

En.regional 2012

KEY ENERGY CHALLENGES

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31.5.2012, GH Union, Ljubljana.

Key energy challenges in South-East European region (1):

- Climate policy adoption in energy sector,
- Secure healthy and safe environment,
- Economic recovery,
- Jobs creation,
- Foreign and domestic Investment needs,
- EU integration.

Solution: Energy (R)evolution

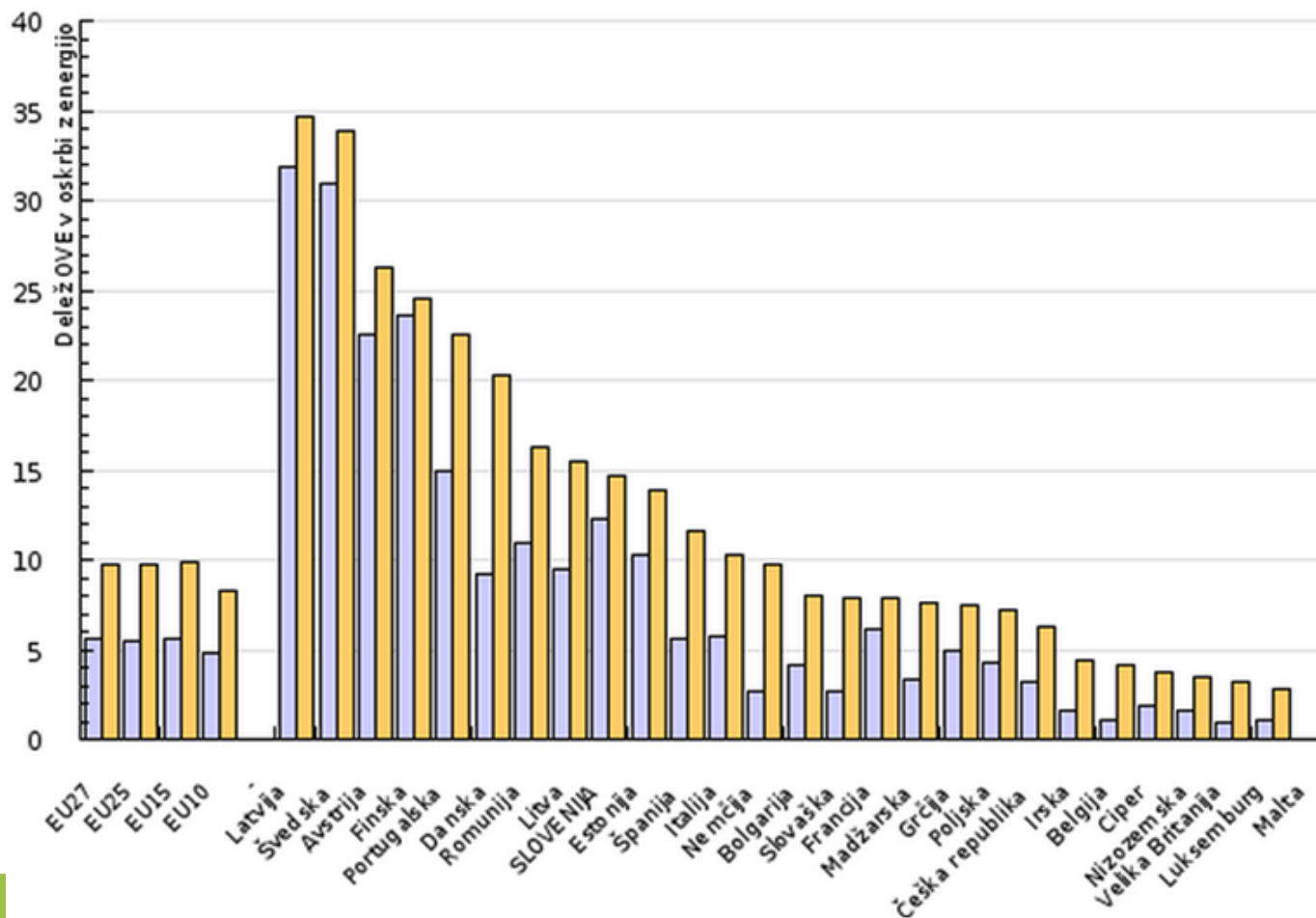
**Transition towards low carbon
renewable energy system**

