



# **SNS COLLEGE OF TECHNOLOGY**

(An Autonomous Institution)

COIMBATORE-35

**Accredited by NBA-AICTE and Accredited by NAAC – UGC with A+ Grade**

**Approved by AICTE, New Delhi & Affiliated to Anna University, Chennai**

## **DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING**



**COURSE NAME: 19EEO305 /Renewable Energy Generation Technology**

**III YEAR / VI SEMESTER**

**UNIT 1- SCENARIO OF RENEWABLE ENERGY**

**Topic 1 – Introduction to Renewable Energy**



# SUCCESSFUL STUDENT

Positive  
Attitude

Professionally  
Groomed

Socially  
Interactive

Technically  
Skillful



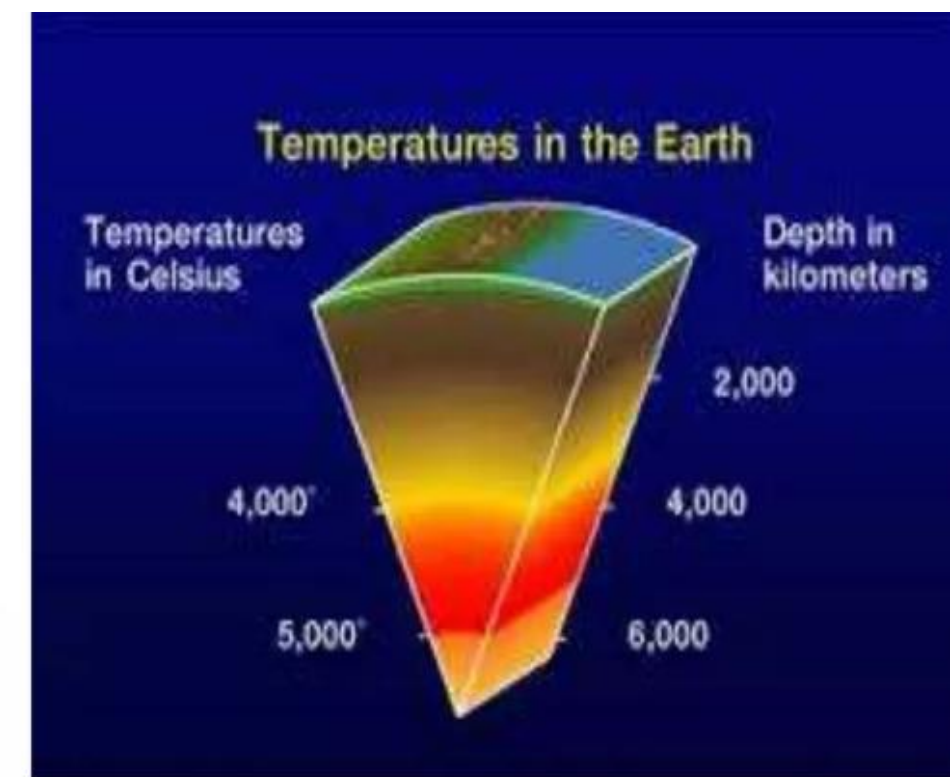
## OCEAN THERMAL



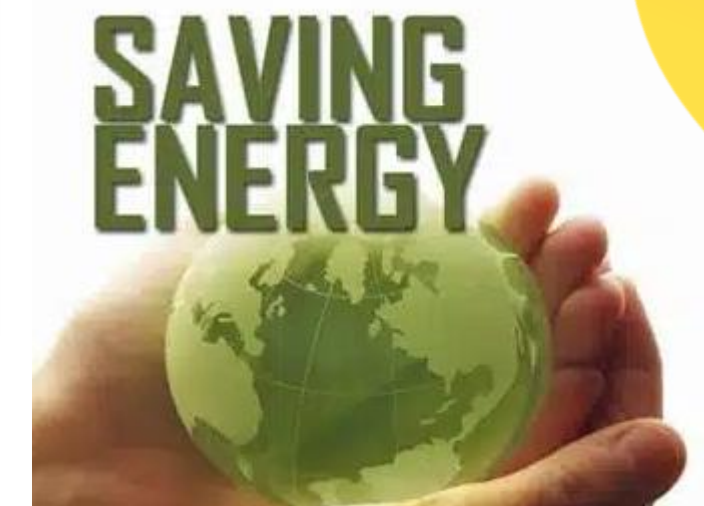
- The oceans cover 75% of the world surface.
  - It is the largest renewable energy source available to contribute to the security of energy supply reduce greenhouse gases emission.
- ➔ **THE OCEAN CONTAIN TWO TYPE OF ENERGY**
- Ocean thermal energy conversion from the sun's heat.
  - Mechanical energy from tides and waves.

