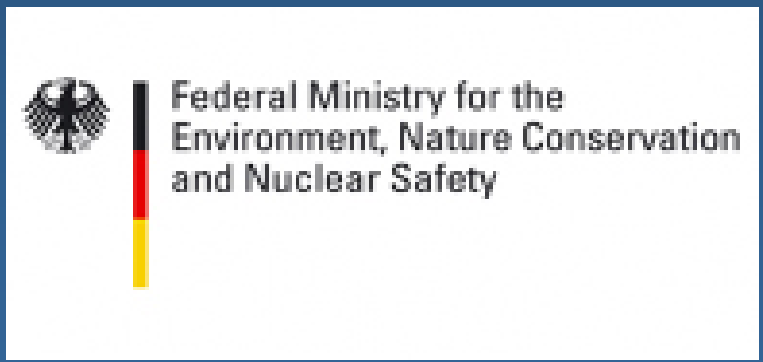
The Renewable Energy Sources Act

&

The Feed-In Cooperation

RA Sonja Hemke

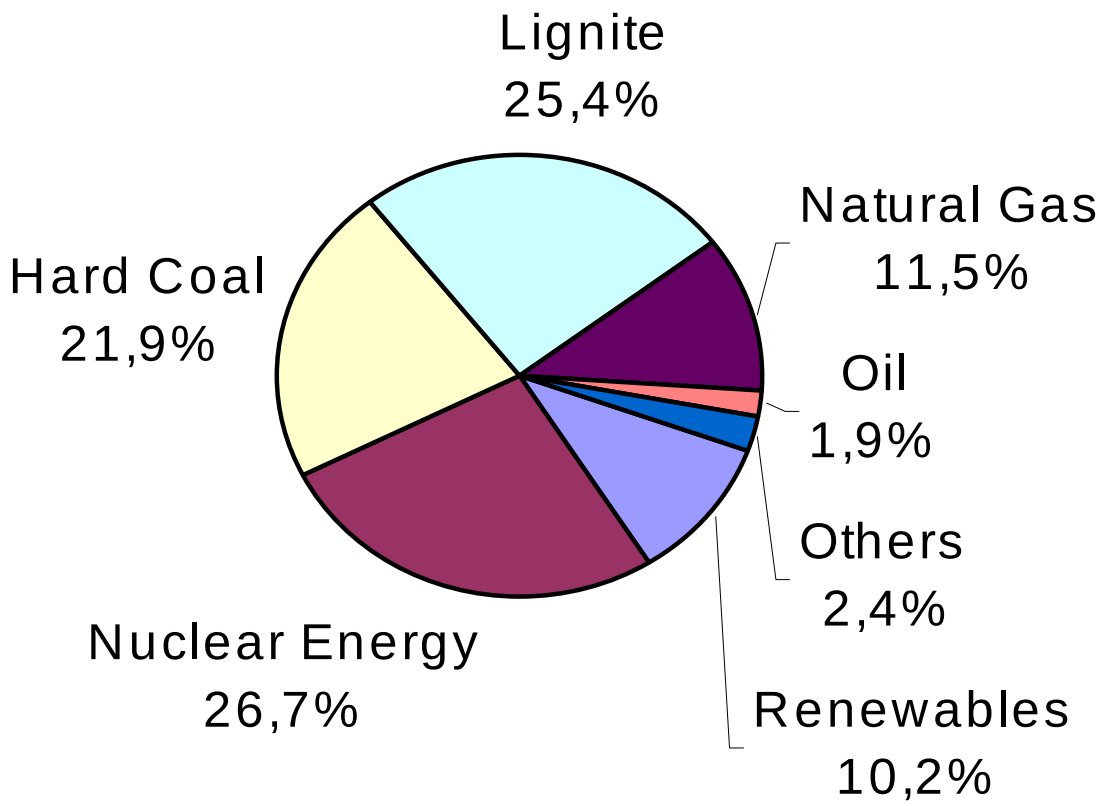
Maribor, May 2006



Outline

- Overview of German electricity sector
- Expansion Objectives
- Overview of the Renewable Energy Sources Act (RE Act)
- Mechanism
- Achievements
- The Feed-In Cooperation