Region's strengths:

- RES potential is mostly not yet harvested – big investment opportunities,
- Good geographical position towards EU,
- Huge energy efficiency potential – cheapest energy source!
Energy poverty reduction.
- Big natural resources (hydro, sun, wind, biomass.)
- Potential of renewable energy exports to EU market.
- EU funds will support investment in green technology (20% of next financial perspective).

Trends in EU

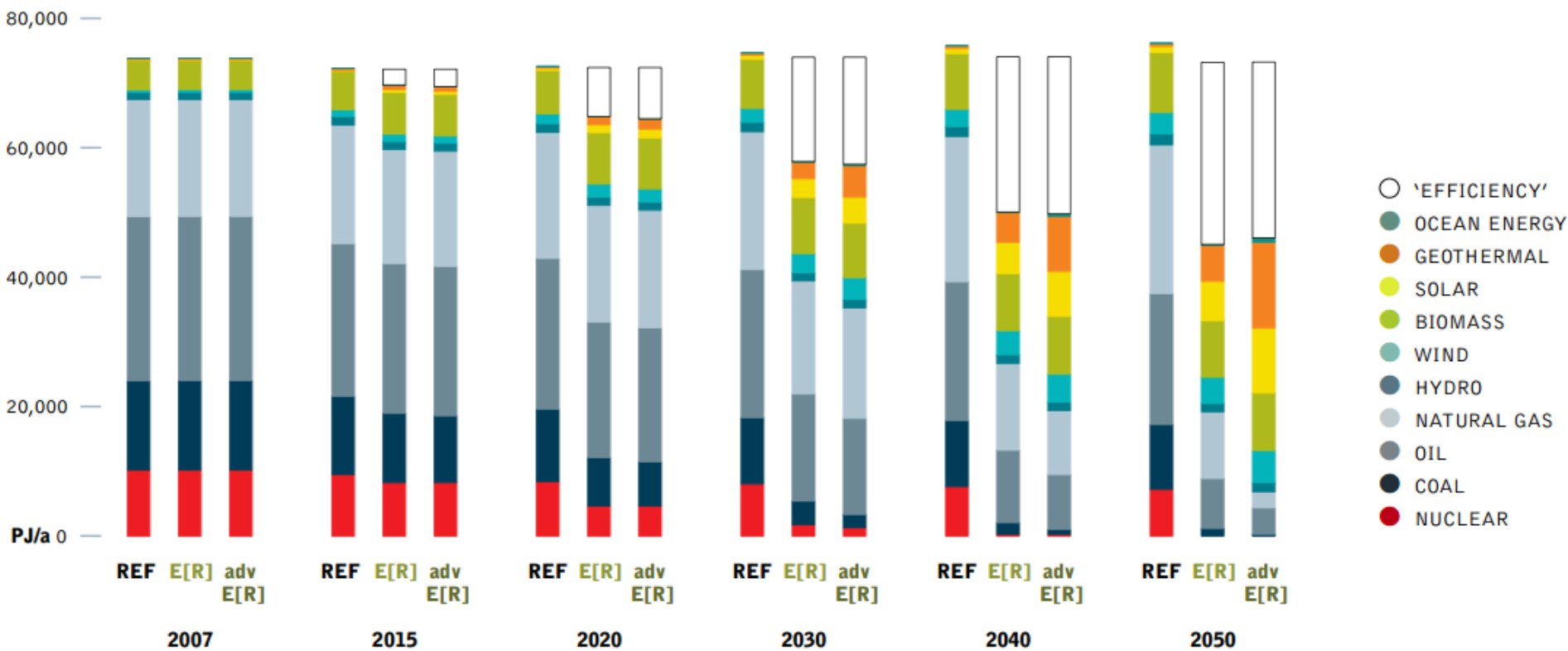
Renewables share 2000/2010 (final en.)



