



Characteristics of Power Systems – Why actions matter!

OECD vs. non-OECD

e.g. Germany, Spain, US



(some) developing & emerging economies

Stagnating demand



Strong demand growth

Highly meshed grid



Weak distribution and transmission system **infrastructure** and operation

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Established markets (power ex.)



Different institutional set-ups

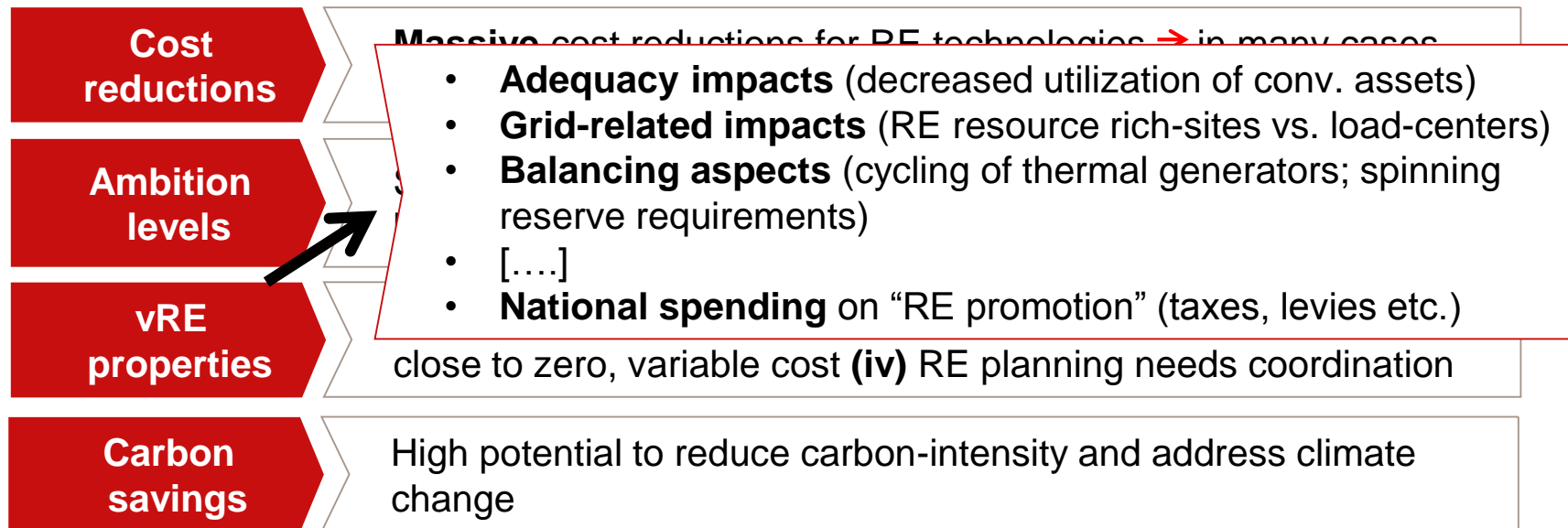
Mediocre RE resources



Excellent RE resources



Key reasons for grid integration measures

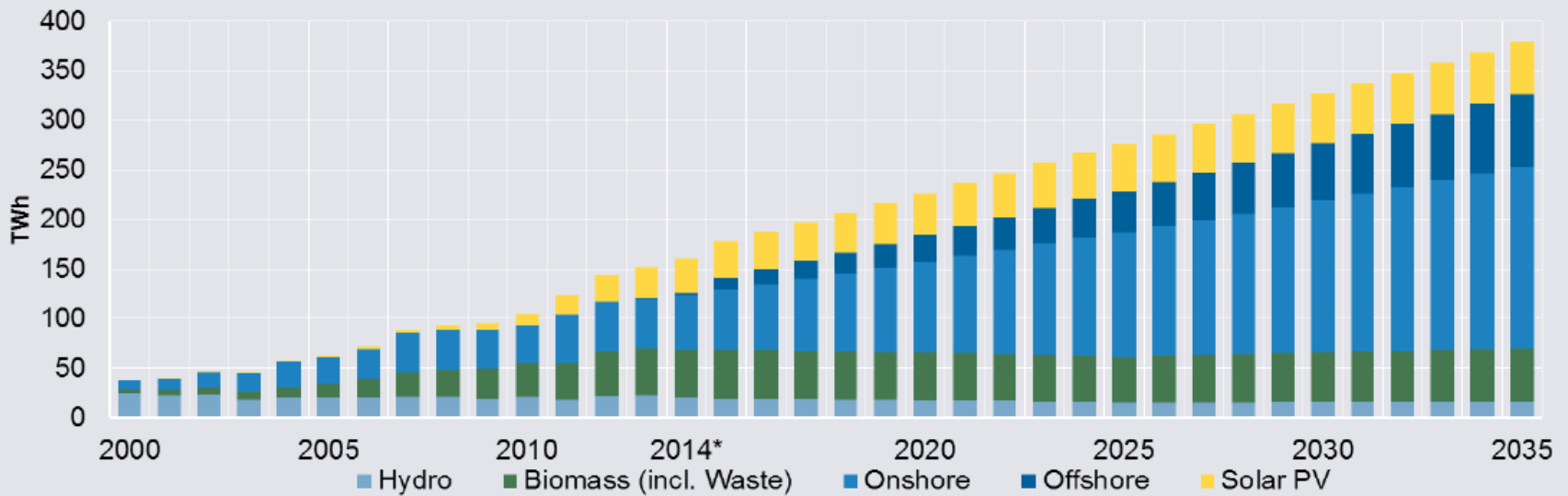


Clear orientation on possible short-, medium and long-term integration measures, including associated costs and benefits, needed



vRE integration challenge: It's all about wind and solar!

