

5th
conference

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MEDENER INTERNATIONAL
CONFERENCE ON ENERGY TRANSITION



The Role of Renewable Energy in Smoothing Energy Transition in Arab Region

Lisbon, November 30, 2017

RCREEE 

Regional Center for Renewable Energy and Energy Efficiency
المركز الإقليمي للطاقة المتجددة وكفاءة الطاقة

Ashraf Kraidy
Planning Director

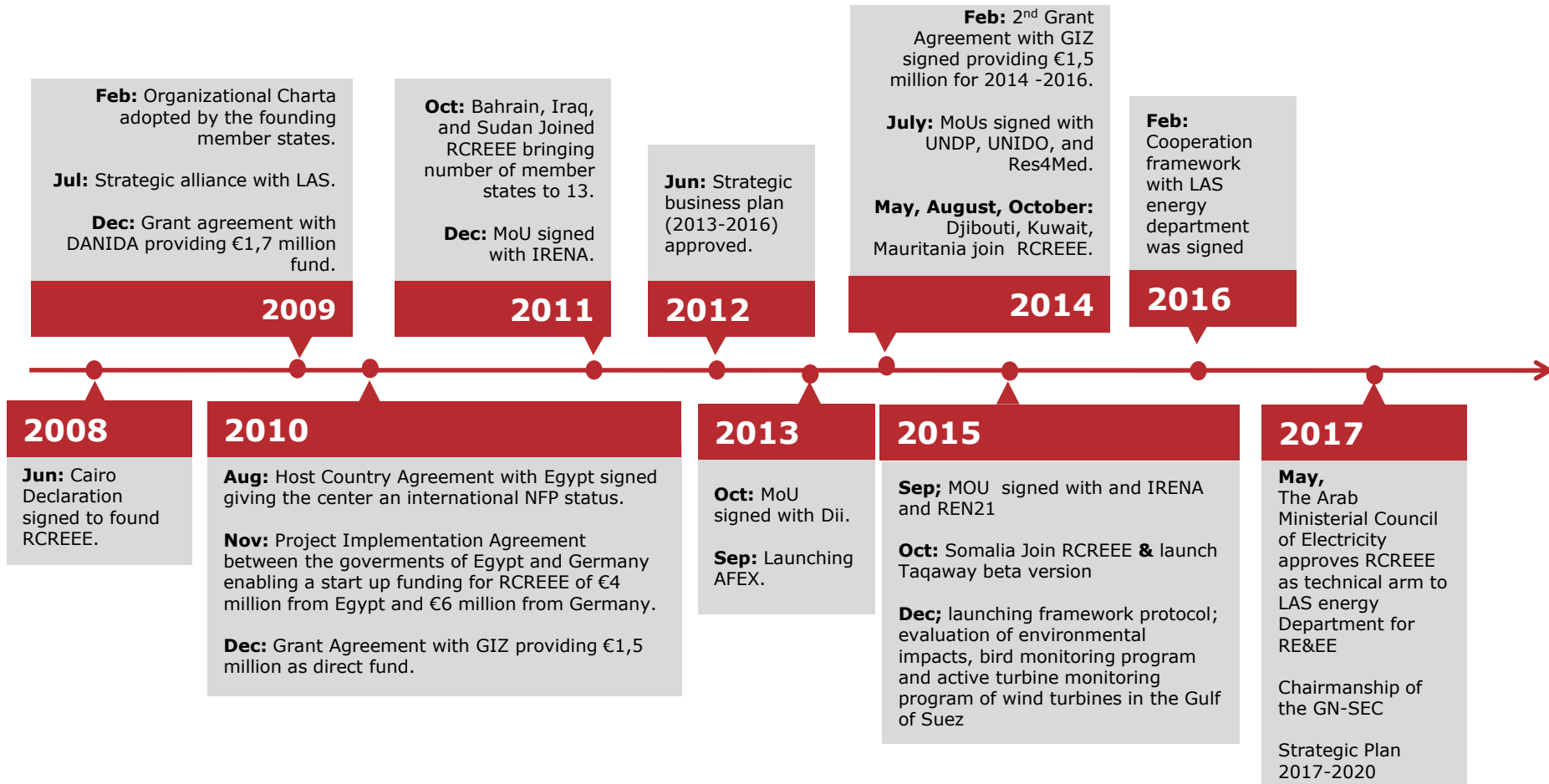
Contents

- **RCREEE Introduction**
- **Energy Profile in the Arab Region**
- **Energy Strategies and future energy perspectives**
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- **Regional Policy Framework**
- **Final Message**

Who We Are

- Independent inter-governmental organization with legal diplomatic status, owned its members countries.
- Operating since 2008 and the headquartered in Cairo, Egypt
- Financed through members' contributions, government grants from Germany and Egypt, and fee-for-service contracts
- Represents national agencies and relevant authorities within the energy and power sectors through the Board of Trustees and National Focal Points of the Secretariat
- Fully Operational Financial and Administration bodies with approved internal regulation and annual financial auditing

