

# **Third EU IEF Energy Day**

## **The Economics of New Energy Technologies in Europe and the Gulf Region**

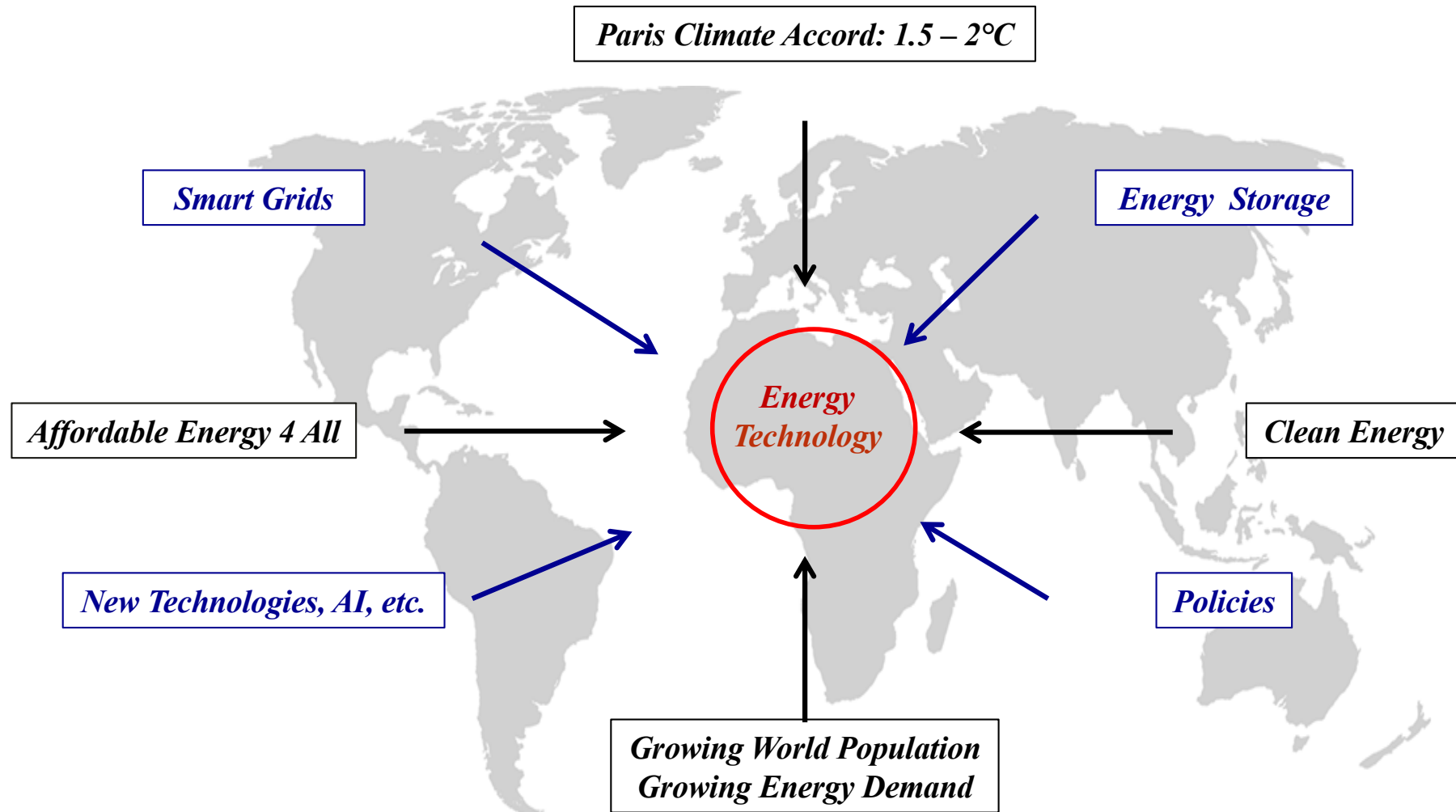
**IEF Secretariat, Riyadh**

**February, 26 2019**

**Cornelia Meyer**

# The Global View

# Setting the Stage



***Conundrum: Affordable Energy 4 All + Achieve Paris Climate Goals  
→ Can Only Be Achieved Through Technology***

# The Steps

## *Chronology*

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The World As Is.