Gross electricity generation of renewable energies 2000 - 2035



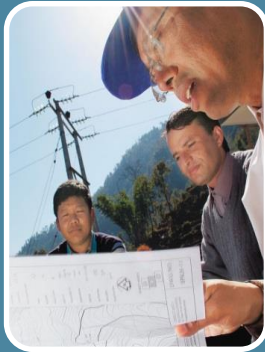
2000 - 2014: AGEb (2015a); 2015 - 2035: own calculation on basis of BNetzA (2014)/BNetzA (2015b)

* preliminary

Source: Agora Energiewende 2016



Main work packages in partner countries



Grids and vRE Integration

- Expansion of transmission and distribution grids
- Grid integration studies
- Assessments to increase system flexibility
- Assessments for optimized operational routines
- Utilization of grid services from vRE

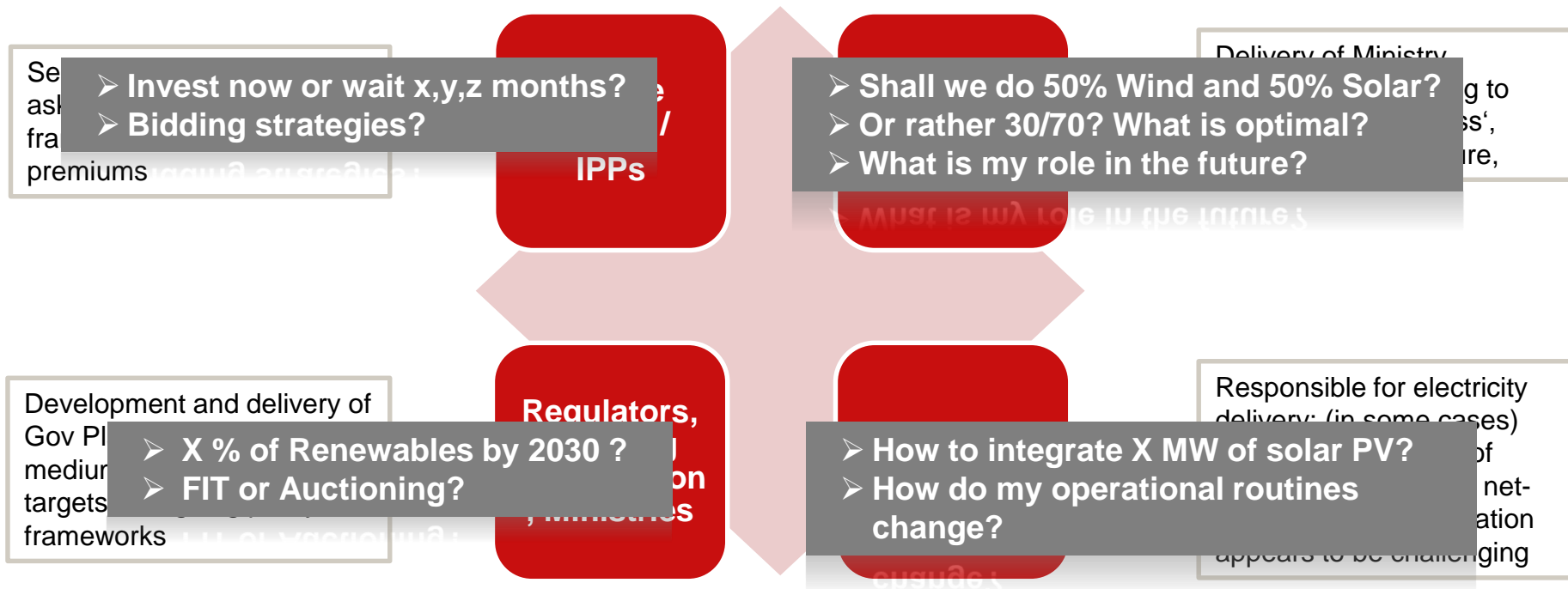


Regulatory Measures and Markets

- RE and Sector planning
- Design of smart integration policies (FIT, Auction Hybrid)
- De-Risking Investments
- Coordination of sector players



Different actors, questions, roles and perspectives



Feasible Pathways for Renewable Energies need holistic perspective



Thank you for your attention!



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1st INTERNATIONAL CONFERENCE ON

Large-Scale Grid Integration of Renewable Energy in India

6 - 8 September 2017

 New Delhi, India

ENDORSED BY:

 GOVERNMENT OF INDIA
MINISTRY OF NEW AND RENEWABLE ENERGY

 GOVERNMENT OF INDIA
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If you would like to present a paper at the conference please visit our website:
www.regridintegrationindia.org

- To submit a paper, upload an abstract of maximum 3,000 characters (free style) between 17 January & 31 March 2017.
- Final papers must then be submitted online by 31 July 2017.
- As the conference language is English, all abstracts have to be written in English.
- All participants are responsible for paying their own travel and hotel expenses.
- Conference admission is free.

The Conference provides an International Forum to:

- Discuss technical and economic issues of the large-scale integration of solar and wind power including the recent advances in transmission technologies (AC and DC)
- Discuss worldwide project experiences
- Discuss innovative ideas and present results from ongoing research
- Stimulate interdisciplinary thinking between renewable energy and power transmission and distribution industries, as well as universities
- Identify subjects requiring more research efforts

The Government of India has set the very ambitious goal to install 175 GW of renewable energy generation capacity by 2022. Grid integration thus becomes a very critical challenge to successfully accomplish this target. This international conference aims to connect international experts and Indian stakeholders to jointly discuss the latest technological, regulatory and conceptual developments in this field.

