"OVERVIEW"

The Establishment of

The Center of Excellence on Clean Energy

(CENTRE)

Rinaldy Dalimi

University of Indonesia

Center of Excellence on Clean Energy (CENTRE)

Facilitate Integration of Clean Energy Knowledge

Drawn From National and International expertise and assist in

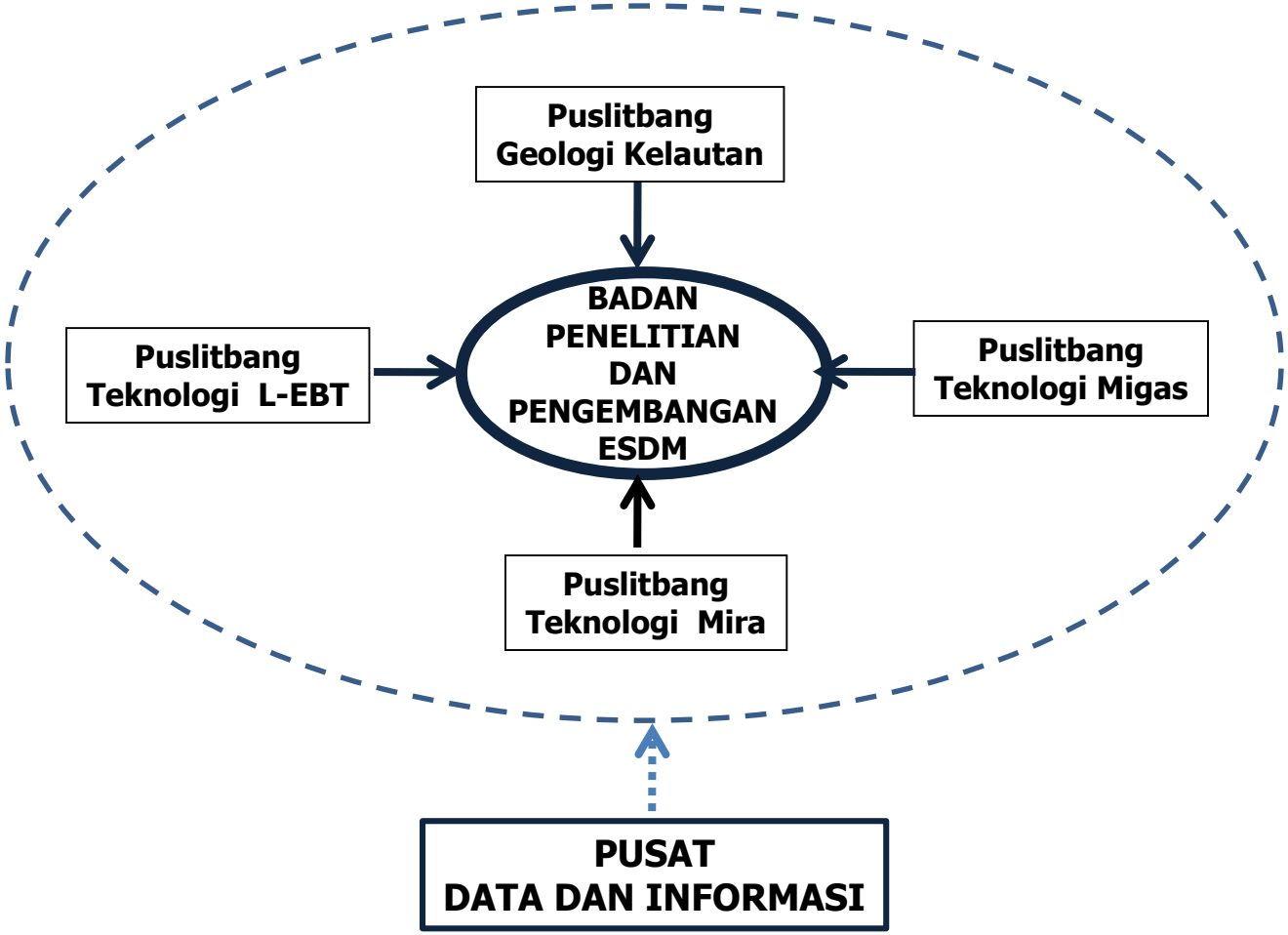
the deployment of clean energy technology solutions