History of the Centre



RCREEE Member States



Our Partners

Development Partners



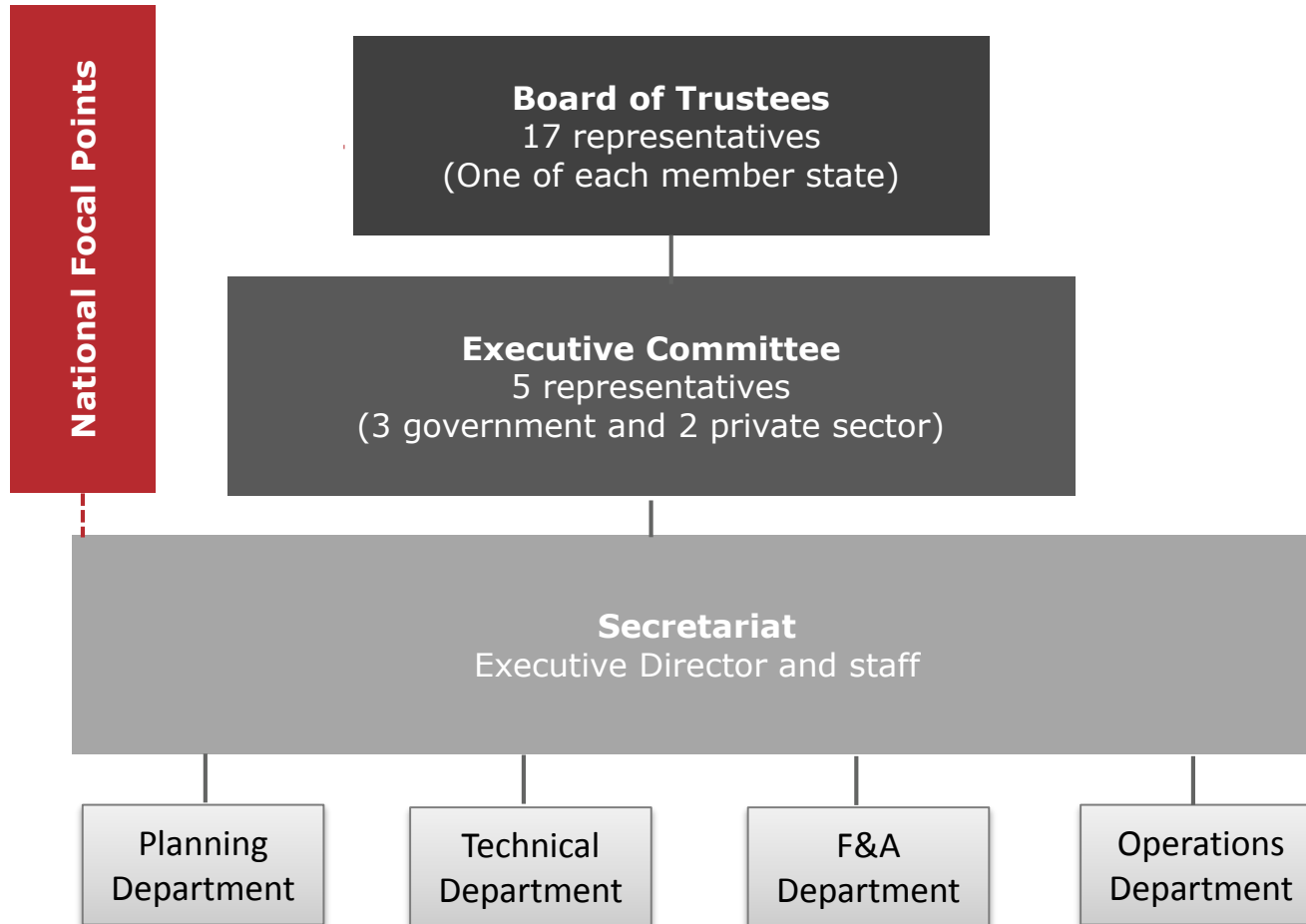
Strategic Partner



Partner Organizations



Institutional set-up of the Centre



Objectives of RCREEE

Vision and Mission

Our Mission/ Vision statement

We, the Regional Center for Renewable Energy and Energy Efficiency, are the strategic partner for Arab countries in driving energy transition contributing to a better life for all our people

Our Partners Trust Us to Contribute To Their Competitive Advantage

We Are Connected, Accessible and Responsive

Our Organizational Structure Is Flexible, Multinational and Attractive For Our Stakeholders

We Grow With Our Assignments

Our Business Is Sustainable

RCREEE Five Success Factors

Major Achievements Of The Centre

Institutional Perspective

- Membership Growing to be 17 MS
- Moving from fully financed Center to be financially Independent Center without loosing our main mission and responsibilities
- Growing Young and Gender Balanced Staff
- The official technical arm of the Arab Ministerial Council of Electricity

Technical Perspective

- Driving Energy Policy Change in the Arab Region
- The only RE&EE Indexing system for the Arab region
- The first regional certification system
- The unique coordination between public sector and developers

Regional Sound Strategic Activities

Arab Future Energy Index AFEX



Arab RE&EE Policy Governance System



Taqaway



SHAMCI



ATMP



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Three Categories of Countries