Electricity Supply in Germany in 2005



Reference: BMU, Renewable Energy Sources in Figures, 2005

Objectives of the Federal goverment

Targets for the share of RE electricity:

- 2010: > 12.5 %
- 2020: > 20 %

Targets for primary energy supply

- 2010: > 10 %
- 2050: ~ 50%

Overview of the Renewable Energy Sources Act

The RE Act

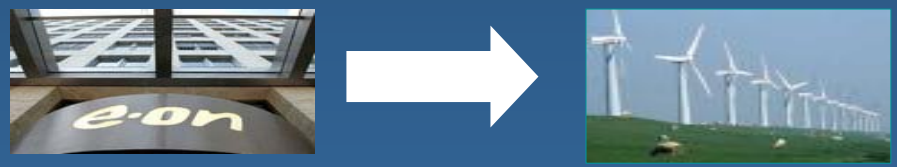
- Gives RE priority access to the electricity grid
- Obliges grid operators to purchase the RE electricity
- Fixes the price (tariff) for RE electricity

How does the RE Act work?

1. RE Act sets tariffs and pay period

2. RE producer feeds electricity into the grid

3. Grid operator pays remuneration (no state aid involved!)



4. Transfer of RE electricity and costs to the consumers

RE Act: Transfer Mechanism

Renewable Electricity

Payment

Why different tariffs?

- All types of RE are needed to reach the RE targets
- Costs for RE electricity depend on different factors, e.g. kind of RE or size of plant
- Consequences:
  - ➔ tariffs need to be differentiated by source and size of plant
  - ➔ tariffs for new plants need to decrease every year to further technological development and to bring costs down

Feed-in tariffs in Germany

	2005 (Cent/kWh)	Degression (%/a)
Hydropower	6.65-9.67	0
Biomass (<20MW)	8.27-17.33	1.5
Geothermal energy (<20MW)	7.16-15.00	1.0
Wind energy (onshore)	5.39-8.53	2.0
Wind energy (offshore)	6.19-9.10	2.0
Solar energy	43.42-59.53	5.0

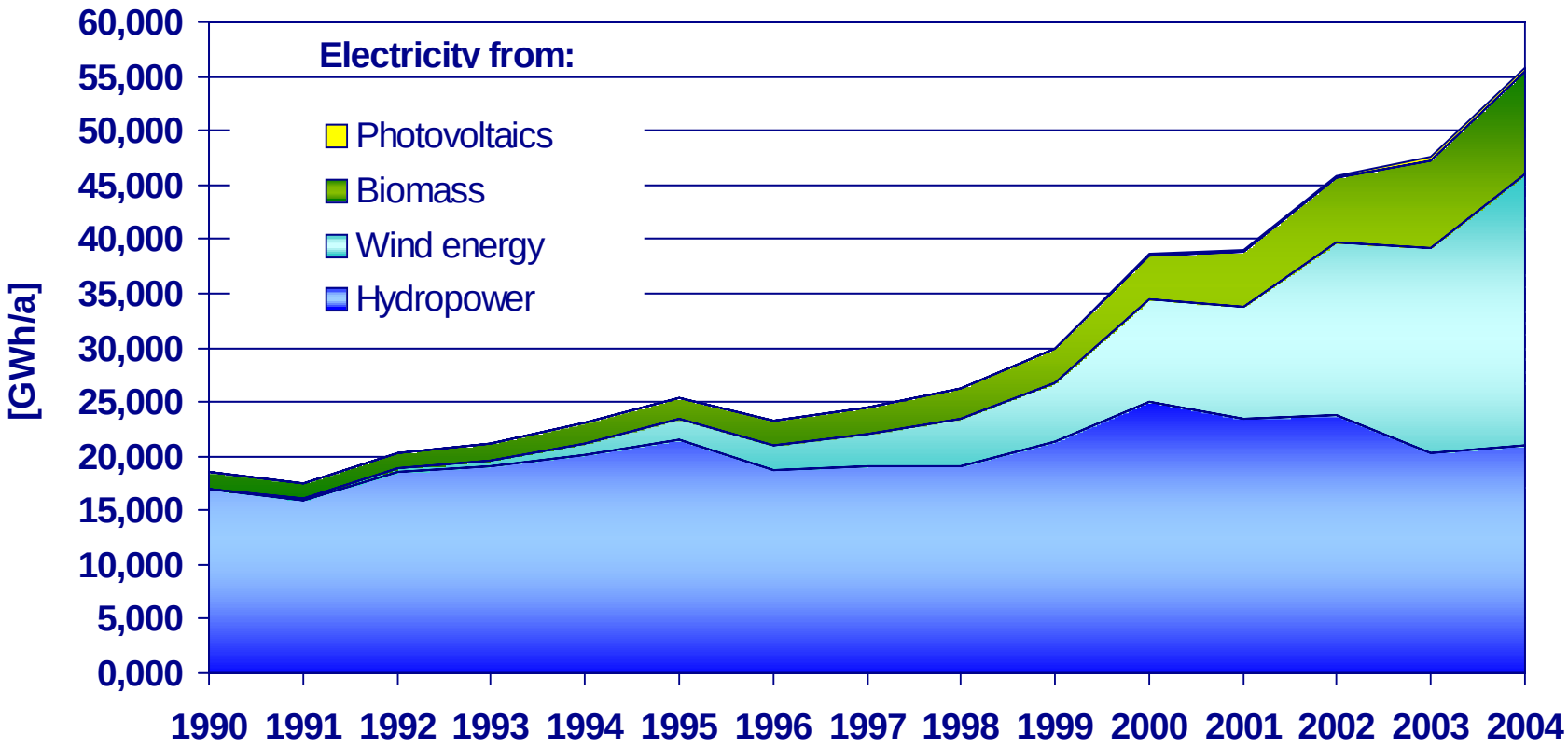
Degression: The tariff remains constant for commissioned installations, but depends on the year of the initial operation. The later an RE installation is commissioned, the lower the tariff