from public and private Sector entities

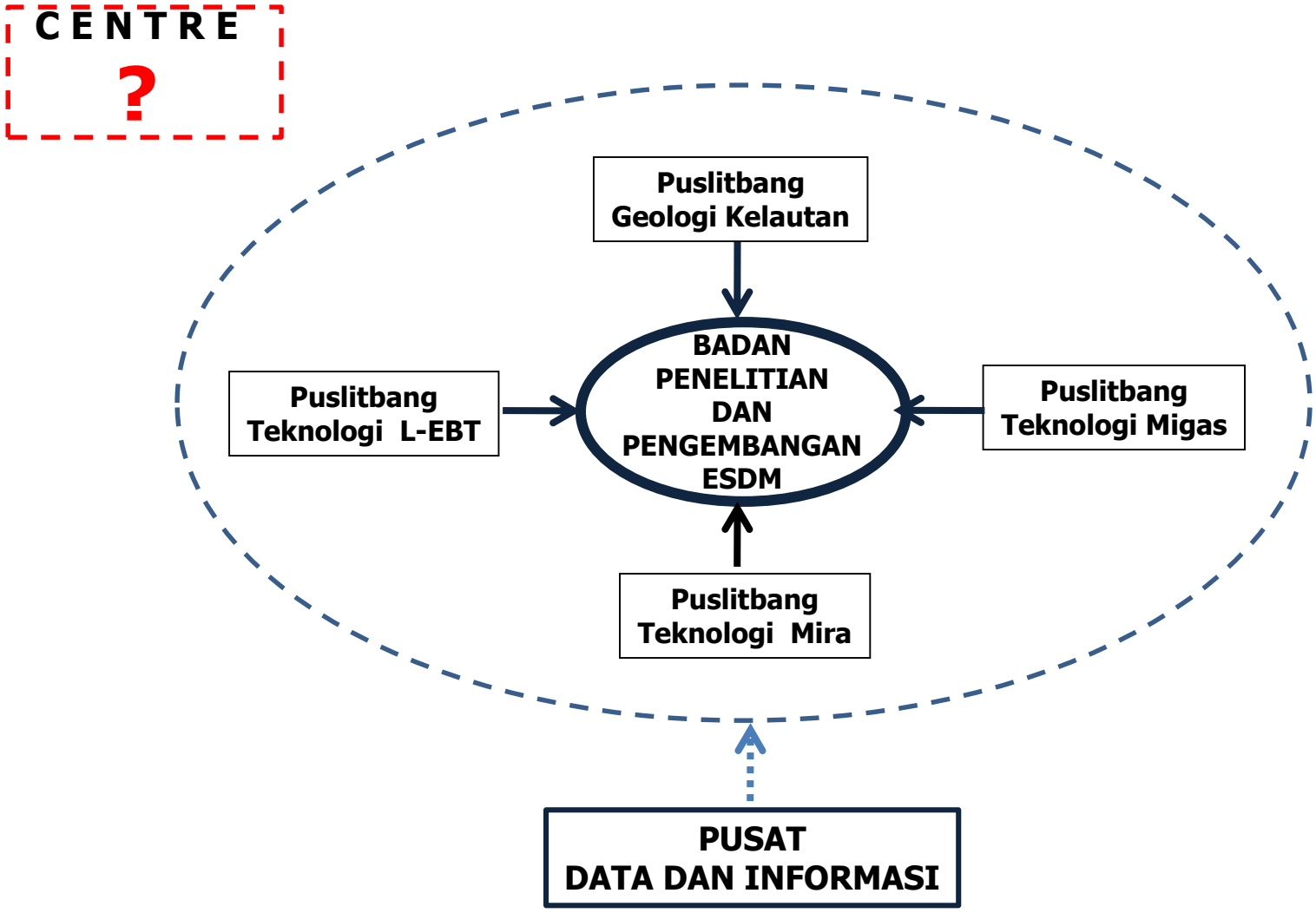
To support the Sector Reform such as :