Countries with
high energy
independency

Decrease domestic
Consumption

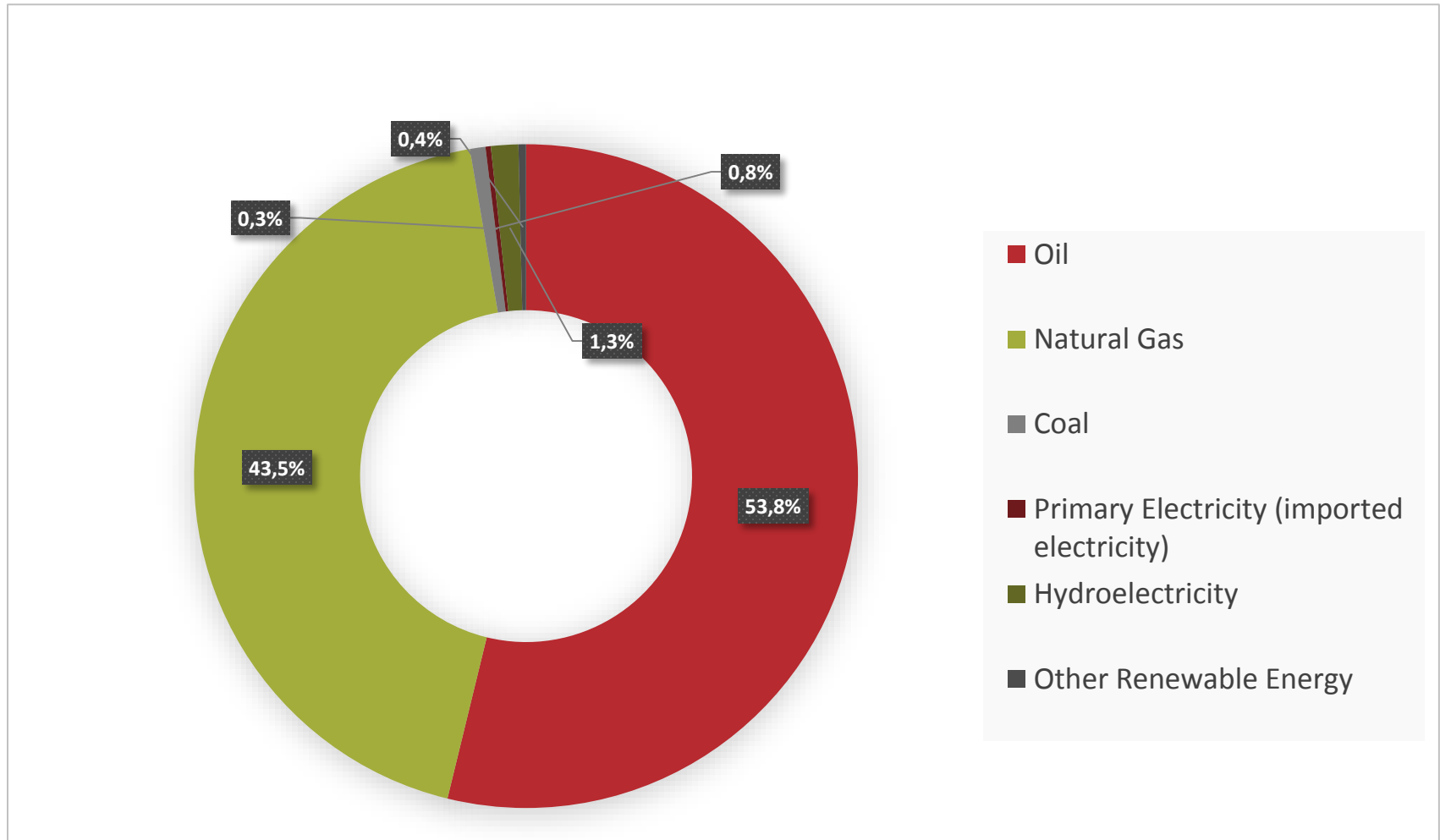
Countries with
low energy
independency

Diversify energy
supply resources

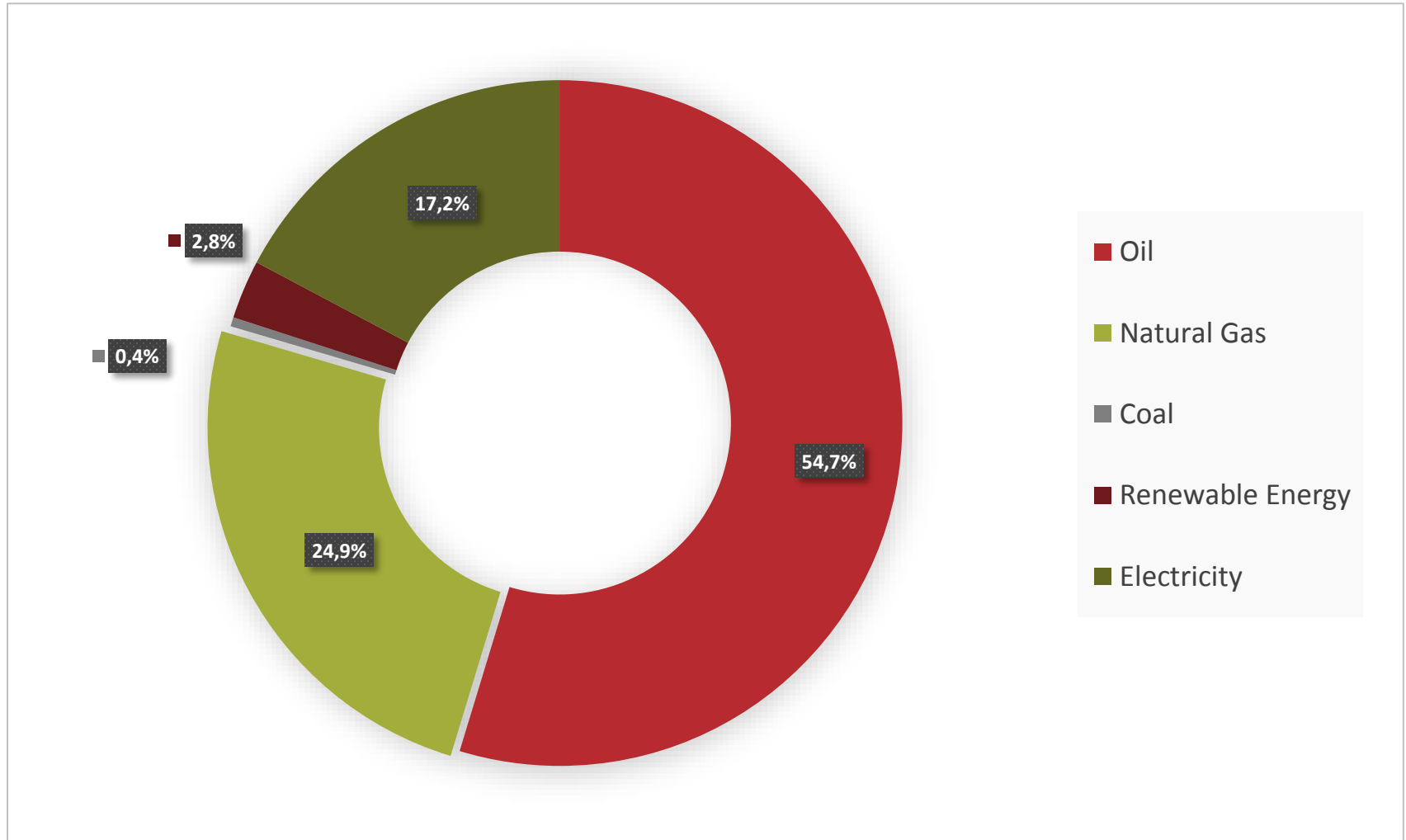
Countries with
negative
energy
independency
and low
electrification
rates