Greenpeace Energy (R)evolution pathway for EU 27

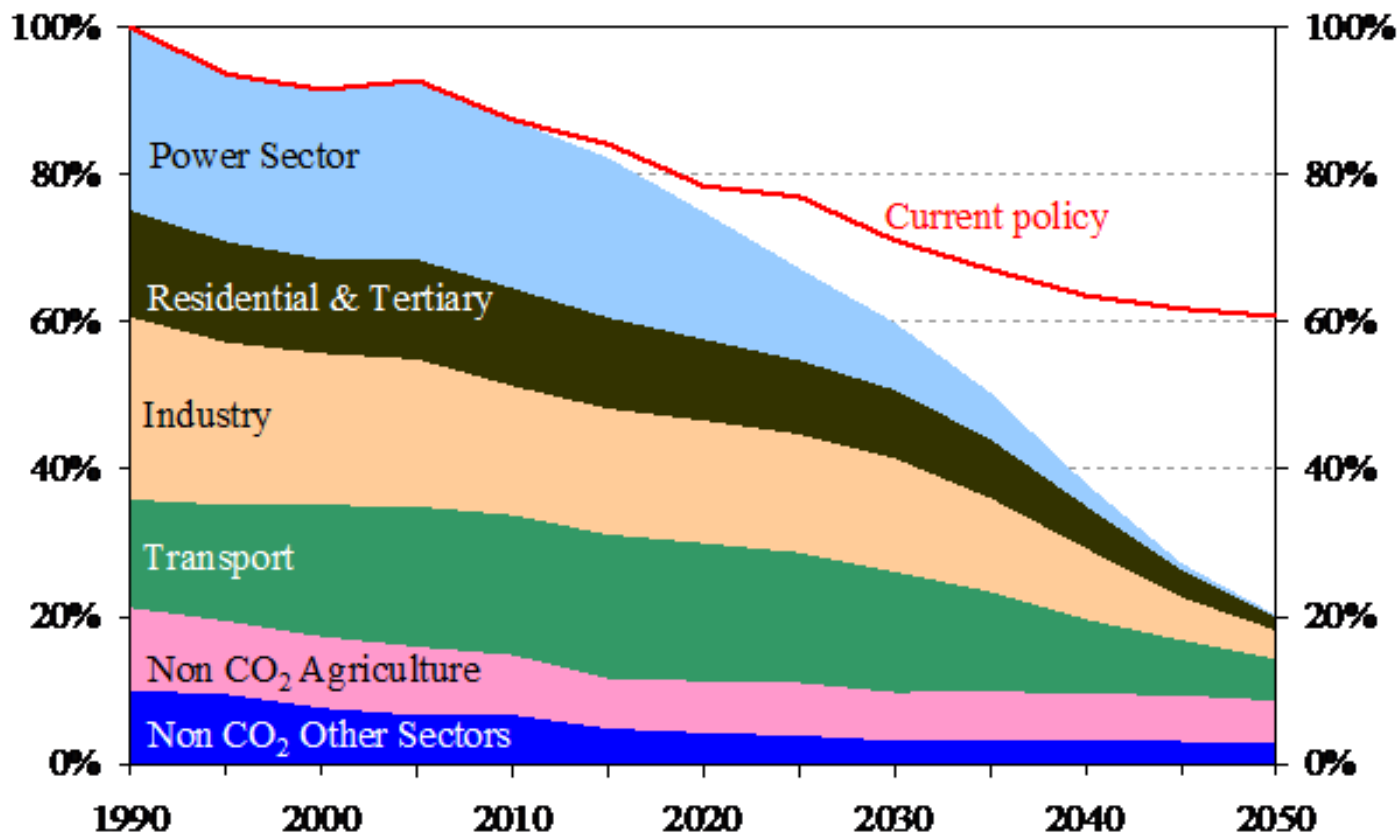
figure 0.1: development of primary energy consumption under the three scenarios

