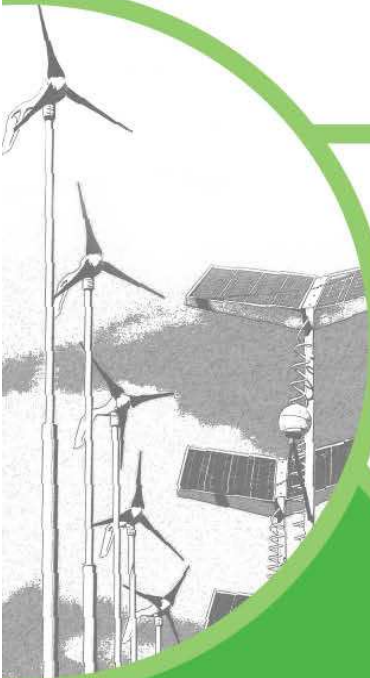


renovatio

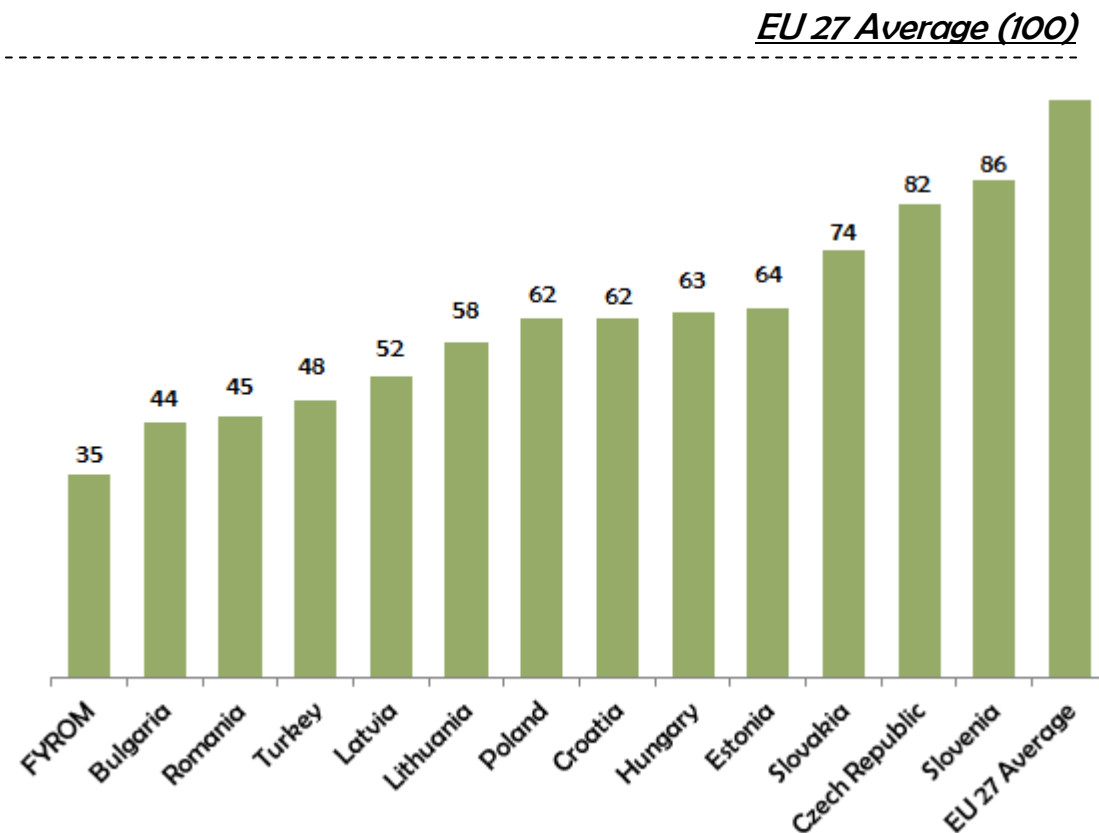
**Tapping the EEC region growth using RES**

**Vienna Economic Forum**

21st of November 2011



## Comparison of GDP PPP in 2010 <sup>(1)</sup>



- Enormous growth potential in the Emerging Market of CEE
- On average the region GDP is only 60% of the EU-27 and 56% of the Eurozone
- In 2004 the average was 52% of the EU-27 and 48% of the Eurozone

*The EEC Region is the Growth opportunity within the European continent*

(1) Source: Eurostat

# RES Generation for a Sustainable Growth

## Education & R&D

- Higher rates of Education
- Cooperation University / Businesses
- R&D private and public investment

## Institutional reforms

- Effective Judicial System
- Stability of Government and policies
- Favourable business environment