Efficient energy
expanding systems

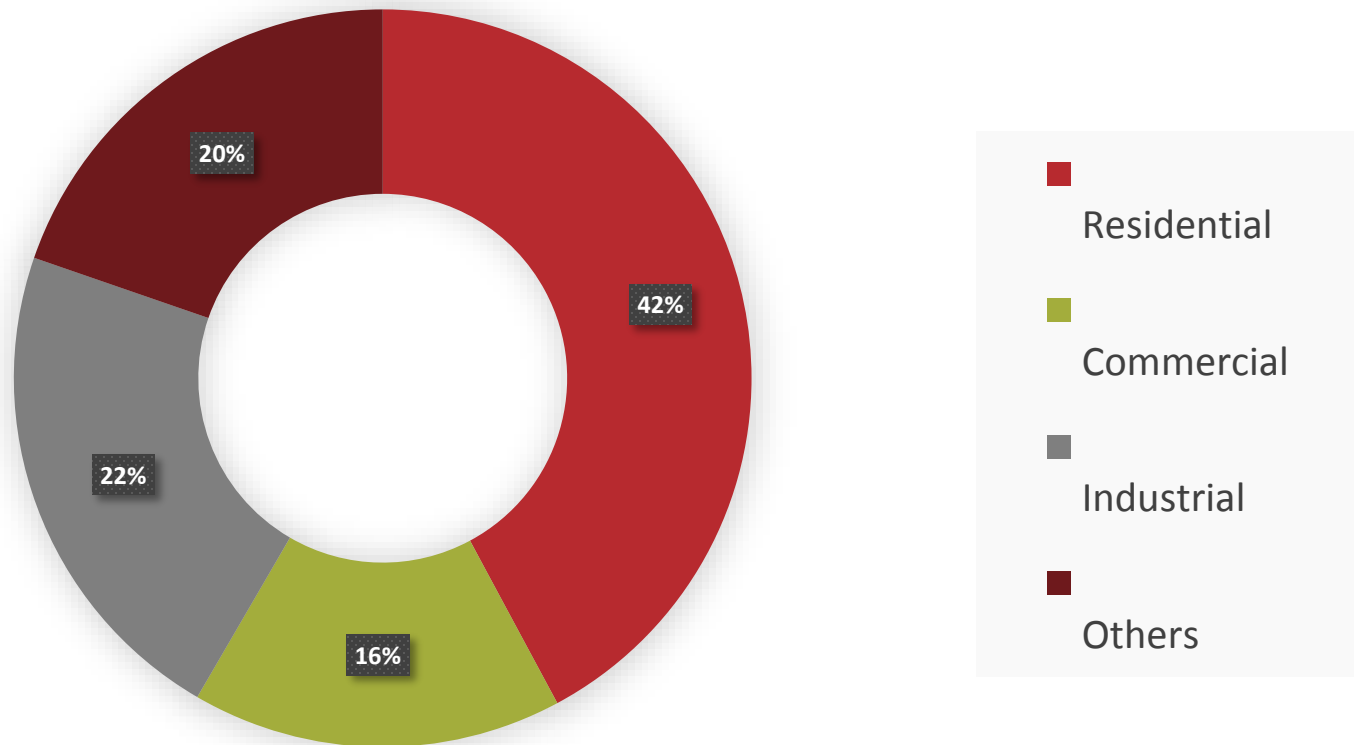
Primary Energy Consumption



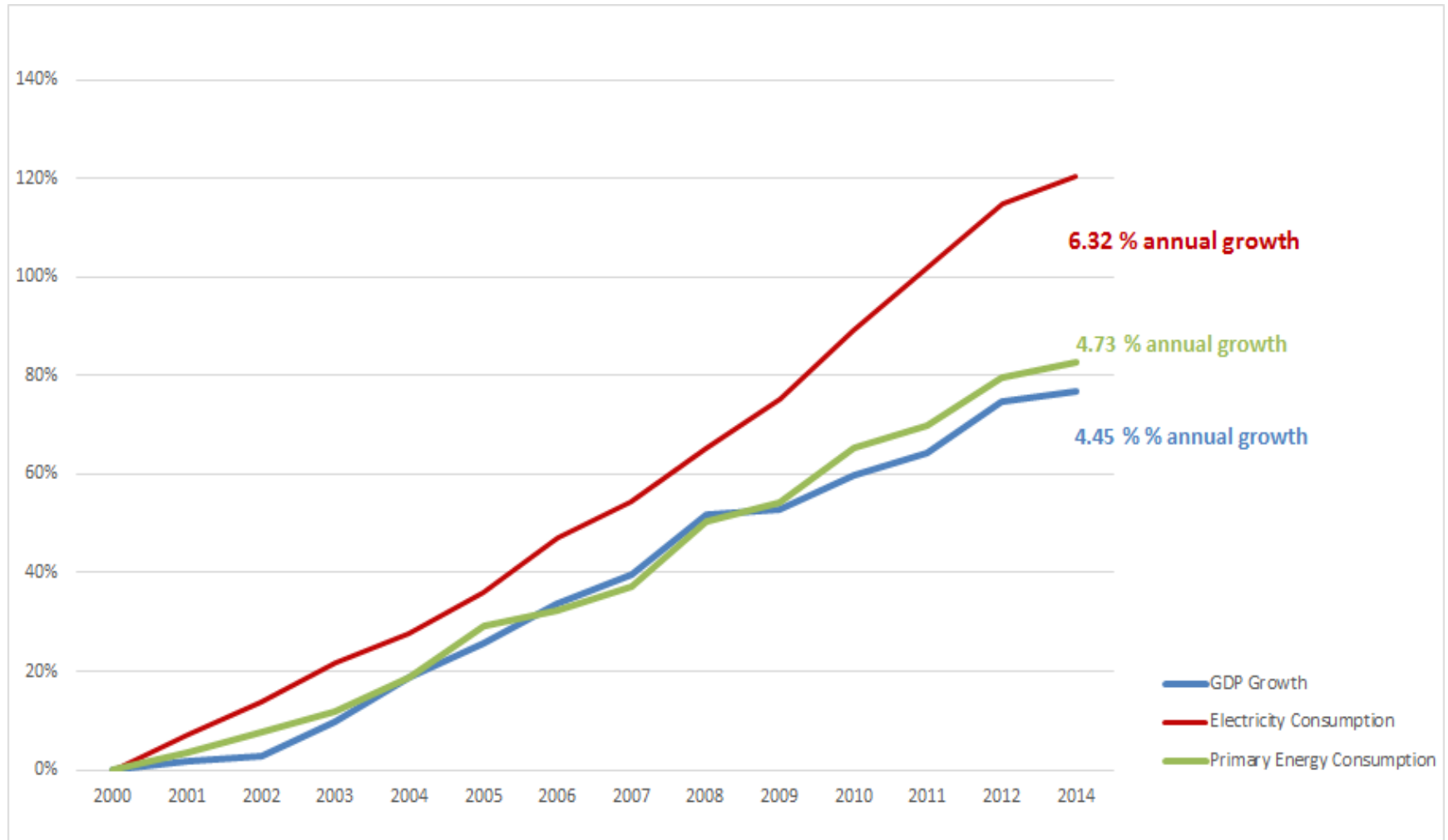
Final Energy Consumption



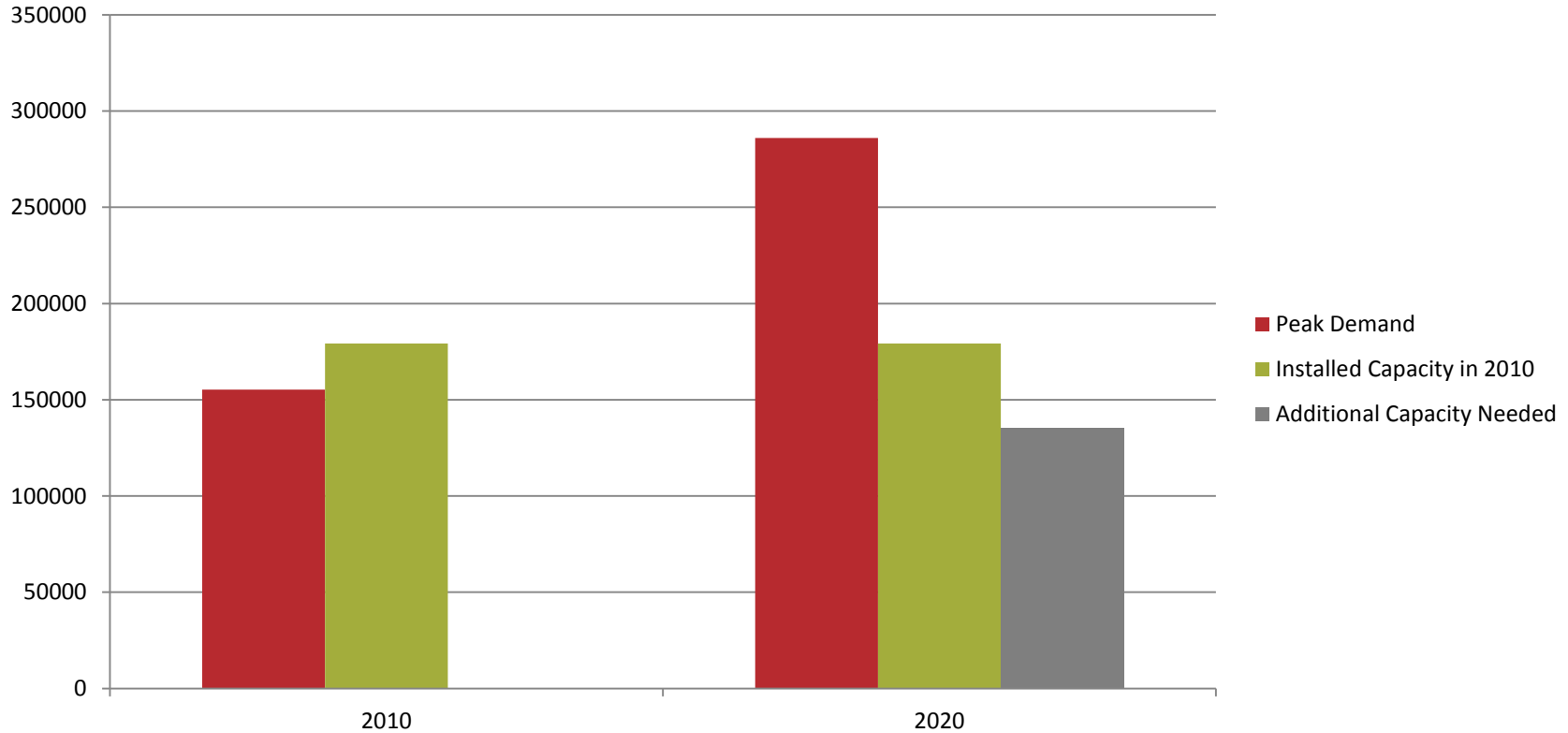
Final Energy Consumption per Sector



Economic Decoupling

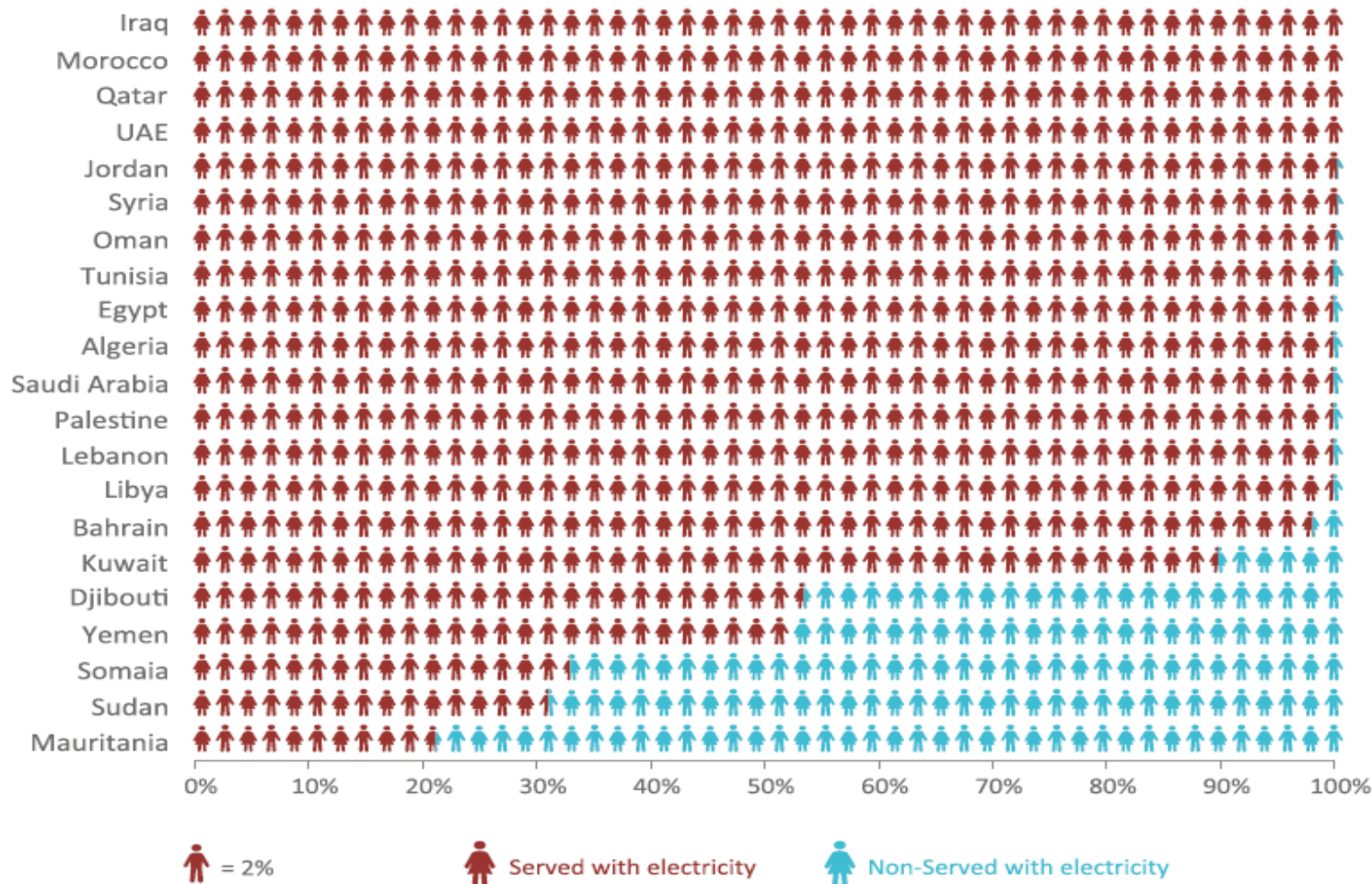


Electricity Growth Forecast 2020

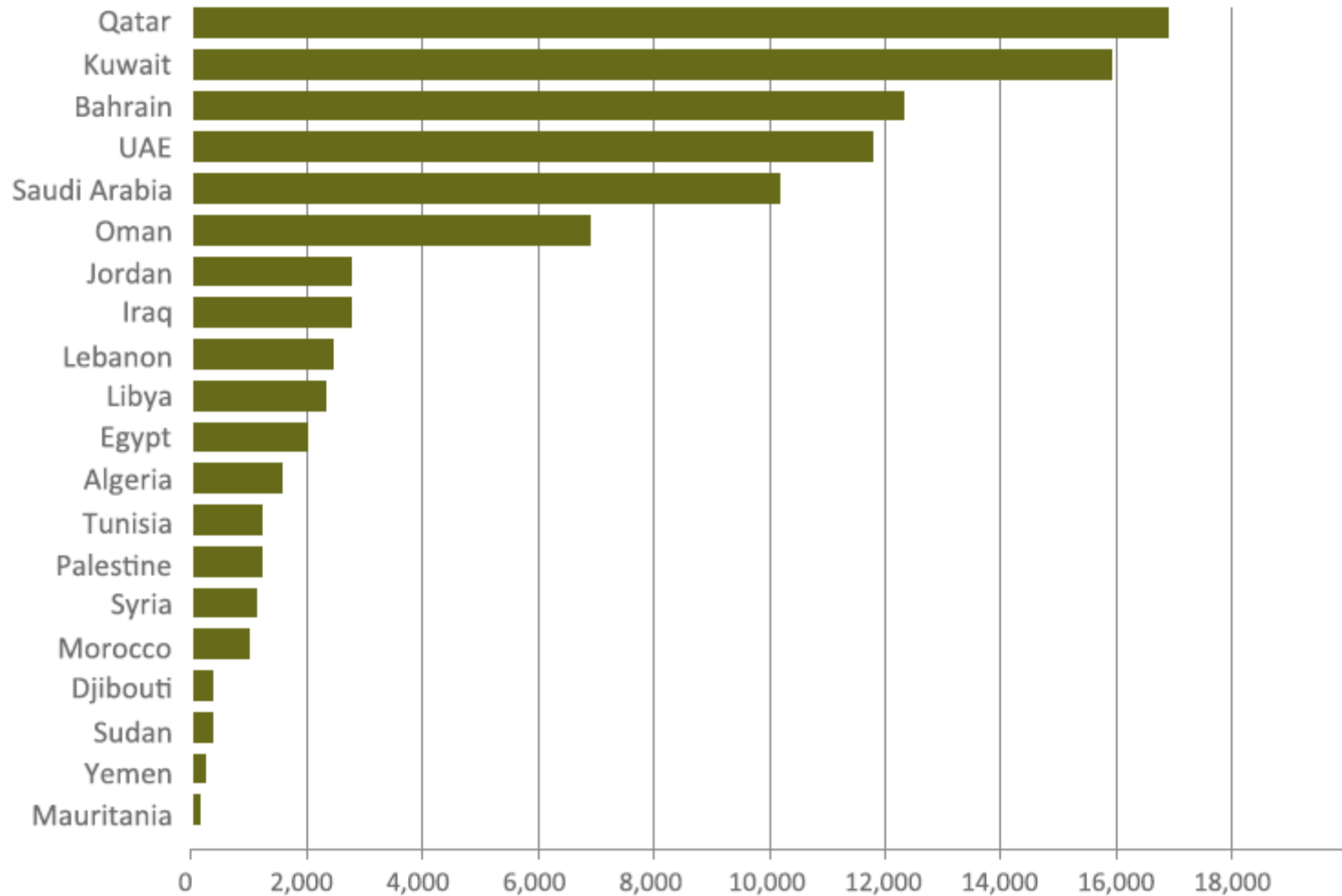


84% Increase
Costs 420 Billion USD by 2020

Percentage of Population Served with Electricity



Per Capita Share of Electricity



■ **Message**

- **Diversification is essential**
- **We need to improve the energy system efficiency**
- **Fighting consumption growth rate incremental**
- **Energy should be consumed more in productive sectors that have a positive revenue to the GDP**
- **Decoupling is a major target**

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■ International Energy Future Profile

USA – The Office of The President

THE ALL-OF-THE-ABOVE ENERGY STRATEGY AS A PATH TO SUSTAINABLE ECONOMIC GROWTH

The U.S. energy sector is:

- Producing more oil and natural gas,
- Generating more electricity from renewables
- Consuming less petroleum while holding electricity consumption constant.