- **Expand Energy Production Through Greater Private Sector Investment and More Effective Public Sector Investment**
- **Bolster The Sustainability of The Energy Sector Through Increased Reliance on Domestic Gas, Renewable Energy, and Energy Efficiency Investments**
- **Provide Access to Modern Energy to All Indonesians**

THE EXISTING UNIT RELATED TO "CENTRE"



Where is the posisition of the CENTRE ?

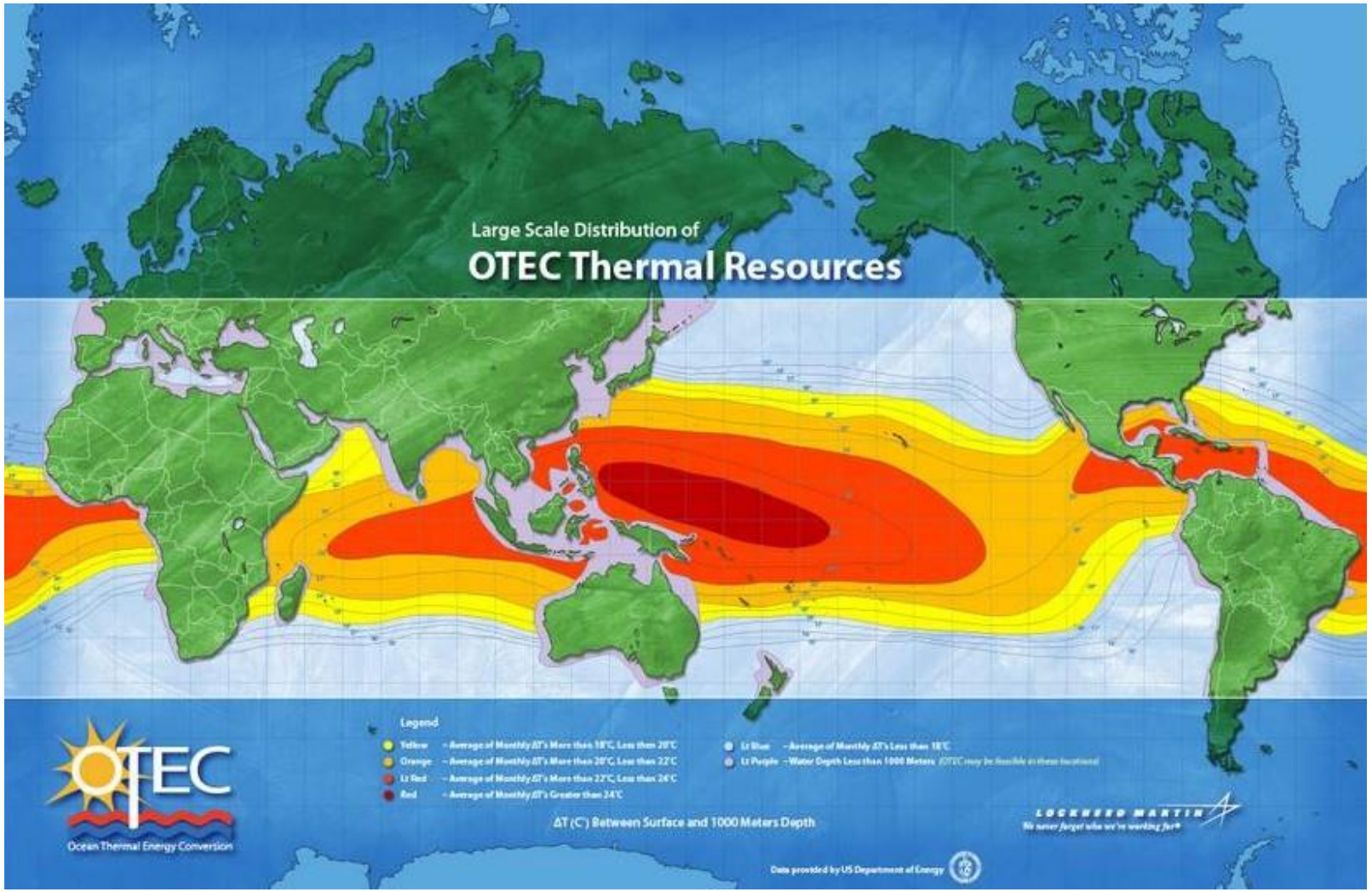