How do we calculate the tariff ?

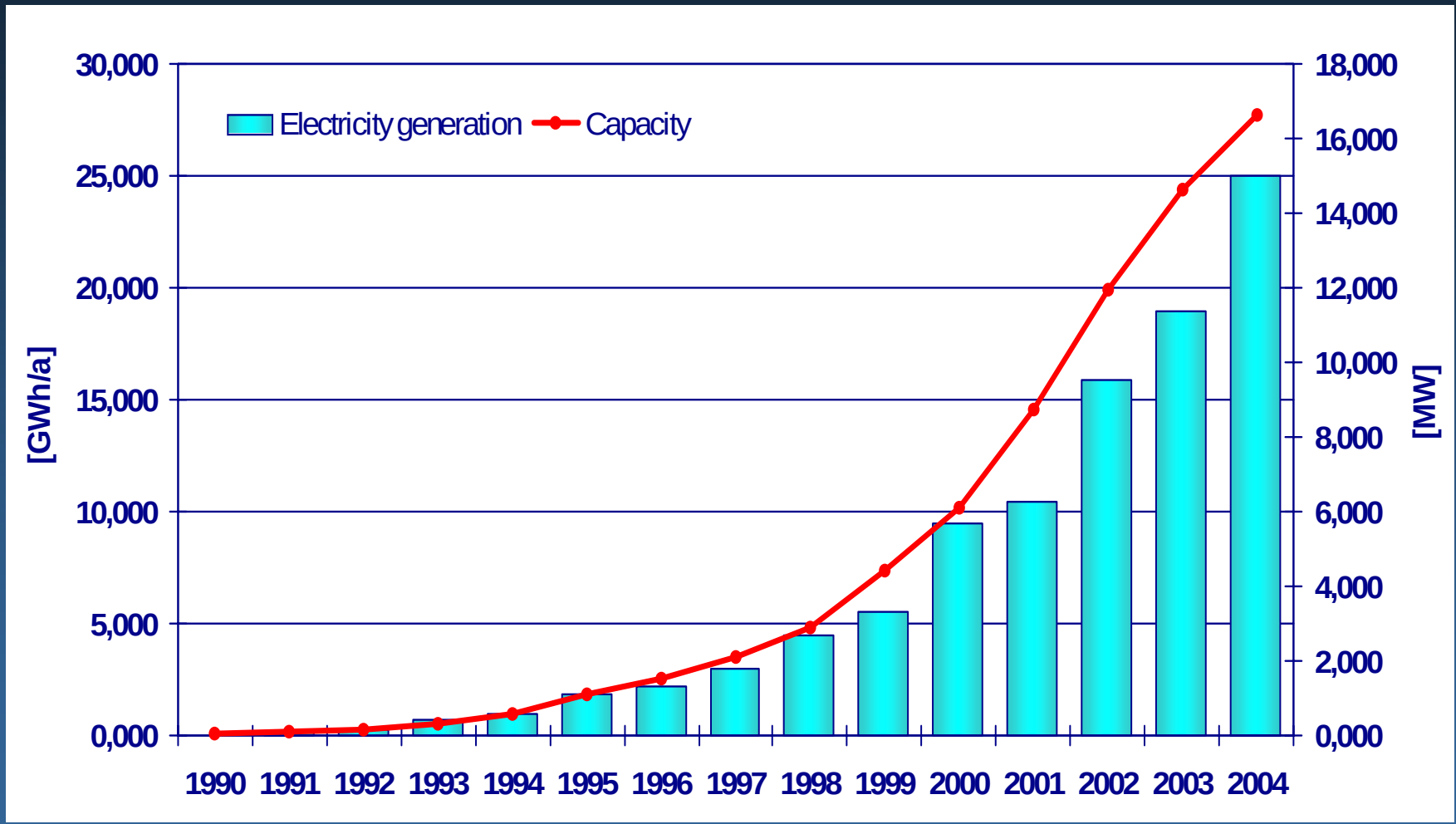
- Scientific studies investigate specific cost per kWh.
- Payback period: 16 to 20 years
- Internal rate of return: e.g. wind power: ~10%

