

Green New Deal Best practice – Germany !?

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German Renewable Energy Federation

- **Umbrella organisation** of the RES-associations **since 1991**
- **Task and mission:** Political consulting → stable and reliable framework conditions for RES
- **20 Member associations:**
hydro, wind, solar, biomass, and geothermal energy.
- **Representing**
> 30,000 members, including > **5,000 enterprises.**
- **Parliamentary board:**
all Bundestag-Parties represented → link to politics.



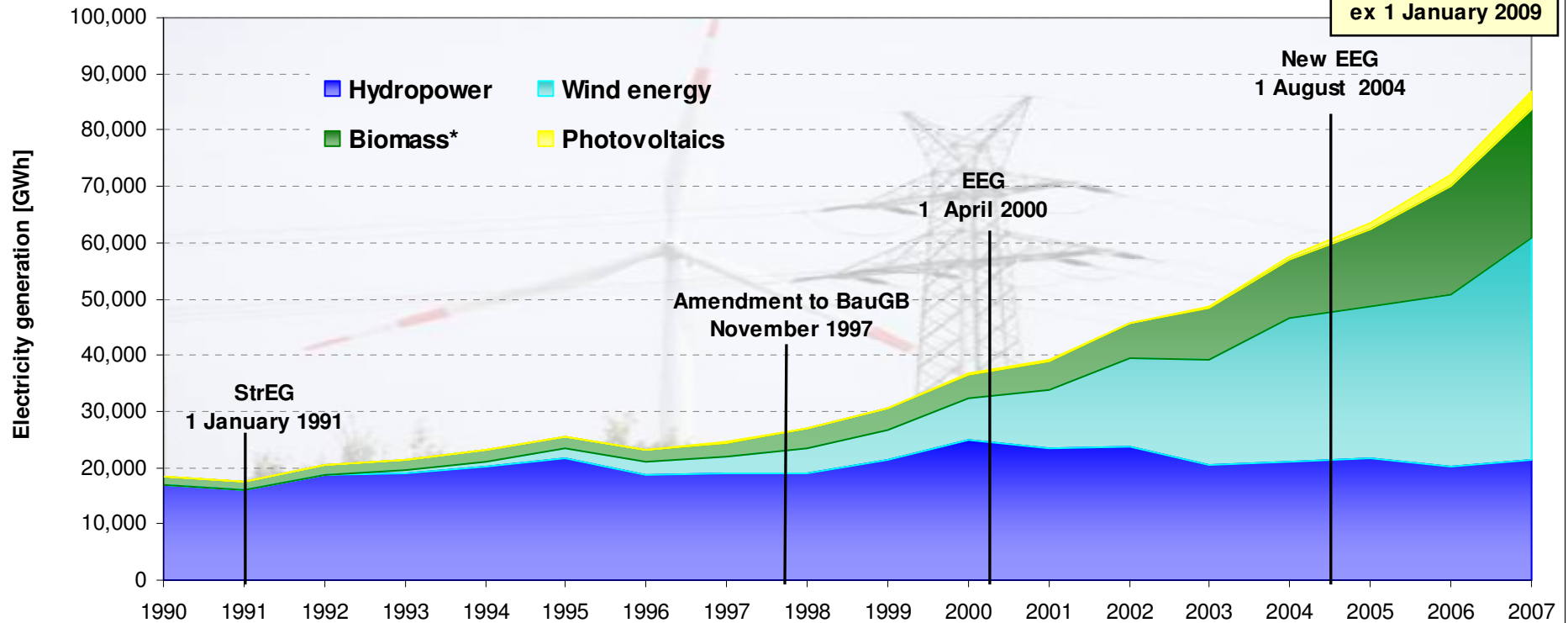
1. Past Development
2. Policy Mix: Good practice / bad practice
3. Lessons to be learned



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Development of electricity generation from renewable energies in Germany, 1990 - 2007



*Solid, liquid, gaseous biomass, biogenic share of waste, landfill and sewage gas;