## Transportation Infrastructure

- Roads and Railroads
- Ports and Airports

## Energy Infrastructure

- Update and expansion of current transportation and distribution grids
- Substitution of highly polluting energy generation technologies for sustainable ones
- Additional sustainable generation capacity to cope with the economical growth

Pillars to  
accelerate and  
sustain  
economical  
growth

## Economic growth and job creation

- Investment and job creation
  - €13,000 million of investment in wind during 2010
  - 190,000 jobs related to wind in 2010; expected to reach 271,000 by 2020
- Development of economical depressed areas within the countries (agriculture-based regions)

## Speed of deployment

- 3 - 5 years since development to construction of a RES generating installation
- 7 – 10 years for a Conventional power station (Coal-fired or Natural Gas)
- 10 - 15 years for a Nuclear power station

## Energy Independence

- Higher energy security by generating with renewable resources
- No exposure to commodity prices fluctuation and availability
- Avoid of imports with strong impacts in the Balance of Payments

## Cleaning up the environment

- A sustainable future in terms of emissions by:
  - Substitution of current contaminating and uncompetitive technologies
  - Modernization of grid infrastructure reducing losses and resource waste
  - Green-based economy with less dependence in energy imports and “dirty” industries

## What are other high growth countries doing?

1

### CHINA

Clear bet in RES in order to achieve:

- significant energy generation in a low time-to-market
- equipment production worldwide leadership (both Wind and PV)

#### Wind <sup>(1)</sup>

2009:	25.1 GW
2020E:	100 GW

#### Solar <sup>(1)</sup>

2020E:	20 GW
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2

### INDIA

RES as a critical source of:

- significant energy generation in a low time-to-market
- energy access for larger part of the population
- equipment production

#### Wind <sup>(1)</sup>

2010:	13 GW
2020E:	70 GW

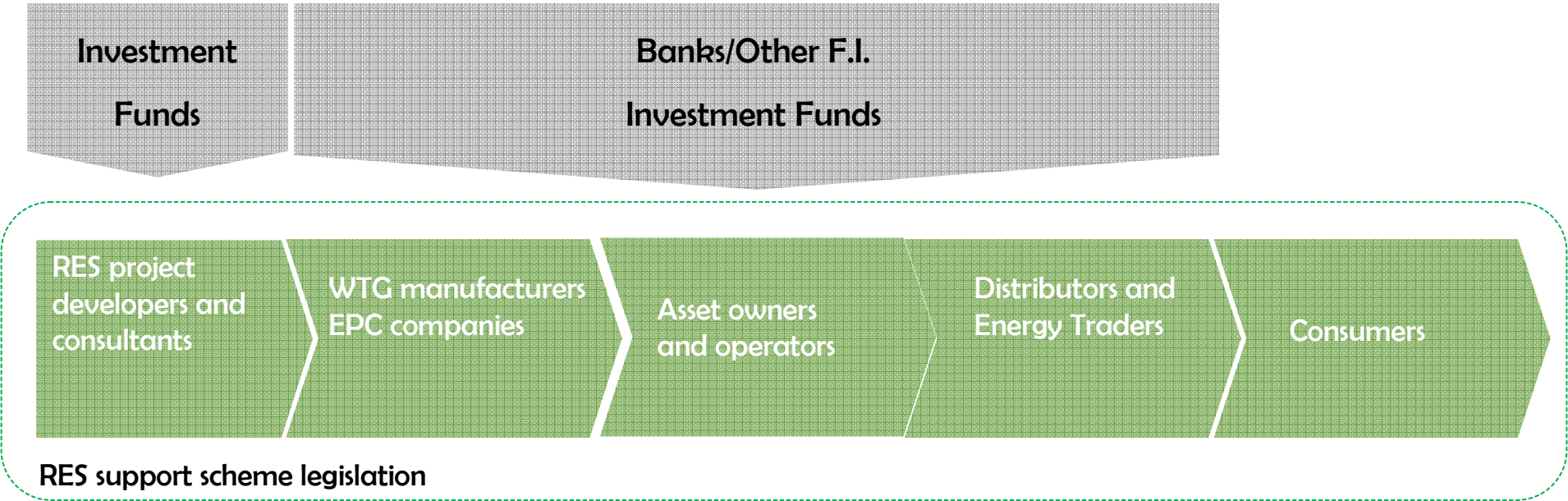
#### Solar <sup>(1)</sup>

2020E:	20 GW
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*RES potentiates growth by quick market deployment, distributed generation and job creation*