RE Electricity Generation in Germany

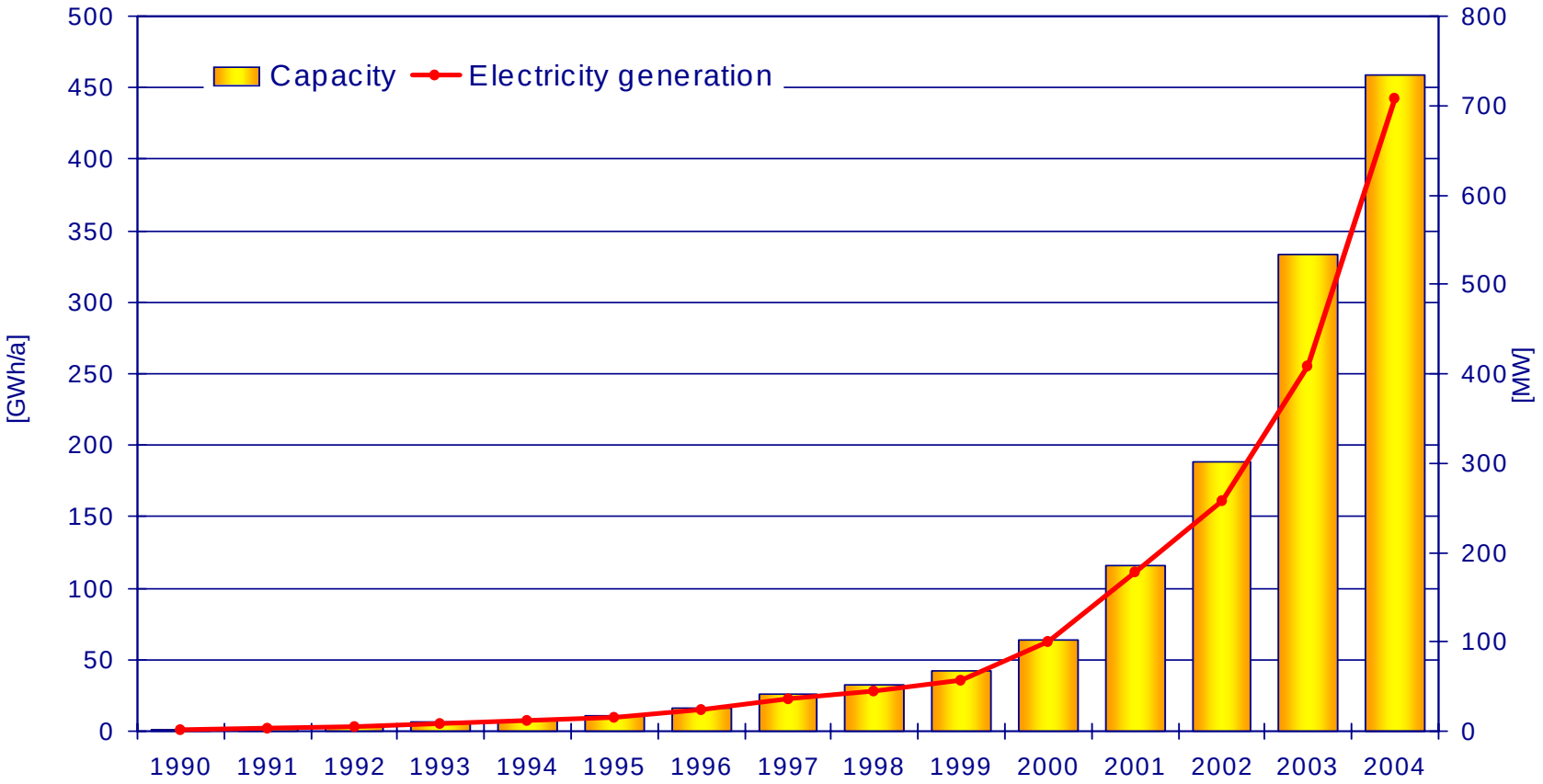
Reference: BMU, Renewable Energy Sources in Figures, 2005