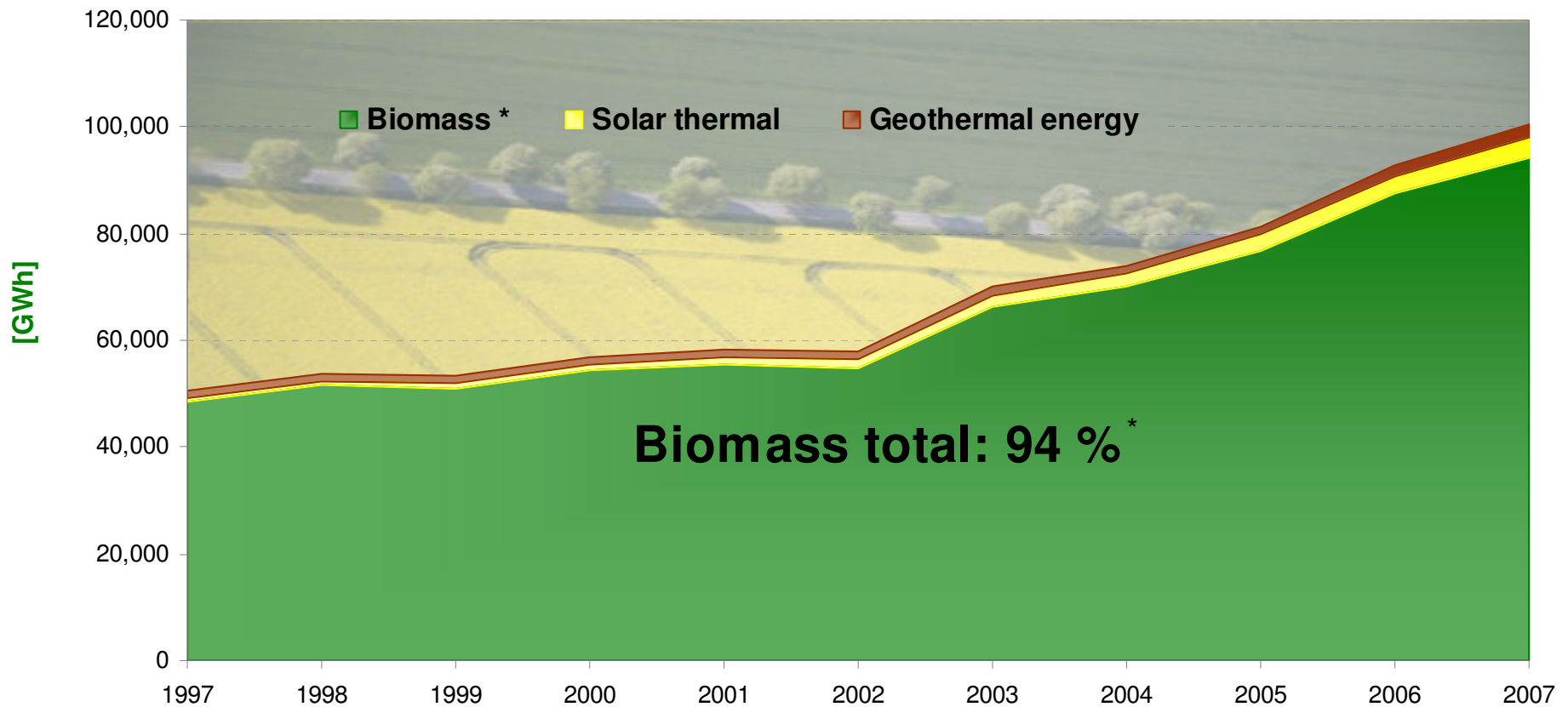
StrEG: Act on the Sale of Electricity to the Grid; BauGB: Construction Code; EEG: Renewable Energy Sources Act;

Electricity from geothermal energy is not presented due to the negligible quantities of electricity produced;

Source: BMU-Brochure: "Renewable energy sources in figures – national and international development", Internet Update, KI III 1; Version: 15.12.2008; provisional figures