International Energy Future Profile

The Strategy has 3 key elements:

- Support economic growth and job creation,
- Enhance energy security,
- Deploy low-carbon energy technologies and lay the foundation for a clean energy future. done.

The President's All-of-the-Above Energy Strategy:

- Embraces natural gas as a transitional fuel,
- Supports renewables, nuclear, and other zero-carbon energy sources (technology and innovation) also invests in energy efficiency.

International Energy Future Profile

Canadian Energy Strategy: Shaping Canada's Energy Future

Strategy Themes

- Sustainability and Conservation with decarbonization
- Technology and Innovation
- Delivering Energy to People

Vision and Principles

- Collaboration and transparency
- Social, environmental and climate change responsibilities
- Energy security and stability

International Energy Future Profile

EU Energy Road Map 2050

A SECURE, COMPETITIVE AND DECARBONISED ENERGY SYSTEM IN 2050 IS POSSIBLE

1. Decarbonization is possible – and can be less costly than current policies in the long-run
2. Higher capital expenditure and lower fuel costs
3. Electricity plays an increasing role with RE&EE
4. Electricity prices rise until 2030 and then decline
5. Nuclear energy provides an important contribution

KSA Vision 2030

- Energy Competitiveness

- Subsidy Restructuring
- Move to energy market price (spot market)
- Energy Diversification

- Sustainable Environment

- Waste and Water management
- Recycling and Combat Desertification

Egypt Vision 2030 - Energy

- Energy Security
- Energy Share in GDP Increase
- Use Local Resources
- Sustainable and Efficient Management for the Energy Sector
- Decrease Energy Intensity
- Limit Environmental Impact of the Energy Sector

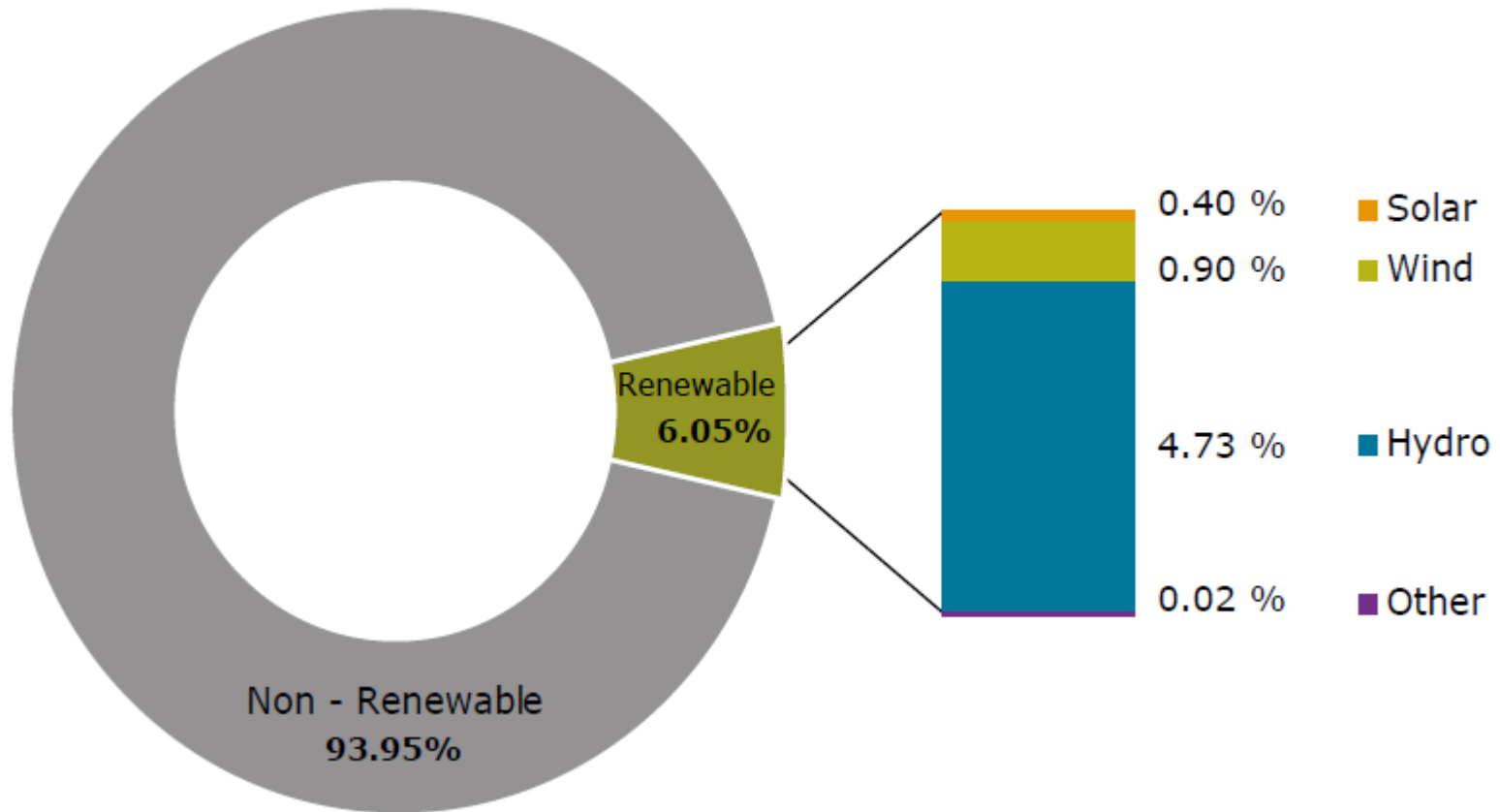
Message

- **The world is decarbonizing and electrifying the energy services, let's deliver electricity**
- **We need to face the reality of oil needs decrease worldwide**
- **Innovation is the most important component in future energy systems, let's go for it**

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Renewable Energy Share 2016



Renewable Energy Regional Targets



~6%

of the total installed capacity.