Wind Energy in Germany



Photovoltaics in Germany

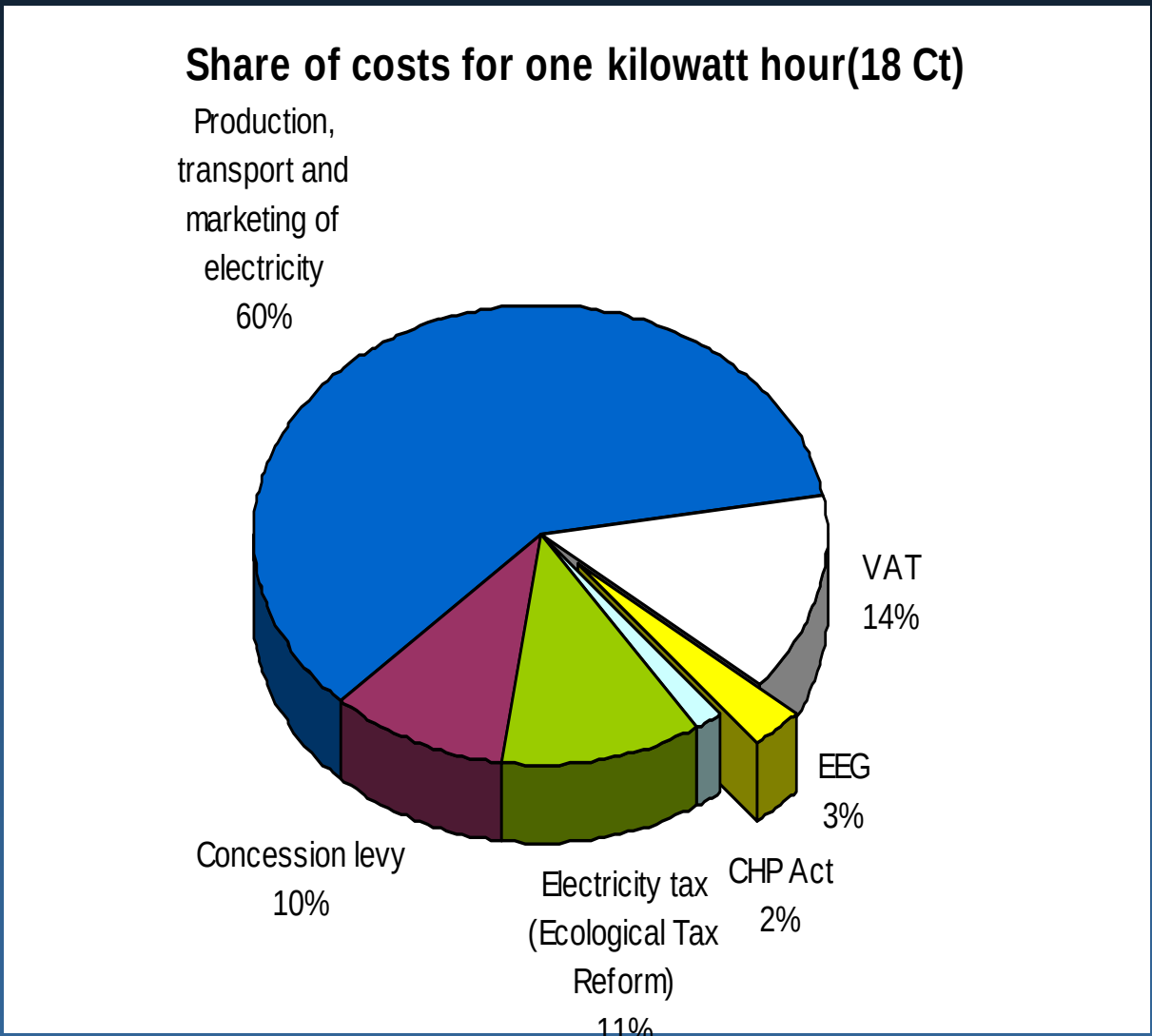


Quelle: BMU, Renewable Energy Sources in Figures, 2005

Achievements (2005)

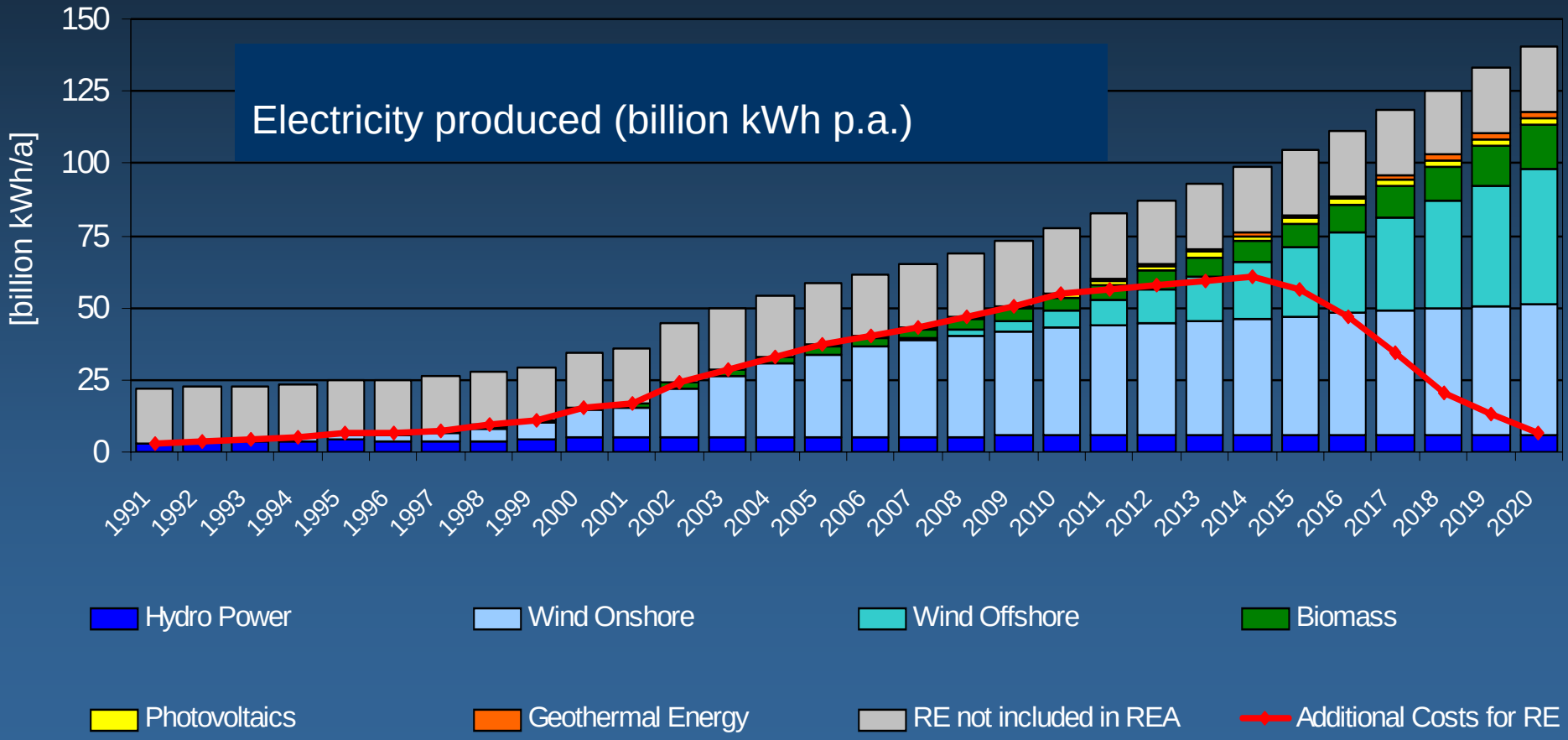
- Share of RE electricity about 10% by the end of 2005 [1999: 4.6 %]
- 170,000 jobs
- 16 billion euro turnover per year
- 8,7 billion euro investment per year
- 83 million tonnes of CO_2 reduction (38 million tonnes by REA)