Contribution of renewable energy sources to heat supply in Germany, 1997 - 2007



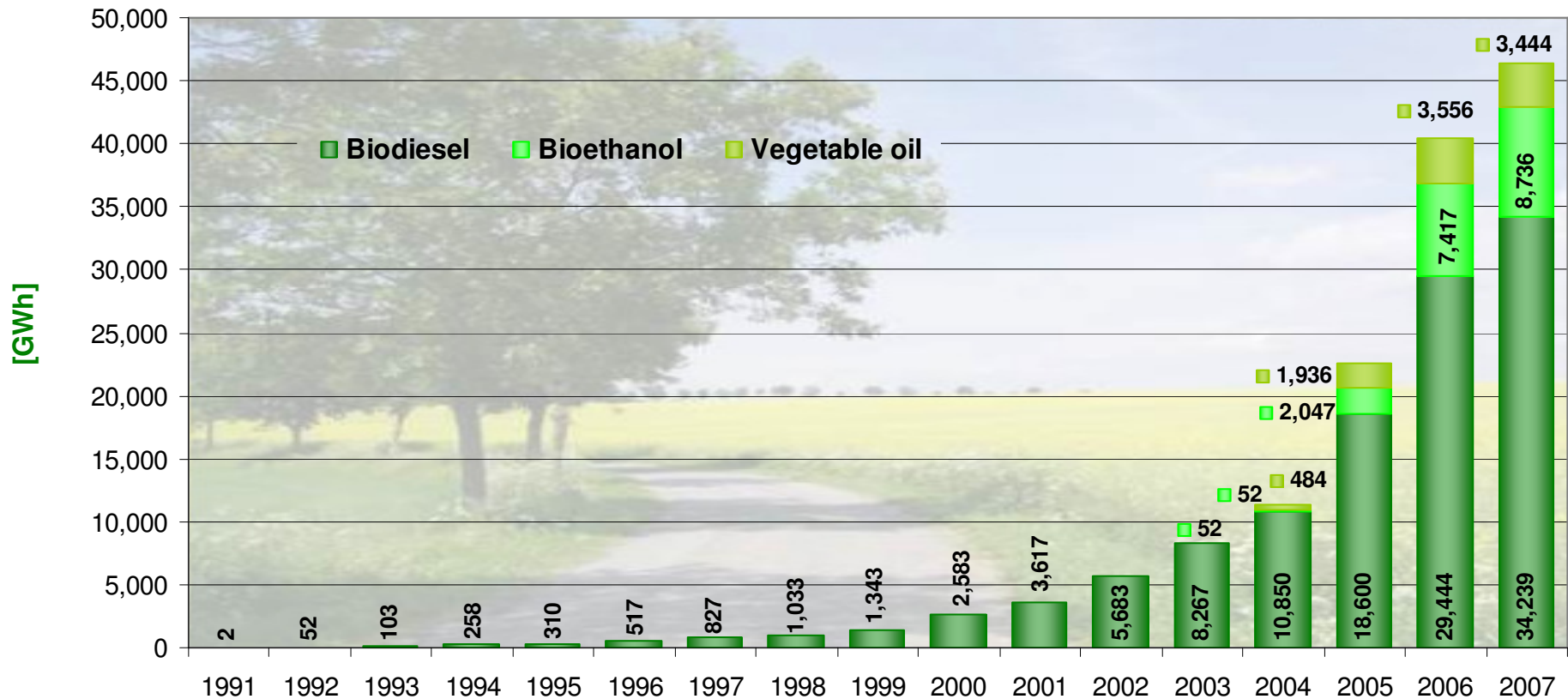
Biomass total: 94 % *

* solid, liquid, gaseous biomass, biogenic share of waste

Source: BMU-Brochure: "Renewable energy sources in figures – national and international development", Internet Update, KI III 1; Version: 15.12.2008; provisional figures



