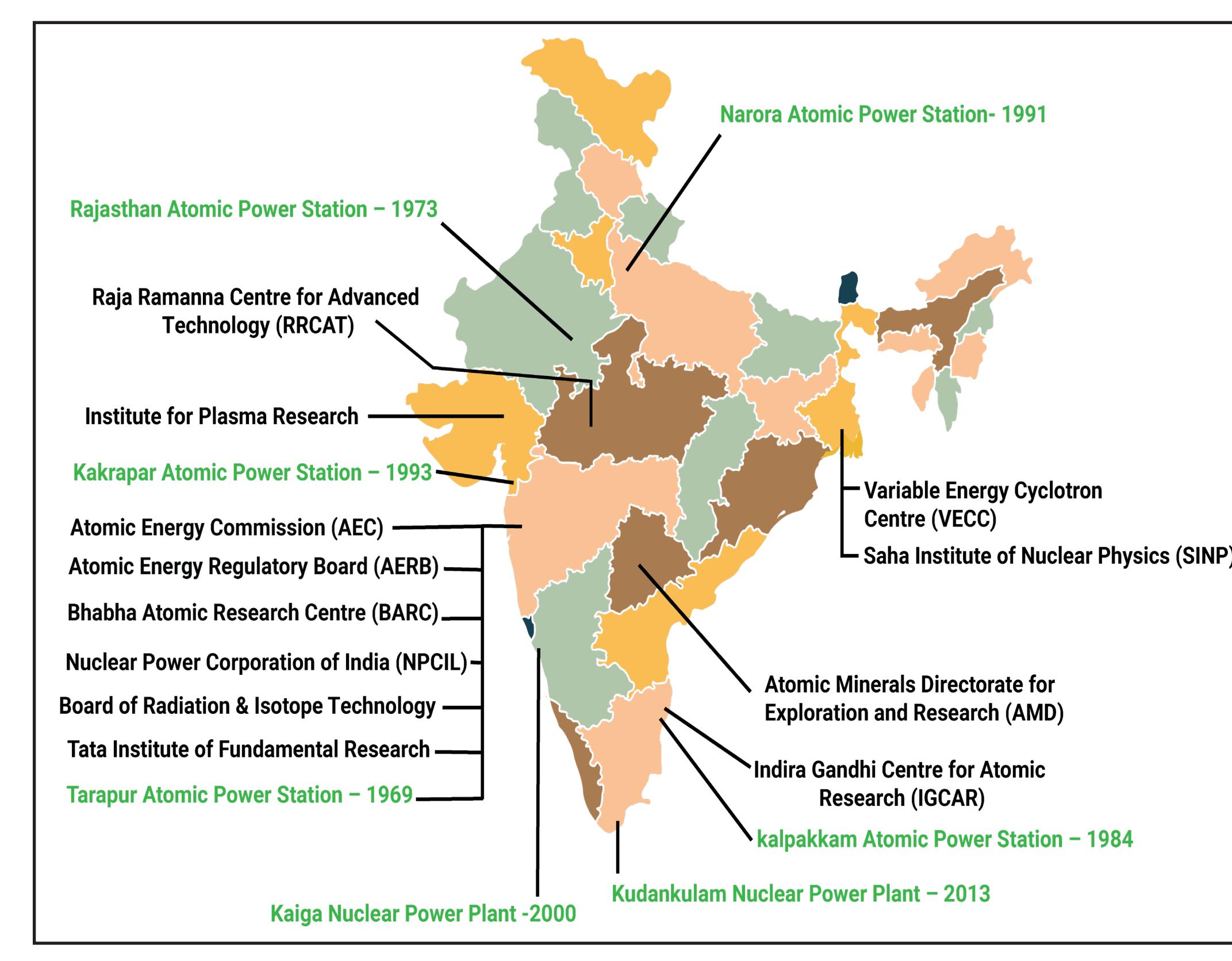
Helping the Nation by the development of Nuclear weapons for the National security.

## NUCLEAR SCIENCE RESEARCH INSTITUTES IN INDIA



SCAN

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Units under Department of Atomic Energy, Govt of INDIA