

Climate Change, Energy Security and Sustainability Green Growth

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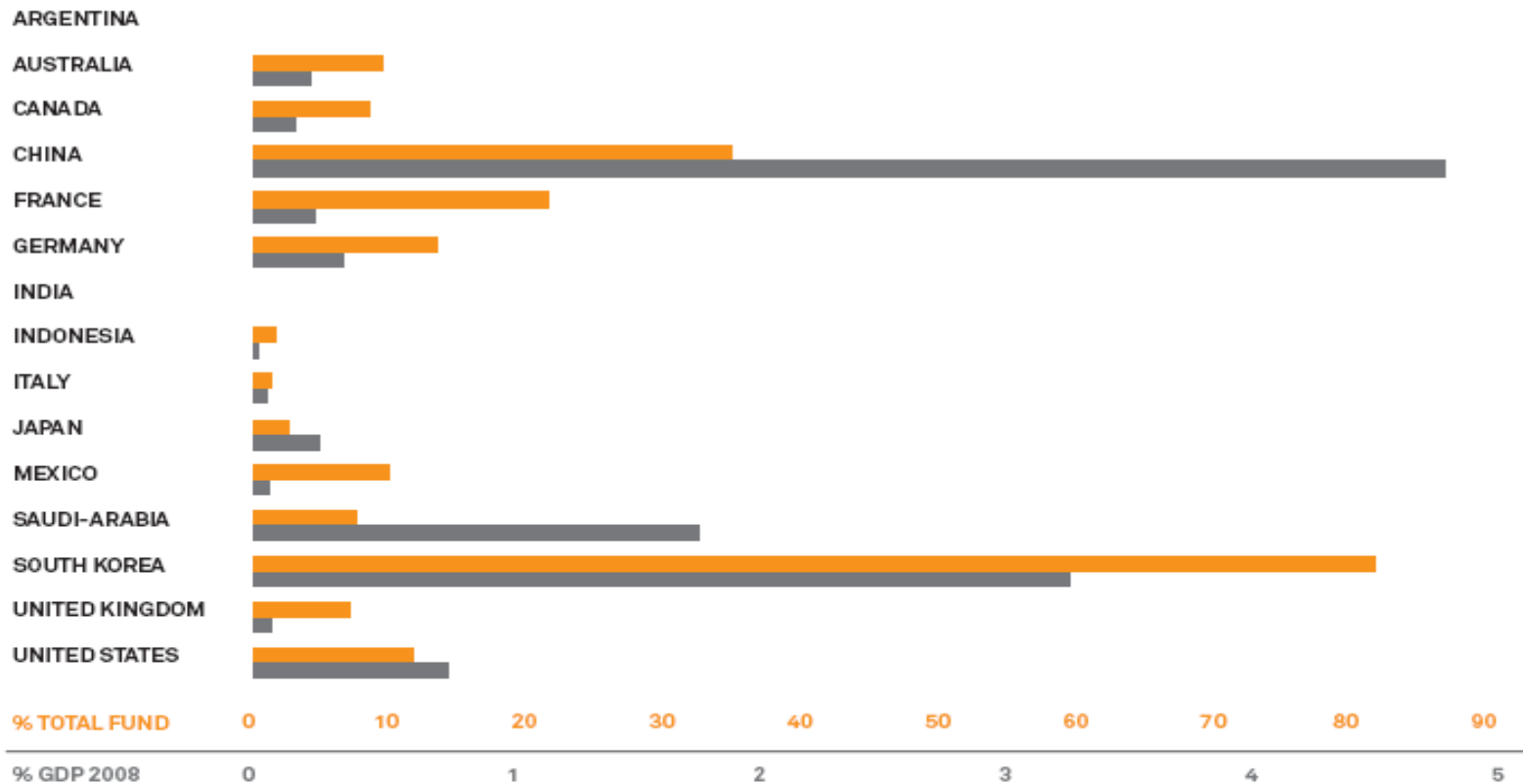
Facts on Energy

- **Global oil supply** can be enlarged up to 100 Mio. barrel/day only with substantial investments in oil exploration
- If oil demand will increase substantially, **peak oil might be reached in 2020**
- Global energy demand will **double by 2030**
- Especially **energy demand** of fast growing countries like China and India **will explode**
- Russia/Iran: high gas reserves - **what about the future?**

The Challenge

- **Time of cheap energy is over** - timing is everything
- **Danger: wait and see** - high oil price will harm the economy; climate policy will make fossil fuel more expensive
- **We urgently need CO2 free, save and affordable energy!** 25 years for new technology to be adopted
- **Technological breakthrough** necessary
- Competitive advantage: to anticipate fuel **scarcity and climate policy** (bad example: car industry)
- **Renewable energy is the key**

Green Investments of Economic Programms (% Fund, % GDP)