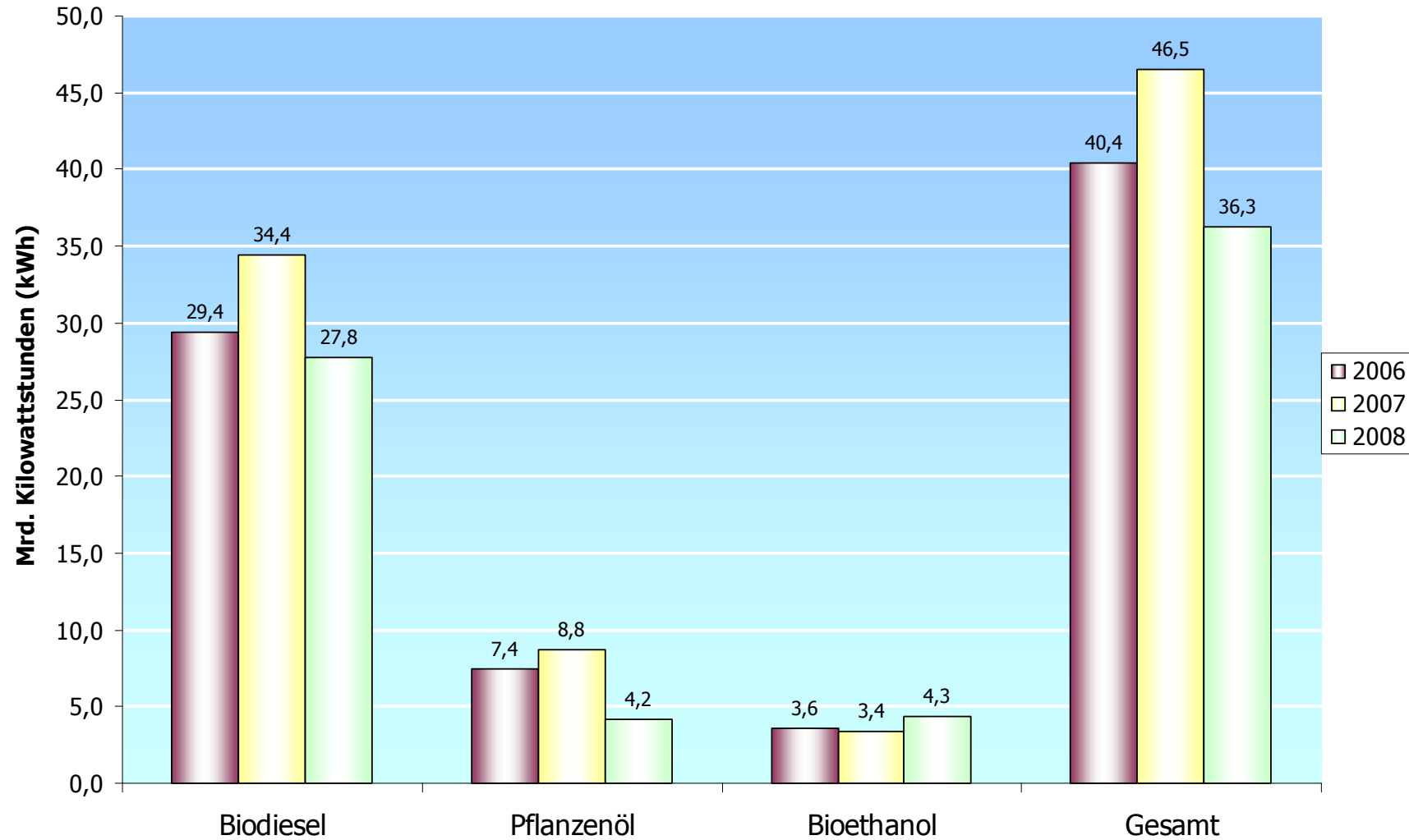
Contribution of renewable energy sources to fuel supply in Germany, 1991 - 2007



Source: BMU-Brochure: "Renew able energy sources in figures – national and international development", Internet Update, KI III 1; Version: 15.12.2008; provisional figures



