

Toward renewable energy
deployment:
parliamentary action after COP21

IRENA Legislator Forum

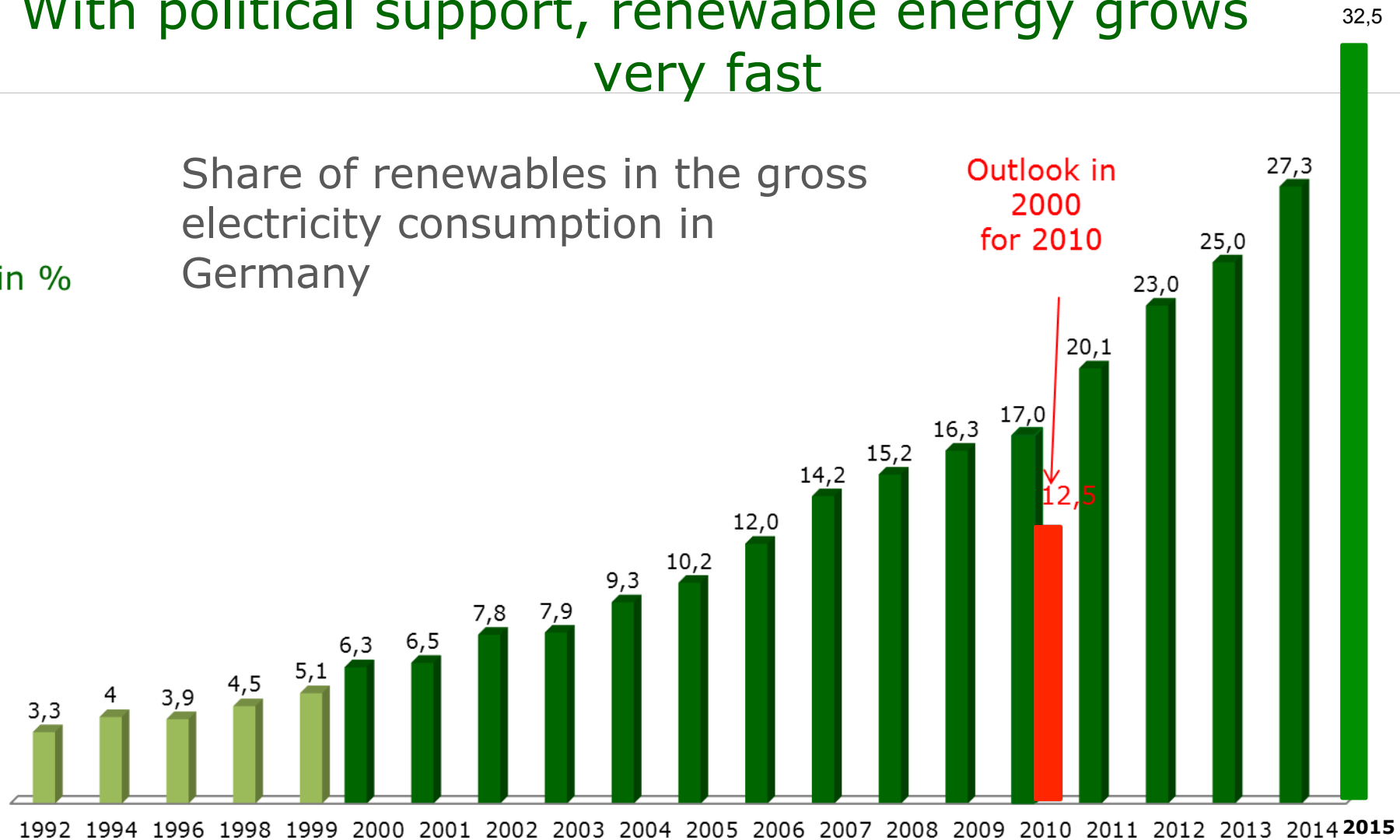
Abu Dhabi 15. January 2016

Hans-Josef Fell
President Energy Watch Group
Member German Parliament 1998-2013
Author of German Feed in Tariff Law

With political support, renewable energy grows very fast

in %

Share of renewables in the gross electricity consumption in Germany



Quelle: BMU, BEE, bdew

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Parliamentarians are decisive:

In the year 2000, the German Feed
in Tariff Law (EEG) was proposed,
formulated and decided by the
German Parliament (Bundestag)
only.

Not by the government.