Cost for the Promotion of RE just 3%



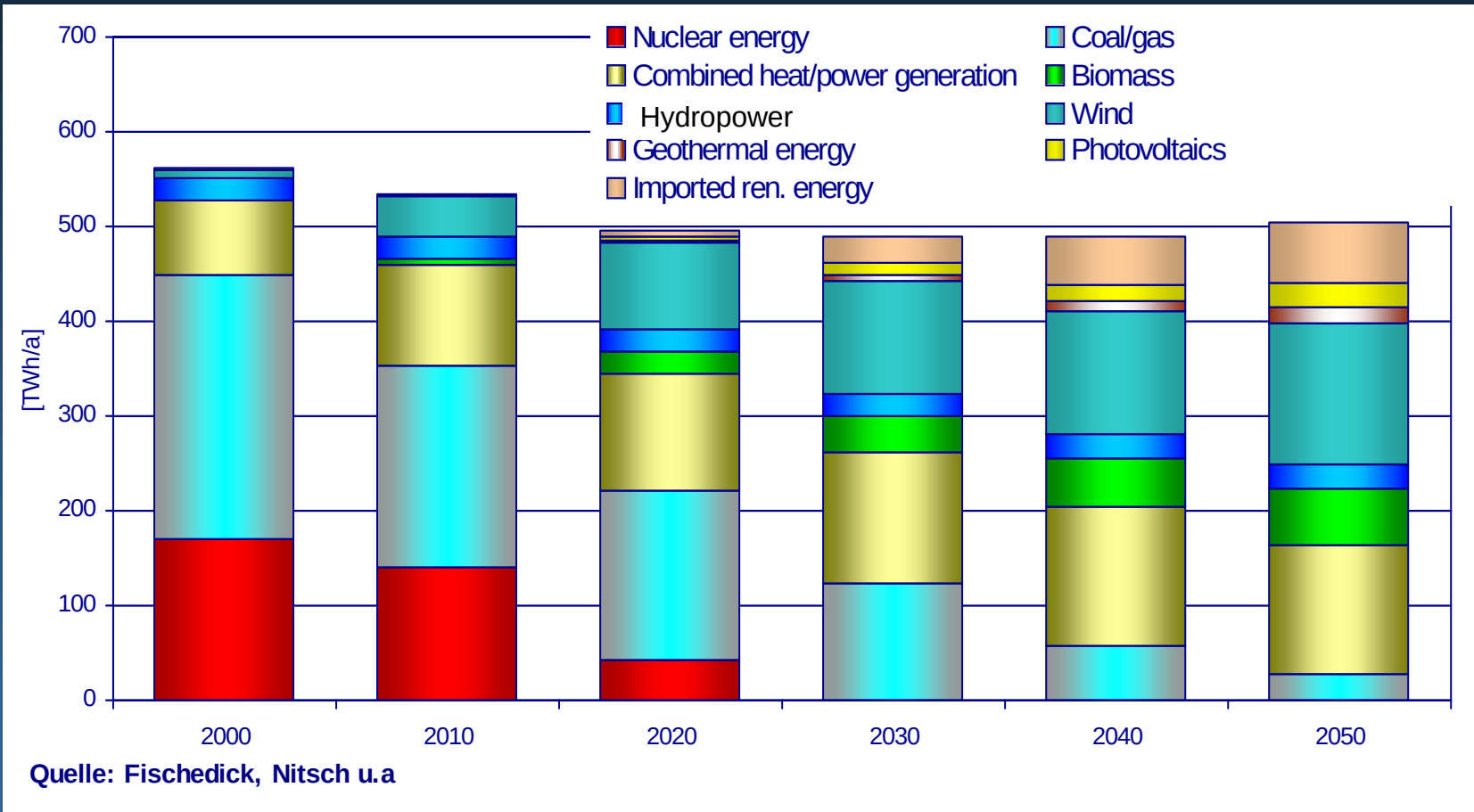
Reference: BMU, Renewable Energy in Figures, 2005