Biofuel Production



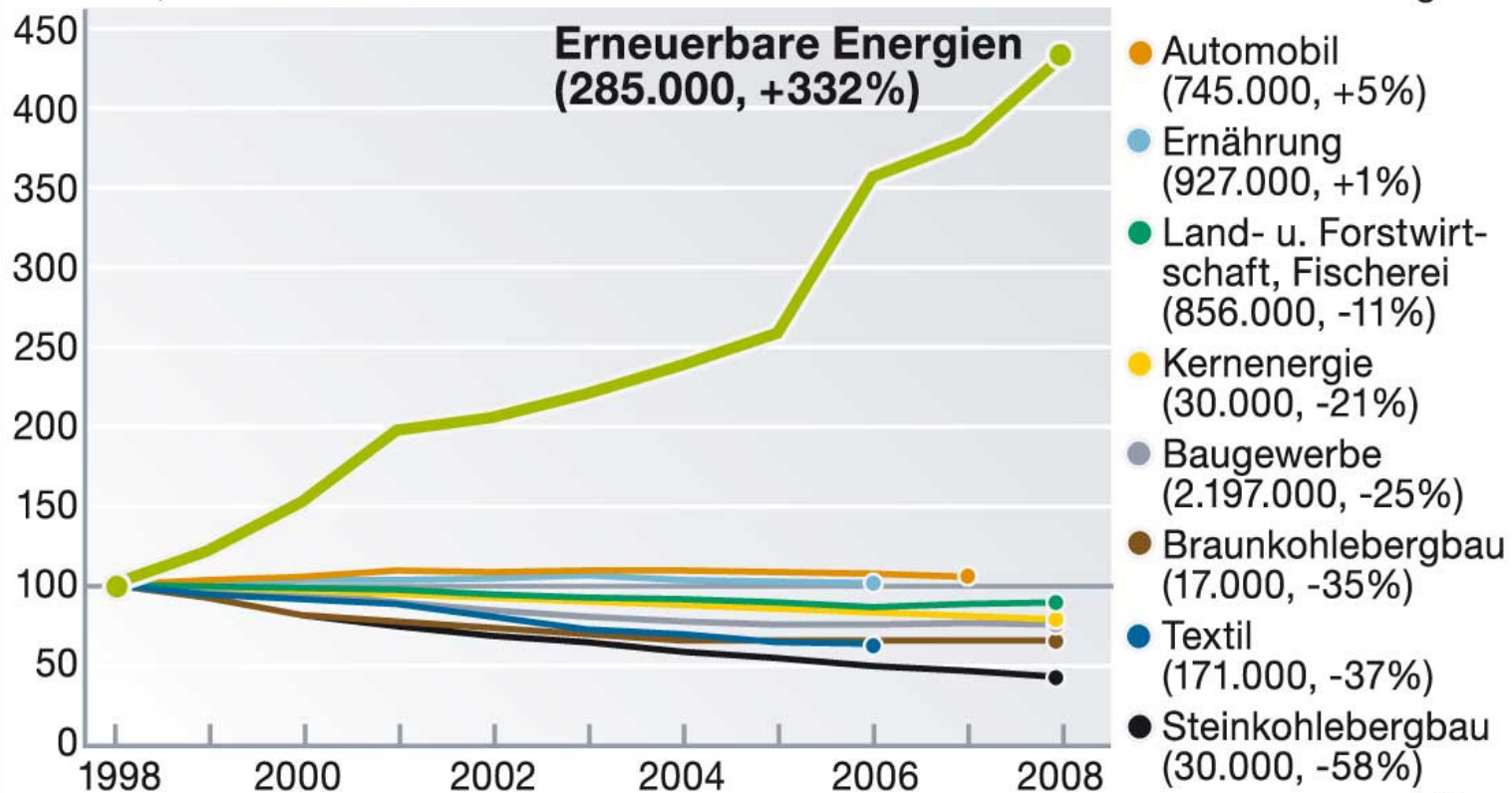


Beschäftigungsentwicklung in der Erneuerbare-Energien-Branche 1998–2008

im Vergleich zu anderen ausgewählten Industriebranchen

indiziert, 1998 = 100

in Klammern: Zahl der Beschäftigten



Quellen: Stat. Bundesamt, Statistik der Kohlewirtschaft, BMU, Atomforum, VDA; Stand: 4/2009