(1) Source: GWEC, EWEC, Renovatio market intelligence

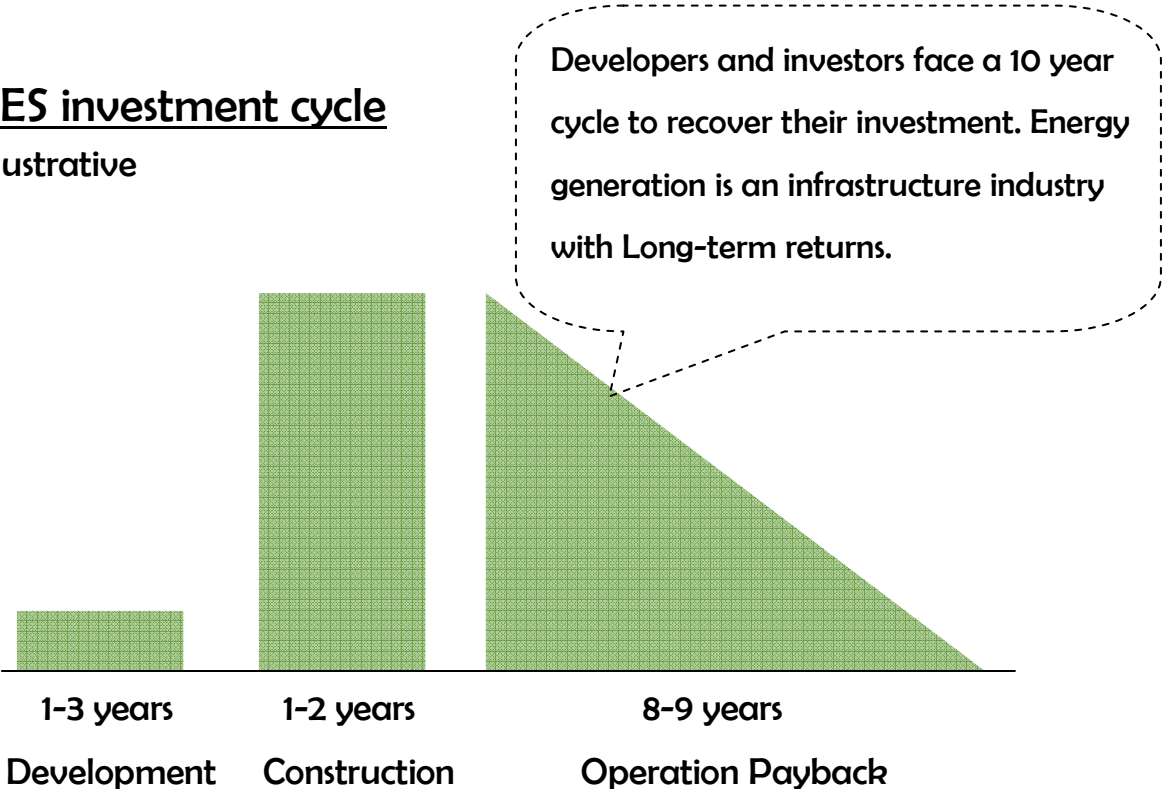
RES Value Chain



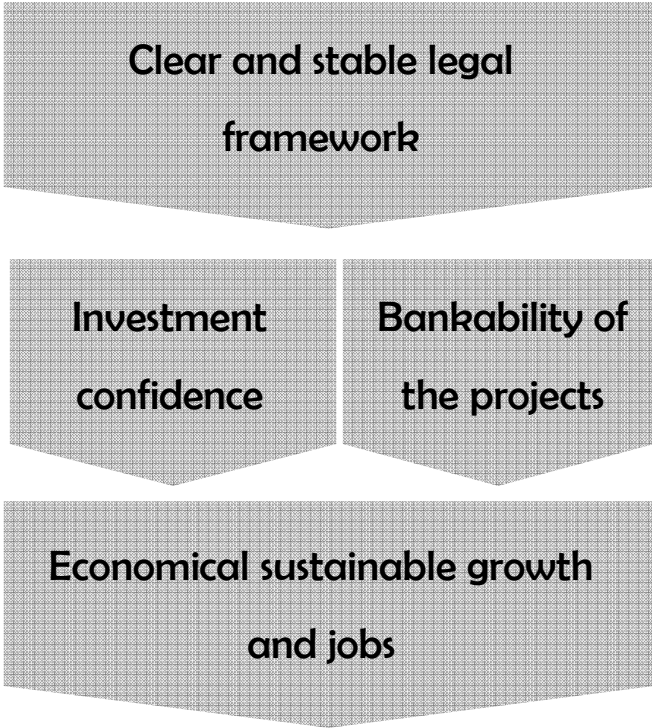
*The full Value Chain is highly dependent on the legal stability and predictability*

**RES investment cycle**

Illustrative



**Political challenge**



*RES policies and support framework need to be Clear and Stable to generate investment*

**THANK YOU!**

**Andre FRAGA**

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