KEY WORDS

- **Clean Energy**
- **Clean Technology**
- **Sustainability of Energy**
- **Renewable Energy,**
- **Energy Efficiency**
- **Modern Energy**
- **Scientific Approach**
- **Independent and Objective**
- **Honest and Candid**

Clean and Renewable Energy Potential in Indonesia

(Ocean, Wind, Solar, Geothermal, Hydro and Bioenergy)



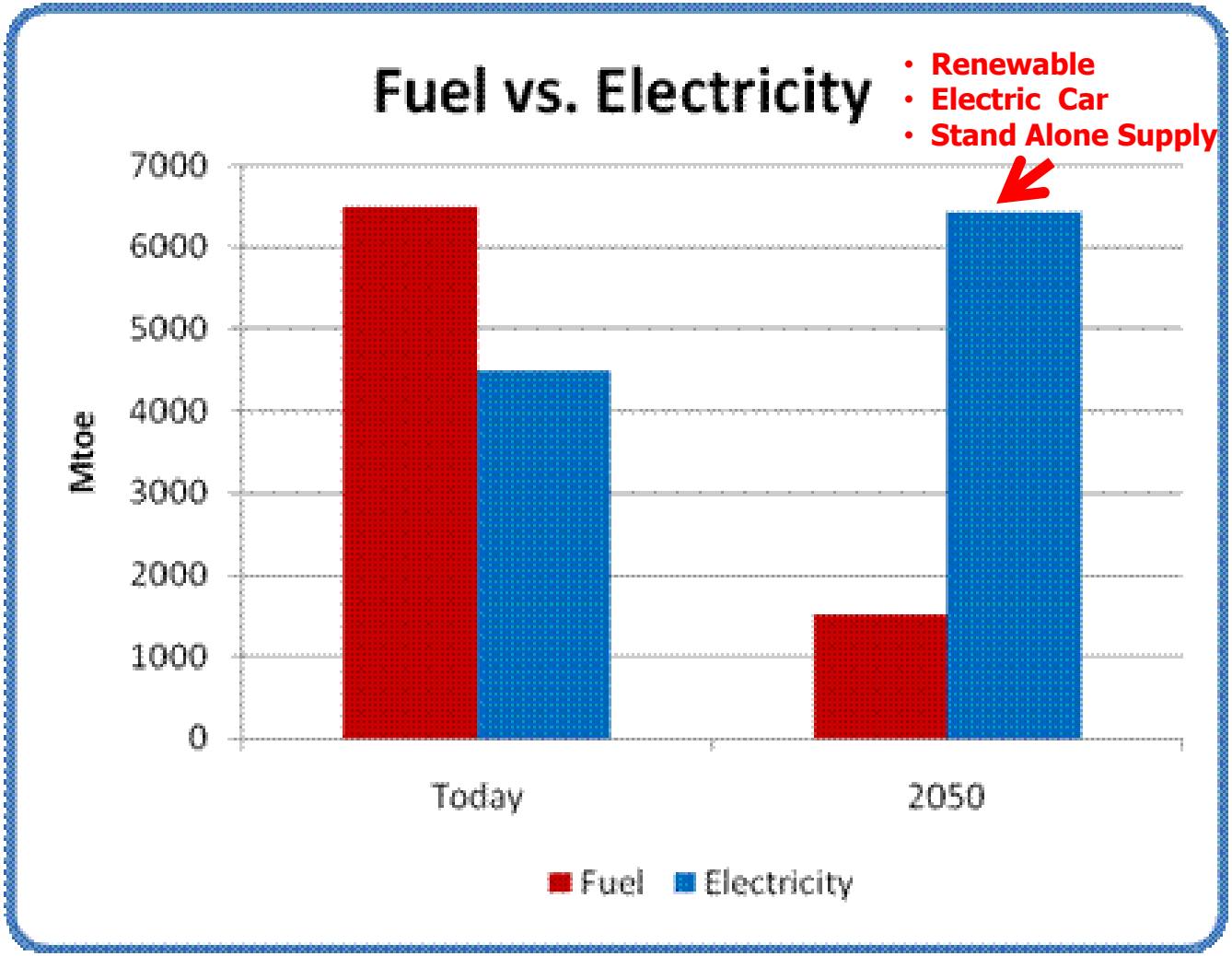
A CHALLANCE FOR "CENTRE"