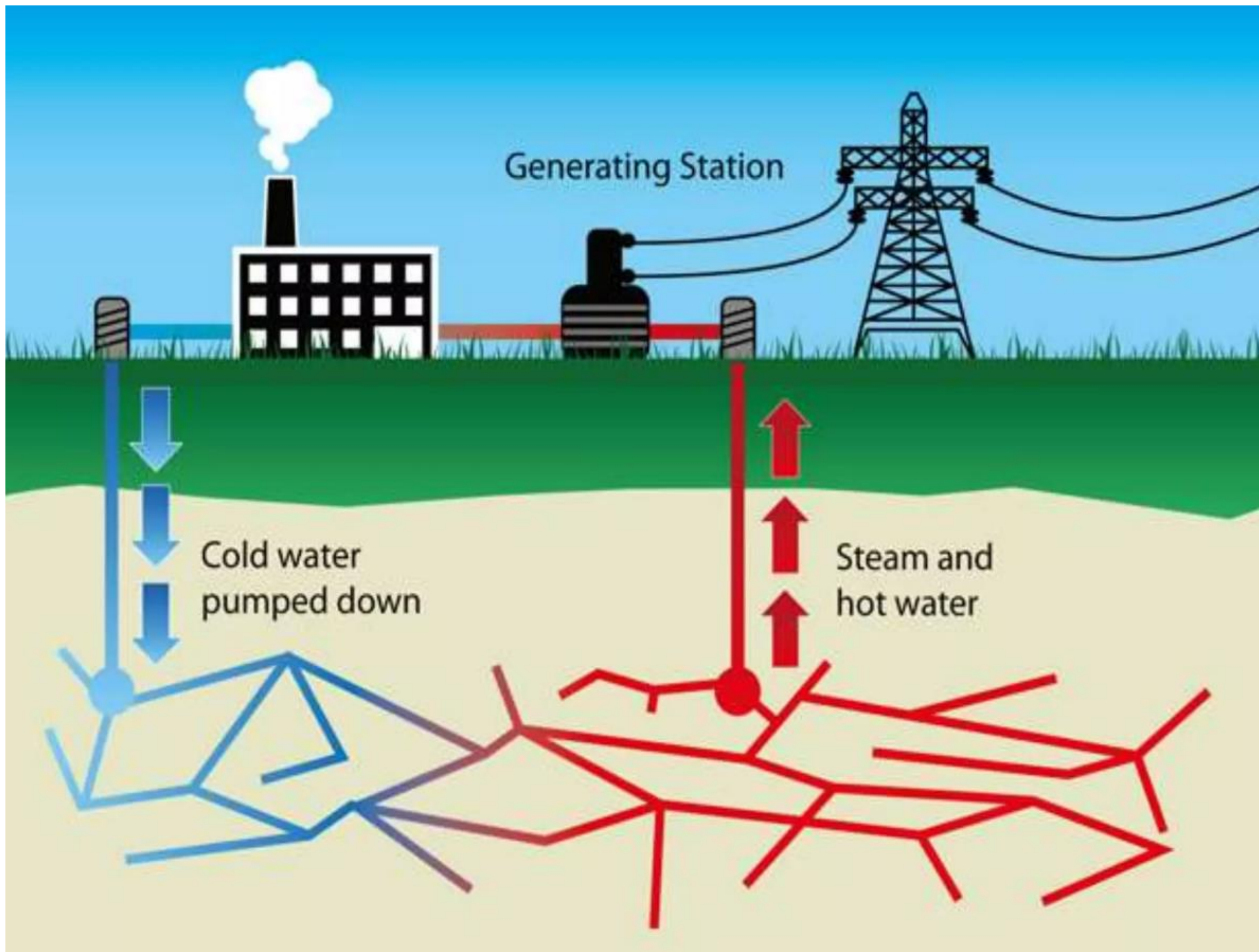


## GEOTHERMAL ENERGY



- Geothermal energy is the heat from the Earth. It's clean and sustainable.
- Resources of geothermal energy range from the shallow ground to hot water and hot rock .
- It found a few miles beneath the Earth's surface, and down even deeper to the extremely high temperatures of molten rock called magma.
- Geothermal heat pumps can tap into this resource to heat and cool buildings.







# What's biomass energy?

- Rapidly increasing the population and industry causes more energy need.
- Biomass is one of primary sources which can be used to provide renewable and clean energy.
- Biomass energy is unending and can be obtained everywhere. Moreover it helps the socio-economical development in country side.





Solar	Wind	Geo	Hydro	Bio	Tide



## Biomass or biogas energy

- Biomass is a **renewable** source of fuel to produce energy.
- because: waste residues will always exist – in terms of scrap **wood**, mill residuals and forest resources; and.
- properly managed forests will always have more trees, and we will always have crops and the residual biological matter from those crops.





# ASSESSMENT



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# REFERENCE



## Reference Book:

1. S.P. Sukhatme, 'Solar Energy', Tata McGraw Hill Publishing Company Ltd., New Delhi, 1997. (UNIT II)
2. G.N. Tiwari, 'Solar Energy – Fundamentals Design, Modelling and applications', Narosa Publishing House, New Delhi, 2002. (UNIT II)
3. S.M. Muyeen, " Wind Energy Conversion Systems: Technology and Trends", Springer 2012. [UNIT III]

## Text Book:

1. G.D. Rai, 'Non Conventional Energy Sources', Khanna Publishers, New Delhi, 2006. (UNIT I - V)
2. D.P.Kothari, K.C.Singal and Rakesh Ranjan, "Renewable energy sources and Emerging Technologies", PHI Pvt. Ltd., 2009. (UNIT I-V)



# THANK YOU!!