Society and Parliamentarians organized energy transition in Germany

- In Germany, demonstrations against nuclear & coal contributed to a renewable-friendly environment
- **Therefore:** Bottom-up instead of drop-down:
 - Energy transition is based widely on the people, not major companies
 - Society needs to be included in the decision making process in an early stage in order to increase private investments from the bottom
 - For example: Tenders is not an effective approach because bigger companies can participate only
- Information:
 - Medias, exhibitions, conferences, speeches: all organised by local NGOs in cooperation with Members of Parliament
- Financing: Cooperatives, companies

COP 21: Stop Climate warming at 2° C

But at today's warming at 1° C is already unacceptable:
aridity and forest fires, floods and storms, sea level rising



The better choice is:
Global Cooling

Global cooling can be achieved by two parallel strategies:

1. Stop greenhouse gas emission

(not only a reduction of emissions)

- switch to 100% renewables
- completely stop the use of fossil and nuclear energies in energy, chemistry, transport, agriculture

2. Take out carbon from atmosphere

- convert plants to humus soil (biocoal)
- reforesting big areas, greening the deserts
- Organic agriculture

The Target must be 350 ppm CO₂

This leads to global cooling, instead of global warming

Parliamentarian actions after COP 21

Promoting acts for Renewable Energy and carbon sinks:

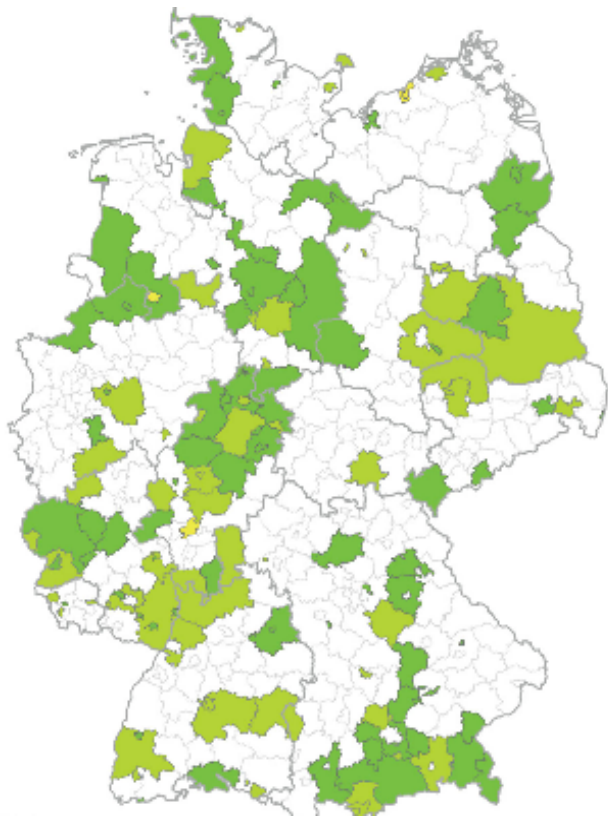
- **Climate protection into national constitution**
- **Laws for feed-in-tariffs** (GET FIT for developing countries)
- **Laws for promoting organic farming**
- **Tax relief** for renewables
- **Carbon tax, Canceling subsidies** for fossil/nuclear economy
- **Research and education** for renewables and organic farming
- **Reducing obstacles** for approval
- Dispose big areas for renewables, reforestation and greening

Not successful:

- Tendering or certificate systems
- Emission trading

100% **RENEWABLES**

www.go100re.net



Countries with a 100% RE target

*Denmark; Sweden; Costa Rica;
Iceland; Cape Verde*

Cities with 100% RE target

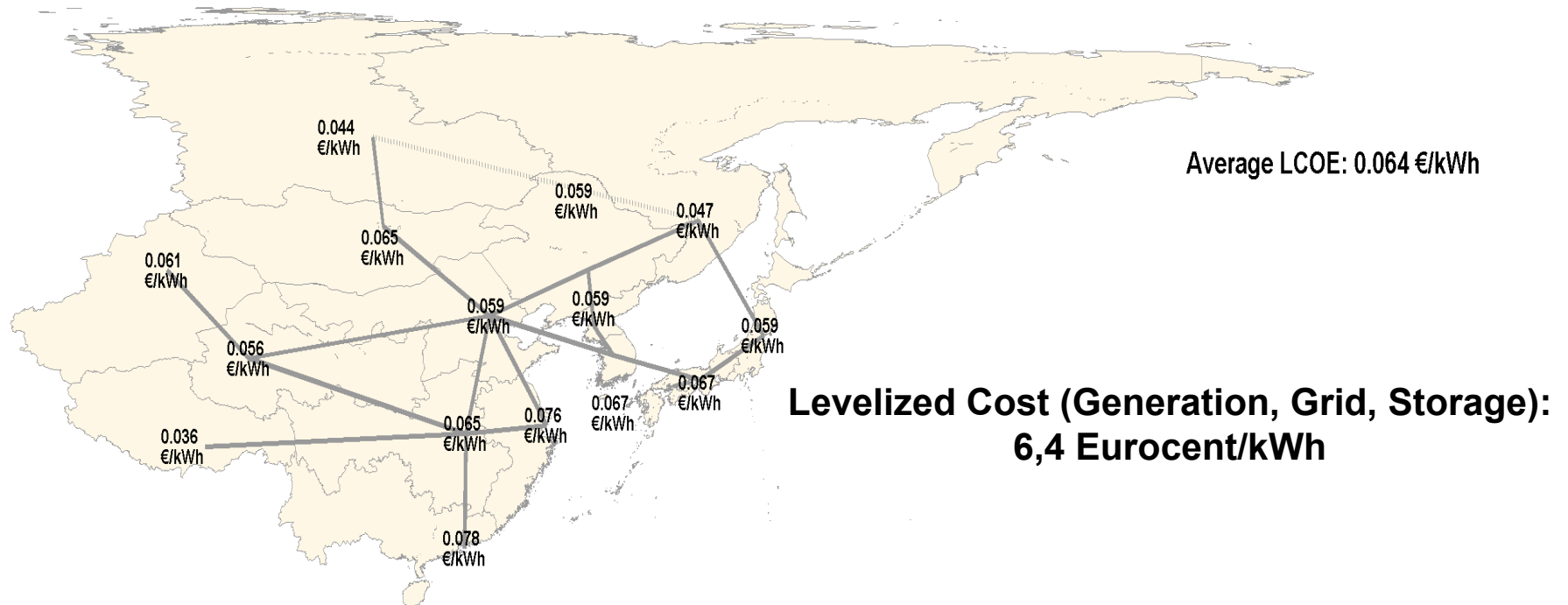
*Barcelona; Masdar City; Munich;
Msheireb Downtown Doha; Vancouver;
San Francisco; Copenhagen; Sydney;
and many more*

Regions with 100% RE target

*Scotland; Upper Austria; Fukushima; Jecu/
Korea; Kasese/Uganda*

North-East Asia Super Grid 100% Renewable Energy

Levelized Cost of Electricity
(generation, curtailment and storage)