- **The Development of Technology (Energy)**
- **The World Energy Prices**

DEMAND EFFICIENCY

Incandescent Light Bulbs	Compact Fluorescents (CFLs)	Light Emitting Diodes (LEDs)
		
60 watts	13-15 watts	6 - 8 watts
1,200 hours	8,000 hours	50,000 hours

Most of The Energy Source is Converted to Electricity



EXISTING WIND ENERGY

EXISTING OCEAN CURRENT ENERGY

EXISTING OCEAN WAVE ENERGY

EXISTING OTEC

Japan : 50 kilowatts of electricity

Mini OTEC was deployment in July, 1979 and became the first successful at-sea OTEC plant in India.

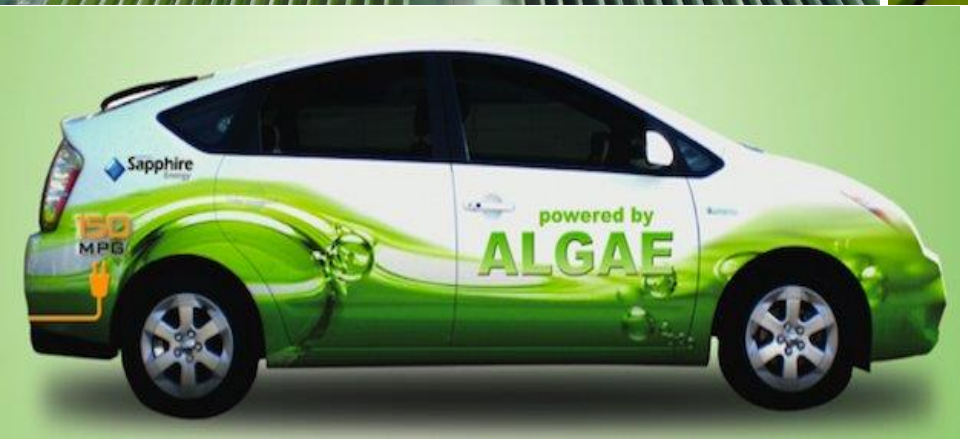
The OTEC plant in Hawaii USA

EXISTING FUEL CELL

WORLD ETHANOL

Brazil - Gasoline on the left, Ethanol on the right

WORLD A L G A E



It could potentially become important oil exporter like the Middle East by devoting just one percent of land to **algae** farms.