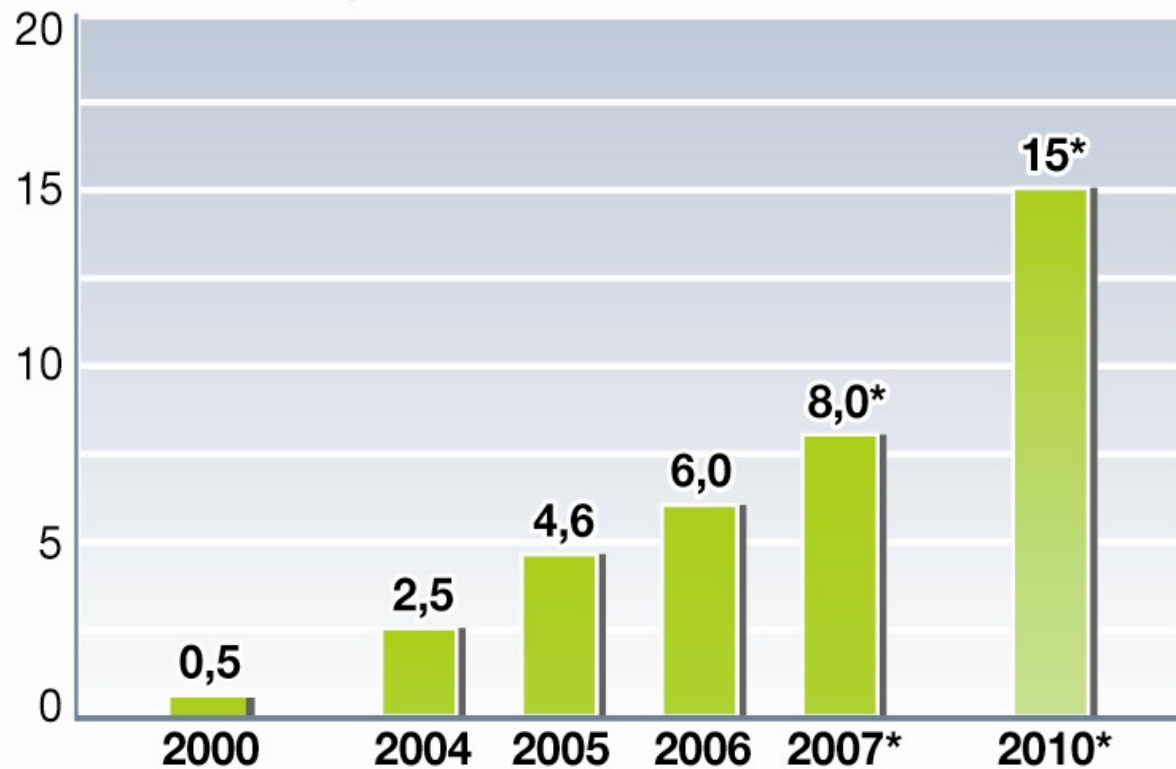
www.unendlich-viel-energie.de





Exportvolumen der deutschen Erneuerbare-Energien-Branche

in Milliarden Euro pro Jahr



*Prognose, Quelle: Branchenangaben, Stand 2/2007





Summary: Differentiated picture

- **Electricity:** high growth rates from 2000, electricity from RES tripled since 1997
→ sustainable growth
- **Heating:** slow growth, heat from RES doubled since 1997
→ high potentials, long ignored
- **Transport:** fast growth, fast decline
→ from saviour to sinner within a year



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RE promotion: The German Policy Mix

<p>Electricity Sector</p>	<p>Renewable Energy Law – EEG - :</p> <ul style="list-style-type: none"> - Priority for RE - Fixed feed-in tariffs, guaranteed for 20 years - High efficiency
<p>Heating <i>and</i> Electricity Sector</p>	<p>Market Incentive Programme – MAP -:</p> <ul style="list-style-type: none"> - Financed through ecological tax reform - supports heating <i>and/or electricity</i> from RES - Until 2006: More than 600,000 solar collectors and small biomass installations were supported -RE-Heating Law from 2009
<p>Fuel sector</p>	<ul style="list-style-type: none"> - tax exemption from 1992 (biodiesel)/2004 (all biofuels) - since August 2006: partial taxation - quota system from 2007, revision in 2009



Biofuel Policy

- since 2007: Biofuel-Quota-Act
- Biofuels within Quota are taxed
- Government wants to reduce quota

	07	`08	`09	`10	`11	`12	`13	`14	`15
Diesel	4.4 %	4.4 %	Minimum quota 4.4%						
Gasoline	1.2 %	2.0 %	min. 2.8 %	Minimum quota 3.6%					
Total	--	--	6.25	6.75	7	7.25	7.5	7.7 5	8



