#### ESSCA SCHOOL OF MANAGEMENT

# CAN RENEWABLE ENERGY SUCCEED ?

# GEOPOLITICS OF EUROPE

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# SUMMARY

INTRODUCTION OF RENEWABLE ENERGIES : DEFINITION, HISTORY
PROS AND CONS OF RENEWABLE ENERGIES
RENEWABLE ENERGIES INTO POLITIC : IN EUROPE (EU)
CONCLUSION
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# INTRODUCTION

# **END OF USE**

Coal, gas and oil has a medium term future

- $\rightarrow$  depletion of reserves
- $\rightarrow$  great impact on Earth

# INDUSTRY

82% of gas and oil firms are moving to clean energy

# RENEWABLE ENERGY PROVIDES 15% OF ENERGY ON EARTH

- 10% on biofuels
- 3% on hydroelectric (dams)
- 2% of the rest

 $\rightarrow$  For the rest, 75% of fossils fuels

# **DEFINITION OF RENEWABLE ENERGY**

"Renewable energy is energy derived from natural sources that are replenished at a higher rate than they are consumed. Sunlight and wind, for example, are such sources that are constantly being replenished. Renewable energy sources are plentiful and all around us." (United Nations definition)



GUESS THE DATE : IN DENMARK WAS THE FIRST WIND FARM IN WATER, WHEN WAS THE INSTALLATION FINISHED ?

• 2022

• 1991

• 2006

• 1957



# HISTORY

# VINDBY IN 1991 AND GERMANY

First windfarm in water in Denmark with 11 wind turbines

Same year, Germany introduced a policy of investment in renewable energy

# 2008

Europe becomes the largest solar photovoltaic market → **70% of the market** 

# SPAIN AND « OLMEDILLA »

A 60 megawatt power plant capable of supplying 40,000 homes

### 2000

Europe accounted more than 70% of the world's wind energy produced

 $\rightarrow$  20% of the world's solar installation

# **PORTUGAL IN 2019**

Break the world record for the lowest cost of photovoltaic solar parks

# **DIFFERENT RENEWABLE ENERGIES**















- It cannot replace oil : it produce only solar energy
- In France 24% of energy consumption is electricity
- Not a 100% clean energy : solar pannels create waste
- They must be changed every 25 years
- Not controllable, no sun no energy

# SOLAR ENERGY



# QUIZZ

IF WE WANTED TO SUPPLY THE ENTIRE PLANET WITH ENERGY THROUGH SOLAR PANNELS HOW BIG WOULD IT BE ?

- 500,000km2 like Spain ?
- 9,8 billions like the USA ?
- 28,92 km2 like Tokyo ?





### DEFINITION

plant materials and animal waste used especially as a source of fuel

# CONS

HUGE POLLUTION AFFECT THE ENVIRONMENT

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### REPRESENTATION

Energy that takes advantage of the movement of water

# CONS

- High intial cost
- dependance on the climate
- Affect the environnement

# DEFINITION

In Spain represent 17% of all energy generated

# **ADVANTAGES OF HYDRAULIC ENERGY**







# NUCLEAR

### PROS

- Production of renewable, clean energy
- Not pollute the air or release greenhouse gases
- Can be built in urban or rural areas, and do not radically alter the environnement around them

#### CONS

- Radioactive waste and it is long-lasting

# **GEOTHERMAL ENERGY**

# DEFINITION

Geothermal energy is heat that is generated within the Earth.

# PROS

Can be accessed everywhere, relatively clean, last for decades, are baseload, used for heat or cool

CONS

Can result in minor seismic activity, release small amounts of greenhouse gases, toxic éléments, technology is expensive



# RENEWABLE ENERGY IN POLITIC LIFE

# GOALS

Countries are setting targets and the EU was setting 20% Renewable energy in 2020

A total of 26 members states met or exceed their target :

**HIGHEST**:

LOWEST :

- - Sweden with 60.1%
- Finland with 48.3%

Austria 36.5%

Latvia with 42.1%

- Malta with 10.7%
- Luxembourg with 11.7%
- Belgium 13%

the 5 Member States with the largest share of renewable energy use are Sweden, Finland, Latvia, Denmark, Austria And the first source of electricity comes from the European Union

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- GERMANY

**GUESS THE** COUNTRY WHICH DID **NOT REACH HIS GOAL ?** 

- FRANCE

- JAPAN

# COUNTRIES THAT HAS EXCEEDING THE TARGET



- SWEDEN AND CROATIA 11 POINTS
- BULGARIA 7POINTS
- ESTONIA 5POINTS

THE GREEN DEAL: FIT FOR 55 OF JULY 2021 THE GOAL IS TO REACH 40% OF RENEWABLE ENERGY USE (32% TODAY)

# CONCLUSION

# BIBLIOGRAPHY

7 Steps to Succeed in Renewable Energy | BDO Insights

WHAT WILL THE FUTURE LOOK LIKE BY 2050 IF IT'S POWERED BY RENEWABLES? | W (WEFORUM.ORG)

WHAT IS RENEWABLE ENERGY? | UNITED NATIONS

HYDRAULIC ENERGY: WHAT IT IS, HOW IT WORKS AND ITS ADVANTAGES | ENDESA

LES ÉNERGIES RENOUVELABLES SONT-ELLES VRAIMENT UNE SOLUTION ÉCOLOGIQUE

NUCLEAR ENERGY | NATIONAL GEOGRAPHIC SOCIETY

« LES ÉNERGIES RENOUVELABLES NE SONT PAS NATURELLEMENT DURABLES » (FUTU

BENEFITS OF RENEWABLE ENERGY USE | UNION OF CONCERNED SCIENTISTS (UCSUSA

À LA UNE: LES ÉNERGIES RENOUVELABLES EN EUROPE | COMMISSION EUROPÉENNE

GEOTHERMAL ENERGY | NATIONAL GEOGRAPHIC SOCIETY