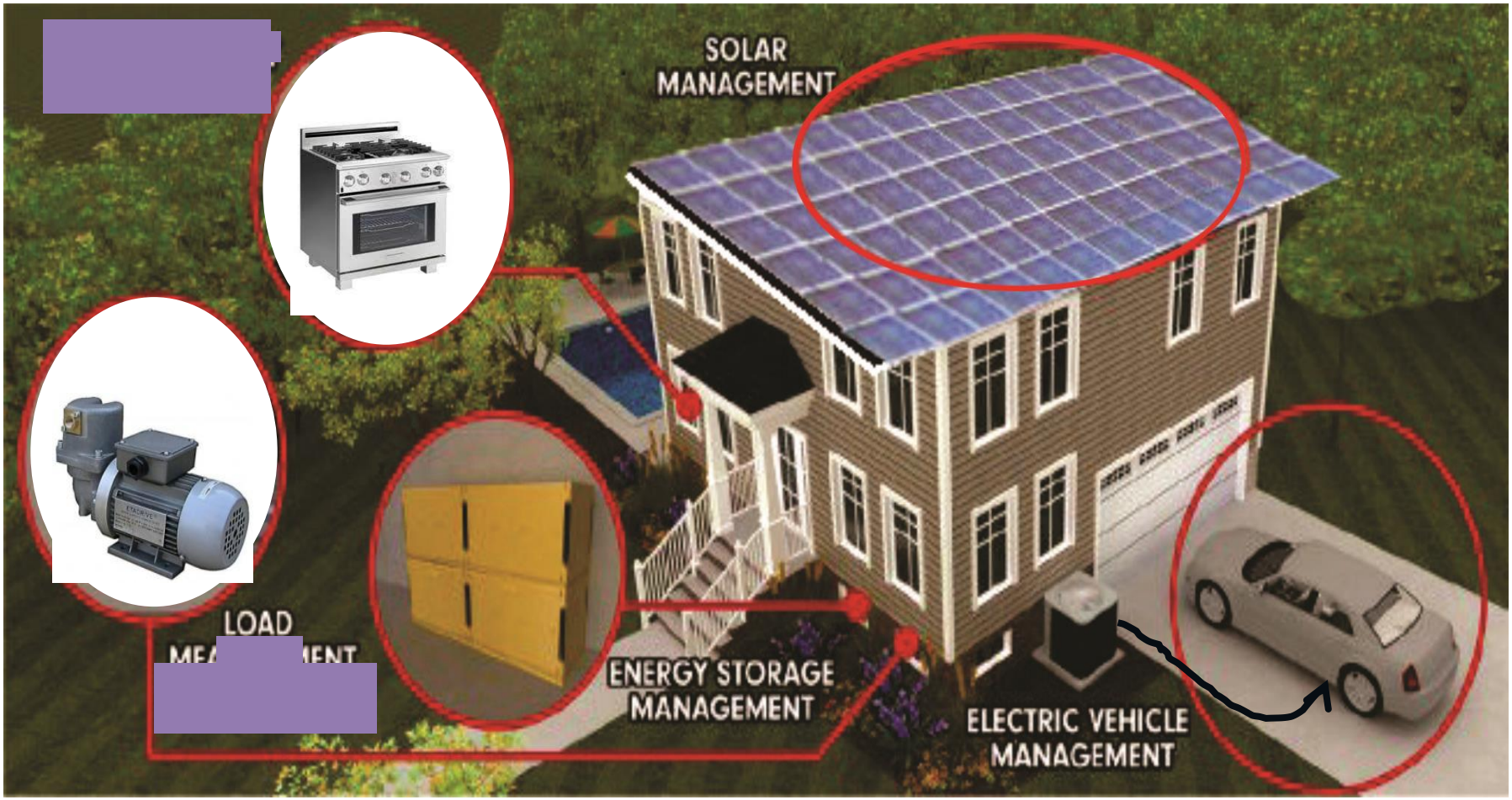
EXISTING PHOTOVOLTAIC

EXISTING SOLAR THERMAL ENERGY

EXISTING ROOFTOP

ELECTRIC CAR WITH SOLAR ENERGY

The Future Solar Hause



25 square meters solar cell with 40% efficiency will Produce Electric Power = **10 000 Wp**

If solar radiation is **6 hours per day**, the Available Electric Power = **2 500 W for** 24 hours