>3000 MW

operational projects



>80 GW

Announced Targets up to 2030



> 2800 MW


Projects under construction

Renewable Energy National in SEMCs


Algeria


 27% by 2030 (~21.6GW)


 ~305MW (1.9% of total capacity)

 Adoption of FiT scheme and all RE projects have now a guaranteed access to the grid


Egypt


 20% by 2022 (~9.5GW)

 ~920MW (2% of total generation capacity)


 Inaugurating 200MW El-Zayt wind farm and signing 10 PPAs FiT Round 1

Libya


 10% by 2025 (2.2GW)

 The Renewable Energy Authority of Libya (REAOL) has started defining a national plan intended to finance small-scale RE projects.

Jordan

 10% by 2020 (~1850MW)

 ~250MW (5.7% of total generation capacity)

 Commissioning Tafila 117 MW wind farm and signing several PPA under Round 1 and 2 of Direct Proposals Scheme

Renewable Energy National Portfolio



Palestine



10% by 2020 (~130MW)



~5GW

(3.4% of total generation capacity)



Attractive RE policies (direct proposal submission and net metering)



Lebanon



12% by 2020 (1GW)



~20MW



Leveraging of private funds for financing small-scale projects through its National Energy Efficiency and Renewable Energy Action (NEEREA) and the commissioning of the Beirut River Solar Snake project.



Tunisia



30% by 2030 (3.7GW)



~265MW

(6.2% of total generation capacity)



Enacting new RE Law and smart net metering scheme for small-scale PV projects



Morocco



52% by 2030 (~10GW)



~1GW

(12% of total generation capacity)

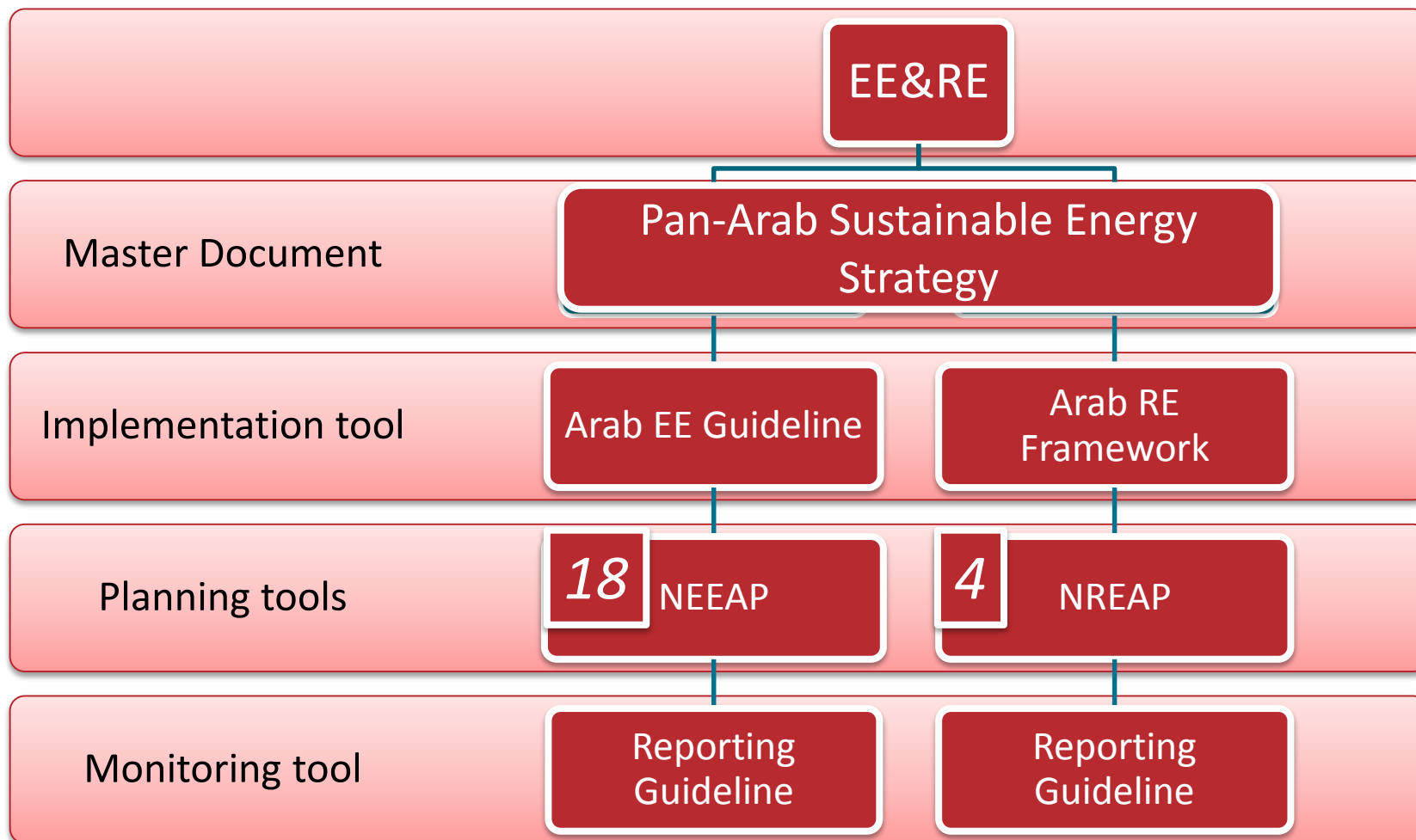


Commissioning Noor 1 CSP 160 MW and awarding 850MW wind project

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Regional RE&EE Policy Framework



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■ **Message**

- **Energy is not any more a resource – it's an important component for sustainable economic growth**
- **RE is important to smoothen the economic burden of loosing oil income**
- **EE is important to increase the impact of RE**
- **It's not always best practice ...it's best fit**

Thank you