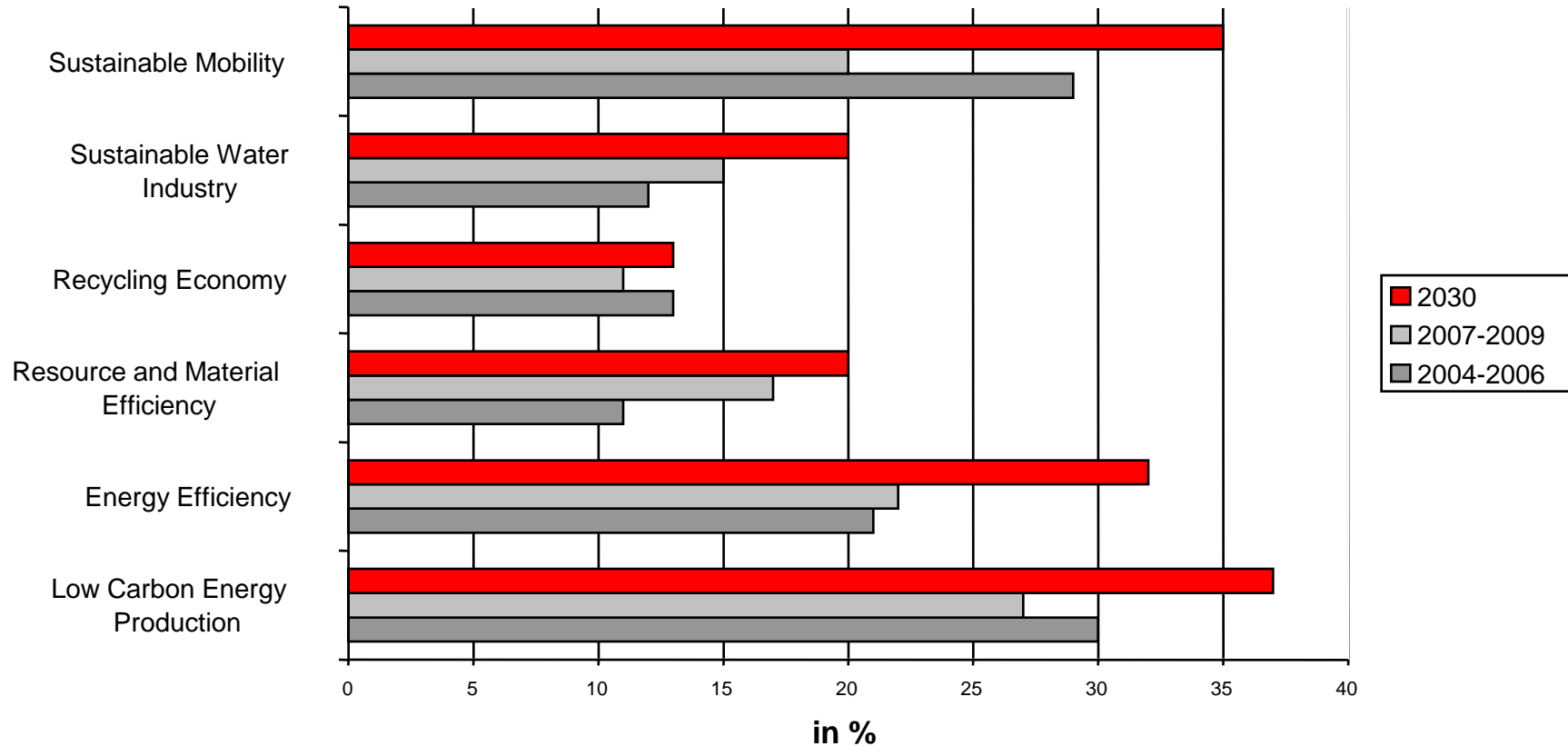


Source: Edenhofer, Stern (2009)

Economic Potentials are huge

- **CO2 free, safe and affordable energy** technologies urgently needed
- **Investments in climate protection** will strengthen new markets - even in financial crisis
- Companies which offer these technologies will have **a competitive advantage**
- **New emerging markets** need to adopt climate friendly technologies

Emerging Climate Markets – Profit Growth Potentials



Source: Roland Berger, DIW

Green Growth

- Job potentials huge: several million additional jobs; Germany: 1 Million by 2020
- Energy Efficiency, Power Plants, green mobility (alternative fuels, electro-mobility), renewable energy, smart grids, smart metering, energy-data and transportation infrastructure

Potentials for Regions and Cities

Green Growth

- Energy saving improvement buildings (public, private: financial incentives)
- Renewable Energy, CHP (Combined Heat and Power), (de-centralized energy production)
- Pilot programs renewable energy
- Sustainable mobility: public transportation, electro-mobility, alternative fuels
- Infrastructure important!
- Information and cooperation between local authorities, companies and politicians

Without Local Authorities the
change will not be successful

Solution: Climate Protection

- Climate protection is **economically efficient**
- **Energy saving important** (buildings, mobility)
- **Future markets are green markets**
- **CO2 free, save and affordable energy is the key**
- **Coal: carbon capture and storage (CCS)**
- **Renewable energy**
- **Sustainable mobility**
- **Climate change causes high costs**
- **Climate protection offers huge economic potentials**

We need to solve three crisis

- **Financial Crisis:** „Green“ Investments with growth potential instead of short term bonus to salvage 9 year old cars
- **Energy Crisis:** Energy Saving, Improvement of Energy Efficiency, Alternatives of Oil and Fossil Fuels
- **Climate Crisis:** Mitigation of Greenhouse Gases; Adaptation, international Climate Agreements



**INNOVATION
INSTEAD OF
DEPRESSION!**

Thank you very much
for your attention!

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