ISSUE RENEWABLE ENERGY PRICE
IS
STILL MORE EXPENSIVE THAN FOSSIL

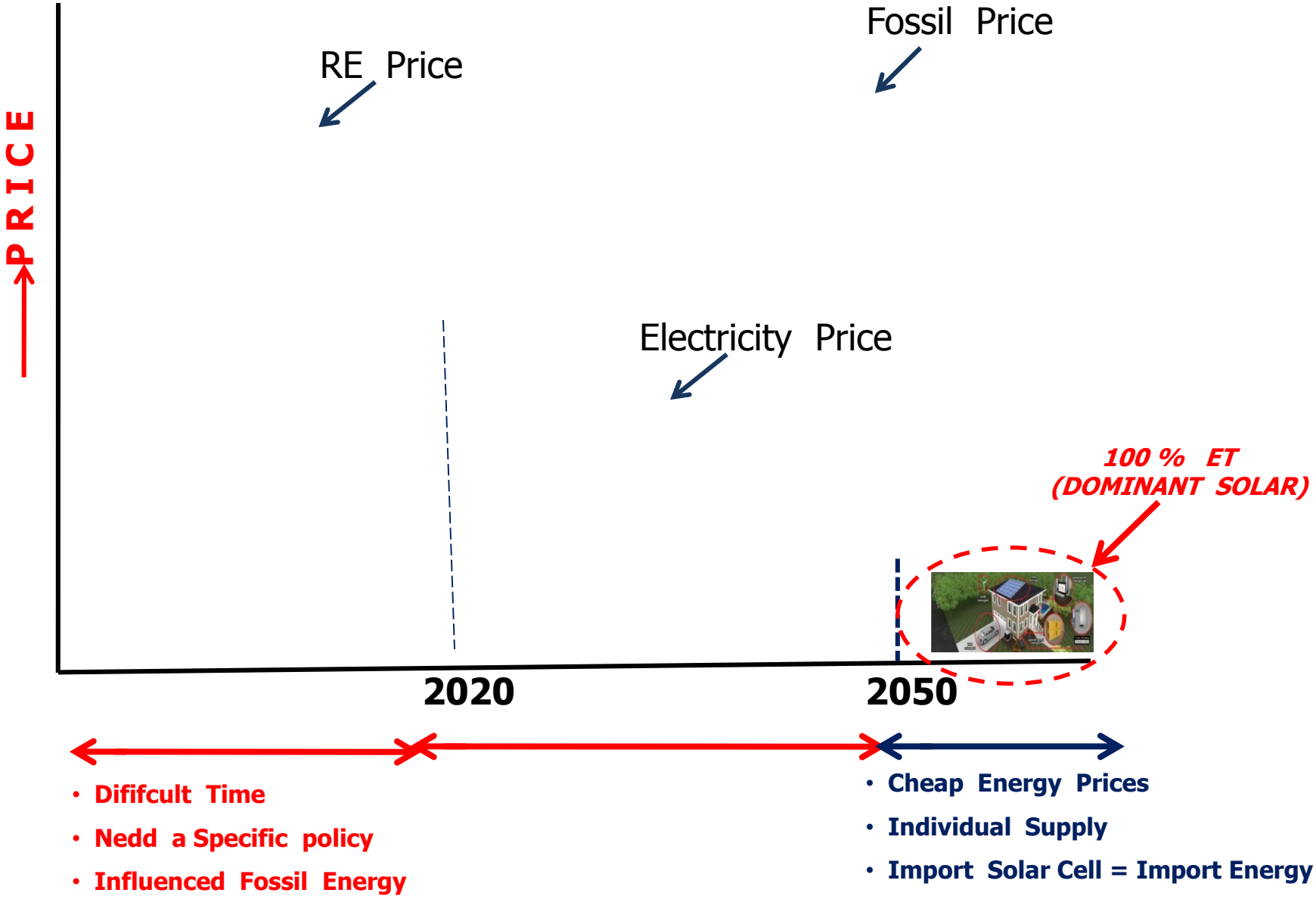
H O W E V E R !!!

World Prediction

By 2020 The Price of Renewable Energy

Will be Cheaper Than Fossil Fuels

Prediction of World Energy Prices



T H A N K Y O U