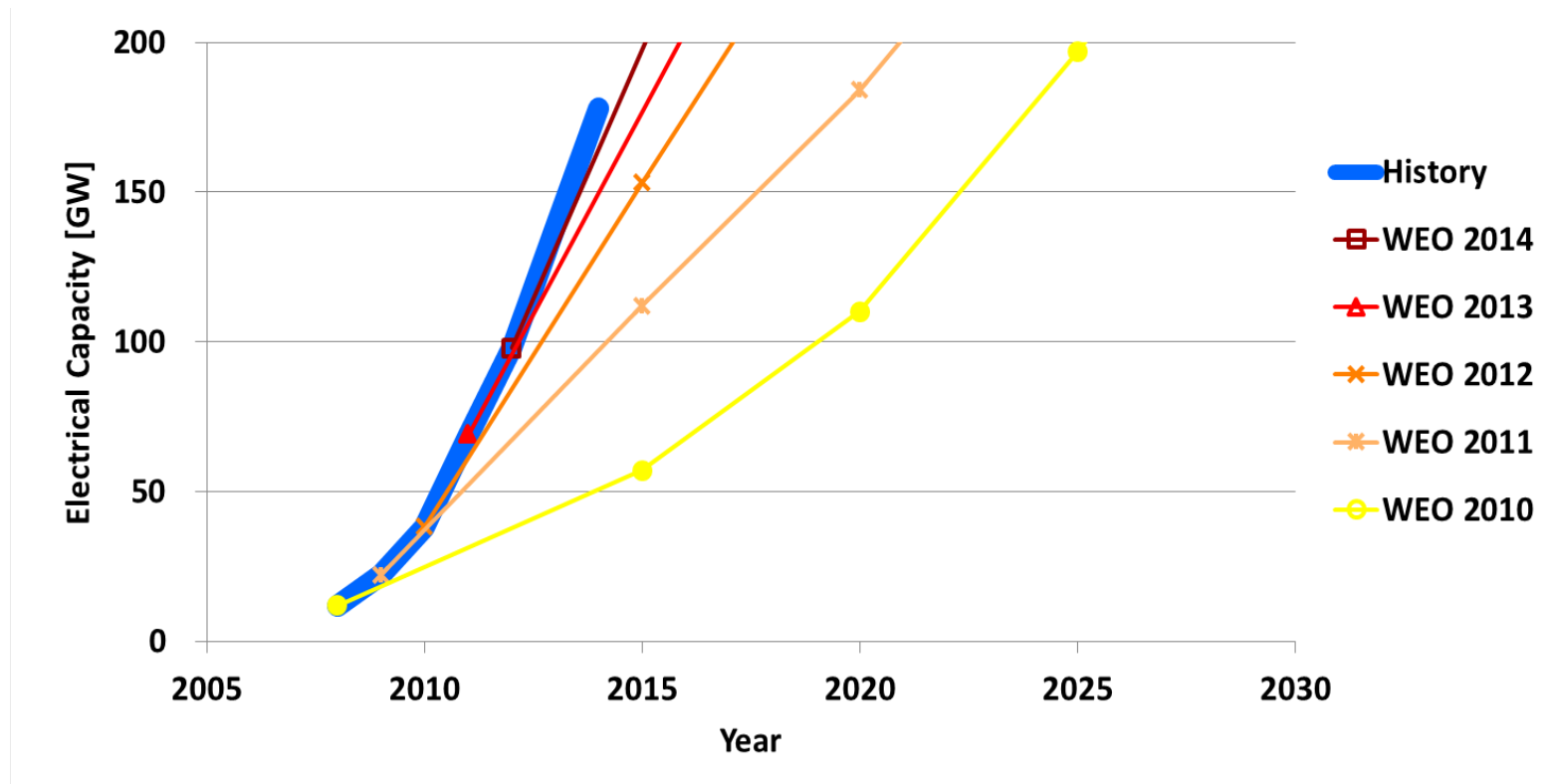


2016 Energy Watch Group will create a world study for 100% Renewables
Sponsors are welcome

Source: Lappeenranta Universität, Finnland
Authors: Dimitrii Bogdanov, Christian Breyer

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WEO Photovoltaic: Projections and Reality



Reality exceeded all projections of WEO by far.
PV, Wind grow much faster than by IEA projected.
Nuclear and fossil grow much less than projected



Greening the degraded land:

20% greened degraded land areas with oleiferous plants can substitute for the global mineral oil demand



Around 200 Gt CO₂ could be taken out of atmosphere in next 30 years

With 100% REN this will lead to **350 ppm (Global Cooling)**

Greened Egypt desert at Luxor with Yatropha brings oil & food

Water + Electricity from the same windmill



Water desalination: up to 1000 m³ per day
Electricity additional: up to 50 kW

Water cost: about 1 EURO per m³

Source: SolteQ

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100% RE and greening degraded land is decisive to overcome poverty and oil wars

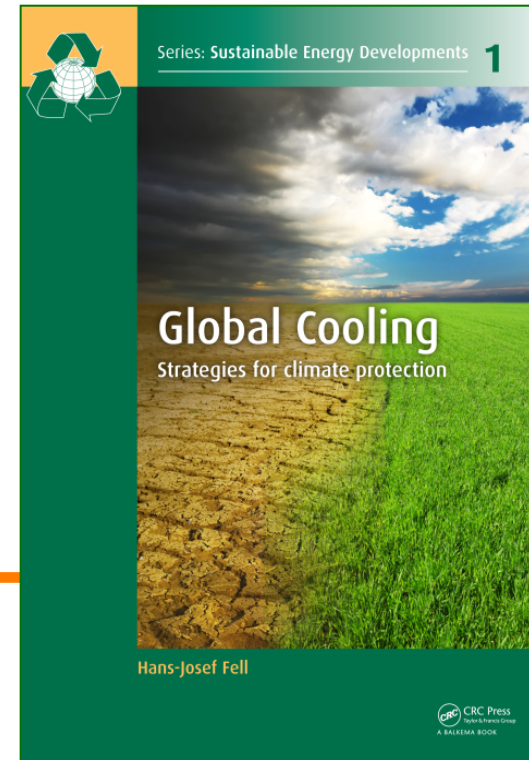


Refugees, Budapest Sept 2015

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***Thank You
Very Much for
Your Attention!***



www.hans-josef-fell.de