Front Runnerst & Europe / GCC



Policies

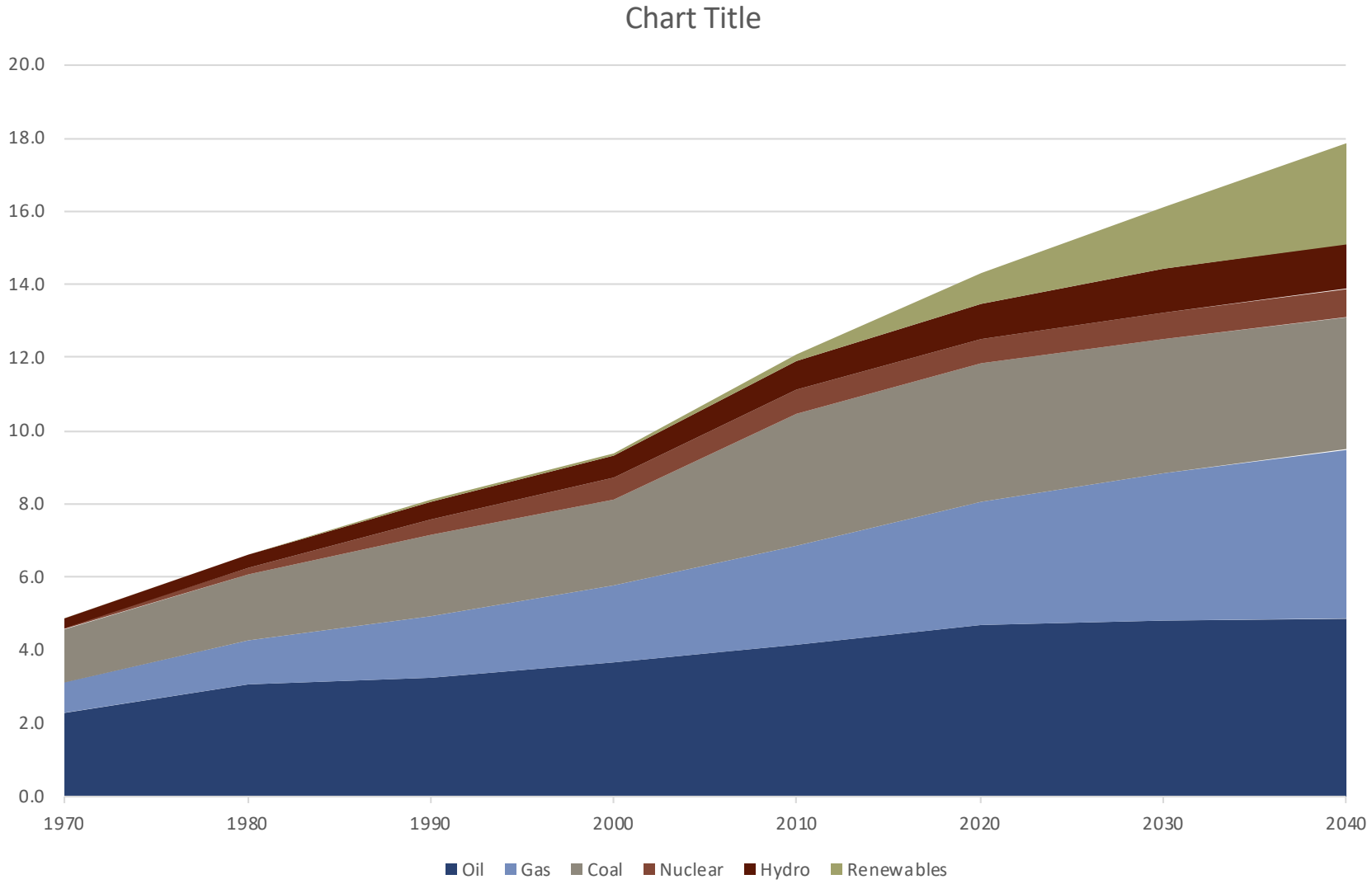


Where to Learn / What to Avoid

***Opportunities for Learning & Cooperation***

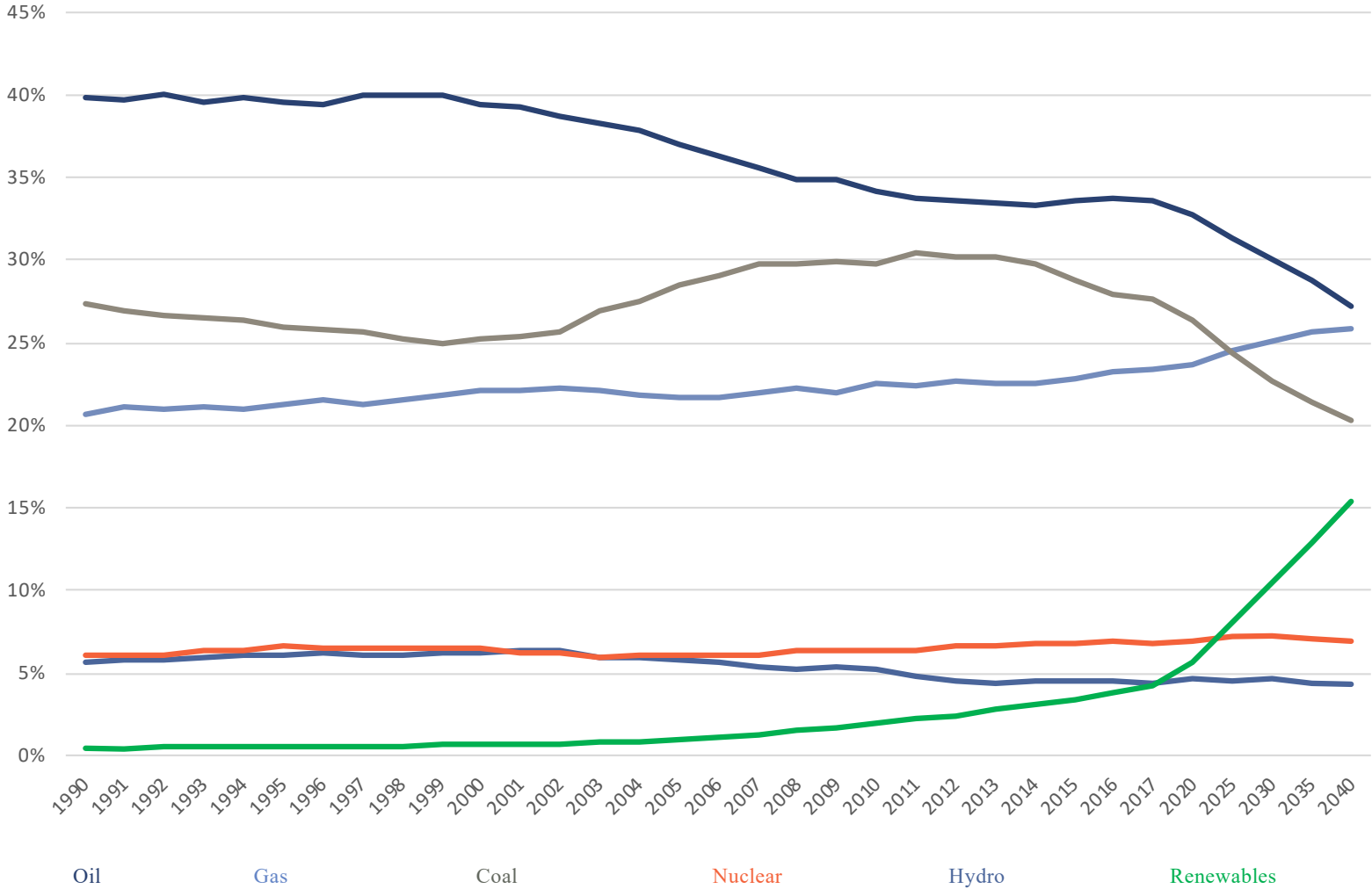
# The World As Is

# Primary Energy Demand 1970 - 20140



***Growth Until 2040 – How to Achieve Climate Goals***

# Primary Energy Demand: Change in Relative Shares



***Will Not Achieve A Carbon Neutral World By 2050***



## *CO2 Emissions*

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- 52 GT
- Current trajectory: 52 – 58 GT in 2030
- For 1.5 °C : 25 – 30 GT in 2030
- Net 0 emissions by 2050

***Only Possible With Massive Technology Deployment Across The Globe***

# Technology

## *Leaders*

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The leaders: 3 countries account for 66% of renewable deployment by 2022

**China      US      India**

Leaders in Europe:

- Denmark : 69 % from renewables
- Ireland: > 33% from renewables
- Germany: > 25% from renewables
- UK: > 25% from renewables

***By 2022 China Leads In Renewables Technology***

### To Achieve Paris Climate Change Goals

- Energy:
  - 1) Renewables: PV / wind
  - 2) Nuclear
  - 3) Hydro
  - 4) **But also oil, gas & coal**
- Buildings:
  - 1) Retrofitting
  - 2) Smart buildings
  - 3) Smart cities

Smart Grids / AI

Transportation

Food & consumption / supply chains

***Will Affect The Way We Live Our Lives***

# Champions

## Europe:

### **Industrial / Energy Companies:**

- ABB, Siemens, Vestas & Co
- Utilities
- BP Shell

### **Buildings:**

- Retrofitting
- New building materials:

### **Transportation:**

- Public transport: rail & road
- German, French & UK manufacturers

→ *Will change the way we live our lives*

## GCC:

### **Energy Companies:**

- Aramco, Adnoc, etc.
- Masdar, New Saudi & other champions
- NERP

### **Buildings:**

- Smart buildings (UAE / Masdar)
- Smart cities KSA

### **Transportation:**

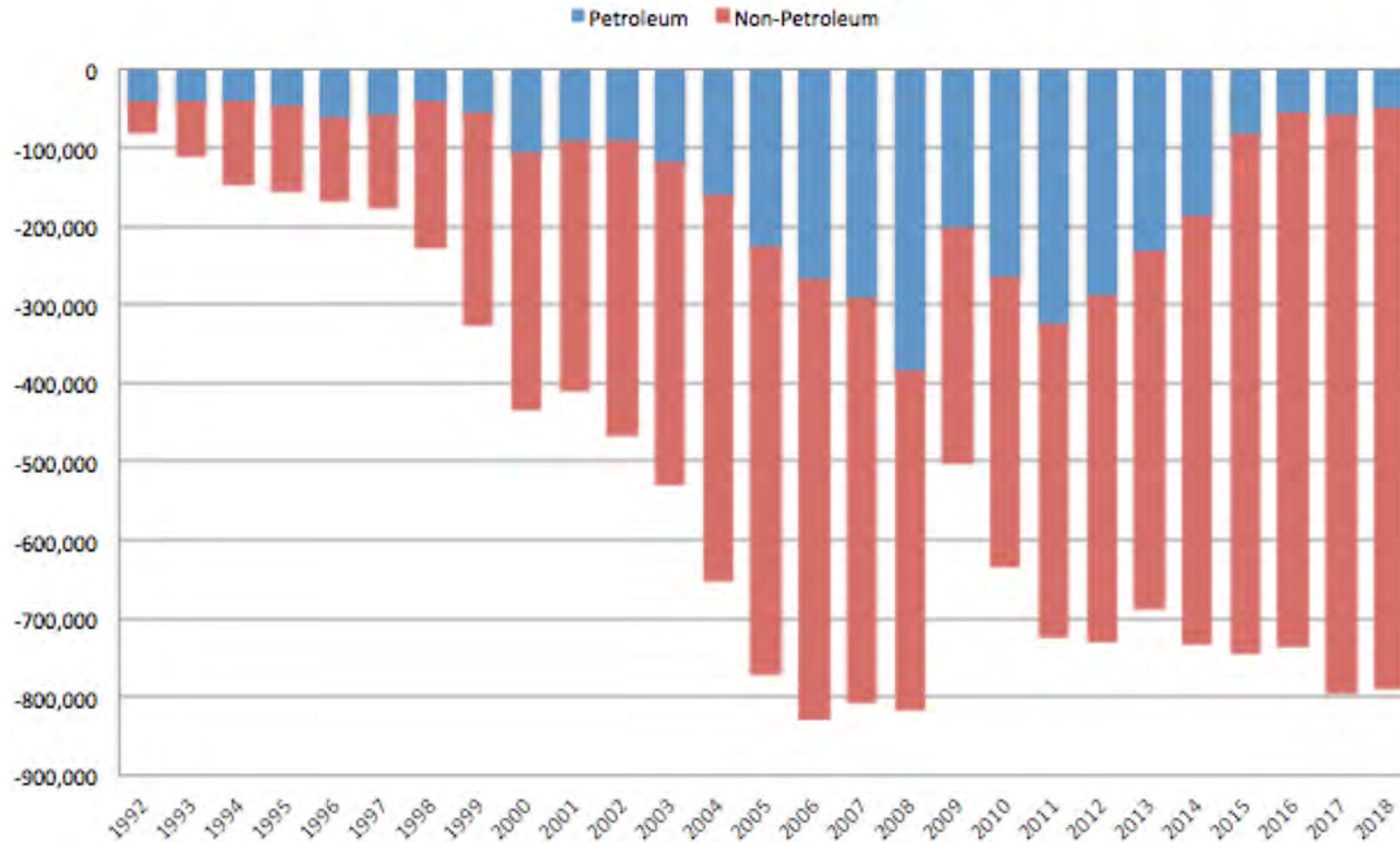
- Mass transit
- Evs hybrids, etc.

→ *Will change the way we live our lives*

*Opportunities For Learning & Shared Experiences*

## Example

### Oil isn't anymore a large component of the U.S. trade deficit Annual trade balance, millions of dollars



Note: 2018 is Jan-Nov Source: U.S. Census Chart: @JavierBlas

*Technology Can Have Real Economic Consequences*

# Policies

# Champions

## Europe:

### Energy:

- EU: 2030 Energy Strategy:
  - 40% emissions reduction compared to 2030
  - 27% renewable energy
- Energiewende

### Buildings:

- Strict building codes:
  - Retrofitting
  - New building materials:

### Transportation:

- Strict emissions standards:
  - EU 2020 renewables strategy
  - Dieselgate :costs

→ *Some outcomes → not desirable*

## GCC:

### Energy :

- Ambitious renewable projects
  - Masdar, New Saudi & other champions
  - NERP

### Buildings:

- Smart buildings (UAE / Masdar)
- Smart cities KSA Great Opportunity

### Transportation:

- Mass transit
- Evs hybrids, etc.

→ *Ensure Policies Are Thought Through*

***Opportunities For Learning & NOT Repeating Mistakes***



# Conclusion

## *Conclusion*

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Technology indispensable to achieve Paris Accord



Europe & GCC CAN learn from each other



Think policies through & learn from mistakes



Watch beyond GCC & Europe: *China*

*Aim Clean, Accessible & Affordable Energy For All*

Thank You!