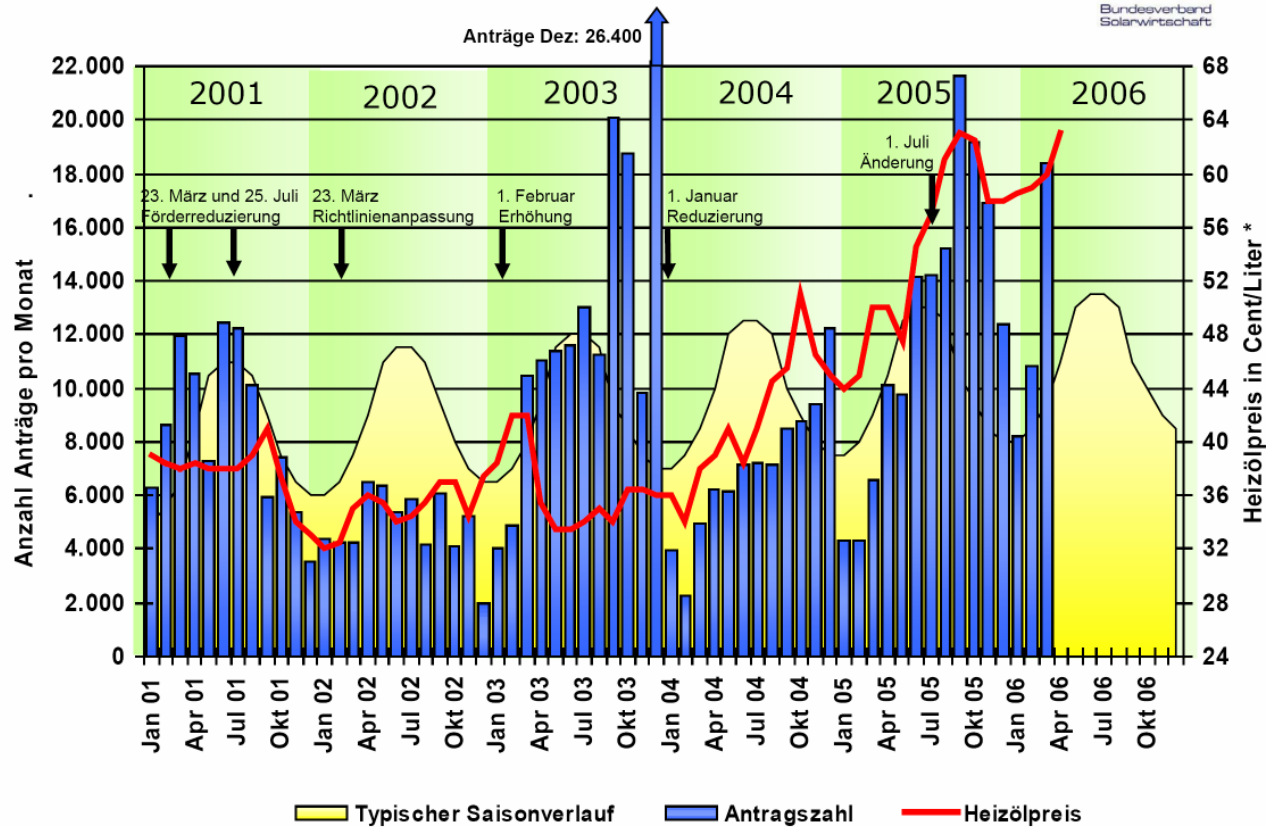
Tax rates

	2006/07	2008	2009	2010	2011	2012
Veg. Oil	0 ct	10 ct	18 ct	26 ct	33 ct	45 ct
Biodiesel	9 ct	15 ct	21 ct	27 ct	33 ct	45 ct
E85 und BTL	- exempt until 2015.					



Market Incentive Programme

Antragszahlen im Marktanzreizprogramm 2001-2006



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*bei Abnahme von 3.000 Liter incl. MWSt., Quelle: BAFA, Tecson, Berechnungen BSW, Stand 31.03.2006



Renewable Energy Heating Act

- Obligation for new buildings (min. 15% RE)
- Support for RE in building stock (from tax money)



Most successful instrument in the electricity sector

German Feed-In Law (EEG)

- Priority for RE
- differentiated feed-in tariffs
- remuneration guaranteed for 20 years
- high efficiency



Renewable Energy Plants:

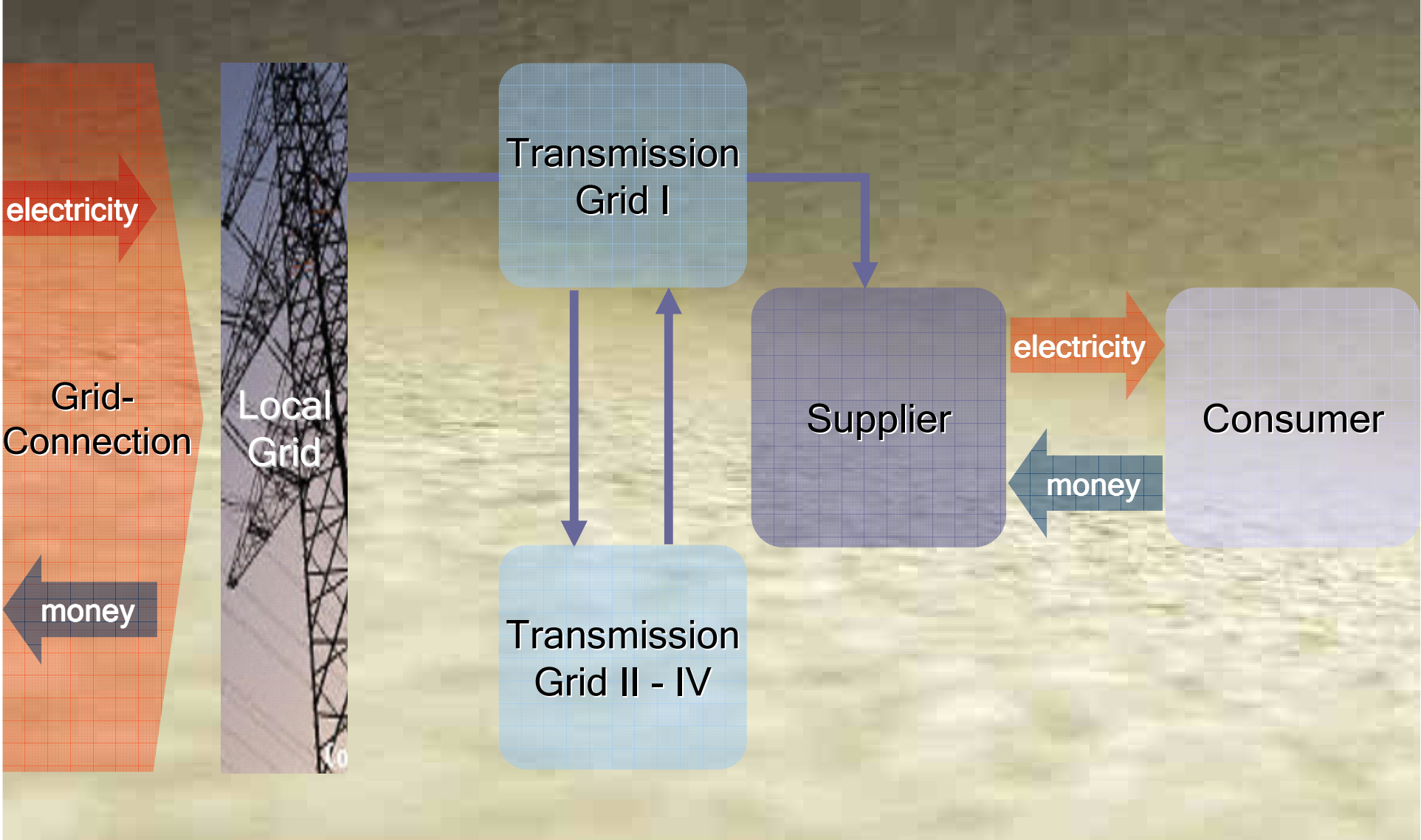
Hydro Power (new build <5MW)	7,65 - 12,67 ct
Biogas	7,79 - 20,67 ct
Biomass	13,79 - 17,67 ct
Geothermal Energy	10,50 - 27,00 ct
Wind Energy	5,02 - 15 ct
Photovoltaics	31,94 - 43,01 ct

electricity

Grid-Connection

money

Local Grid





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Lessons from German Experience

Instruments should ...

- be independent from public budget (no tax money)
- enable new actors to invest
- give investment security
- regulate prices not market volume



Thank you for your attention!

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