Expected Development



Reference: BMU, Renewable Energy in Figures, 2005

Electricity Scenario up to 2050



Quelle: Fischedick, Nitsch u.a

Conclusions:

- European Commisison (12/2005) „*feed-in tariffs are currently in general cheaper and more effective than so called quota systems*“, because
  - they give high planning and investment security
  - involve lower risks for the investor
  - cause low transaction costs
- But: Success depends highly on details of regulation -> design carefully and properly!
  - Different tariffs
  - Sufficient pay periods
  - Administrative framework conditions, e.g. admission regulations, electricity grid capacity etc.

The International Feed-In Cooperation

Cooperation on the development and promotion of a feed-in system to increase the use of renewable energy sources in the production of electricity

Objectives of the Feed-In Cooperation

- to exchange experience on feed-in systems
- to support other countries to introduce a feed-in system
- to improve existing feed-in systems
- to cooperate on the above mentioned issues
- to increase the share of renewable energies in the overall national and global primary energy supply

The EU Commission

European Commission, Communication COM(2005) 627 on the support of electricity from RES (from December 2005):

- „The Commission considers a co-ordinated approach to support schemes for renewable energy sources to be appropriate, based on two pillars: cooperation between countries and optimisation of the impact of national schemes.“

- „Intensified co-ordination between countries in the form of “**cooperation**” could be useful for the development of the different support systems within Europe. The emerging cooperation between the feed-in tariff systems in Germany, Spain and France, or on the Iberian market and the new planned common Swedish-Norwegian green certificate system can set examples for others.“

History

- **June 2004**: Initiated on the Renewables2004 Conference in Bonn, Germany as part of the International Action Programm (IAP)
- **January 27th, 2005**, ***1st workshop*** in Madrid, Spain
- **October 6th, 2005**, a ***Joint Declaration*** was signed in Madrid between the two parties of the cooperation, Germany and Spain.
- **December 15th and 16th, 2005**: ***2nd workshop*** in Berlin, Germany: 50 representatives of the European Commission and the European Parliament, of governments, authorities and associations from 11 EU Member States
- **2006** Next workshop in in Madrid

Membership

- The Feed-In Cooperation is open to all EU Member States.
- Benefits of membership:
  - Impact on the agenda
  - More members strengthen the political weight of the International Feed-In Cooperation

For more information, please visit:

- www.feed-in-cooperation.org

Thank you for your attention!

www.erneuerbare-energien.de

www-feed-in-cooperation.org