(*'EFFICIENCY' = REDUCTION COMPARED TO THE REFERENCE SCENARIO)



EU “Roadmap – 2050”

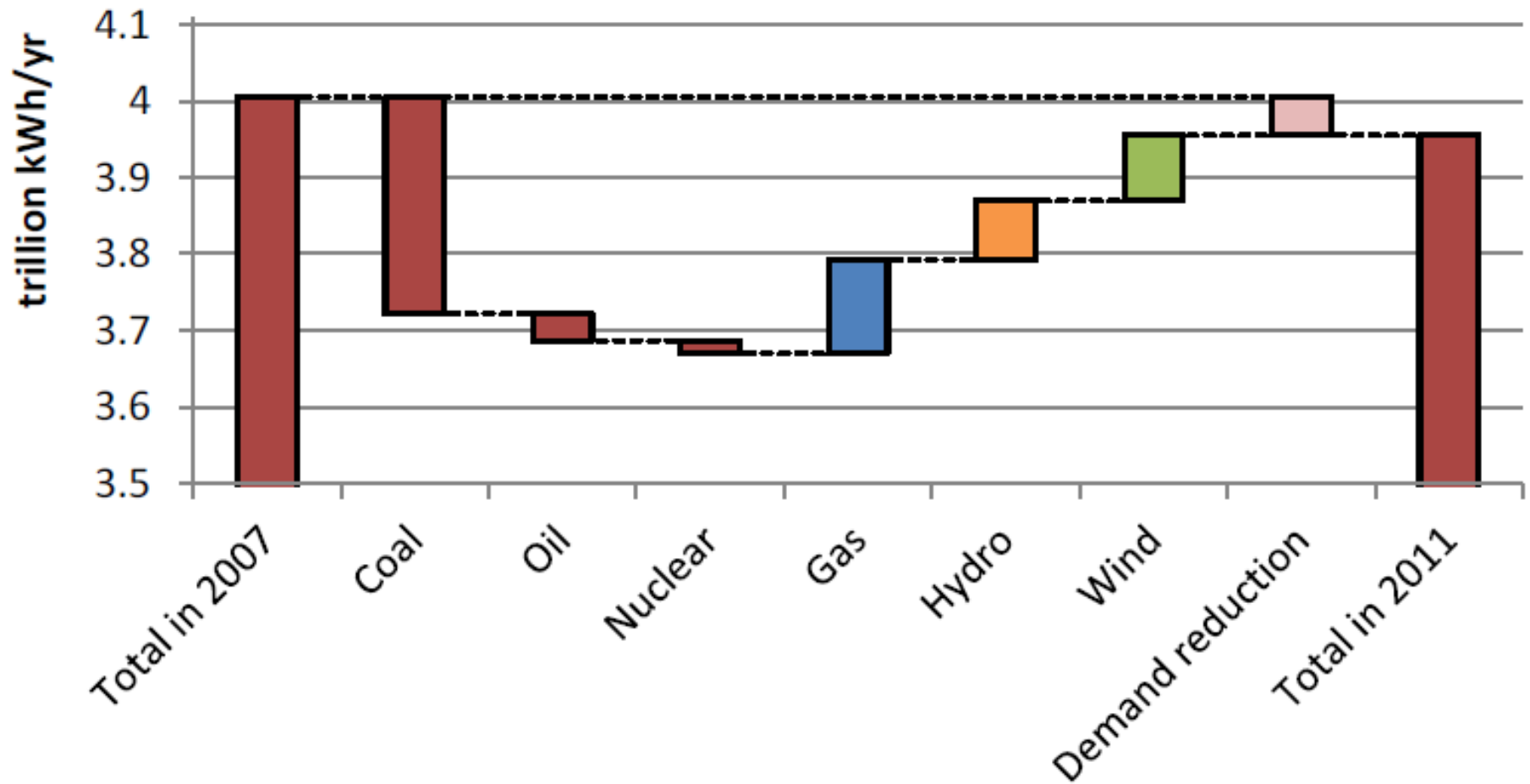
A Roadmap for moving to a competitive low carbon economy in 2050



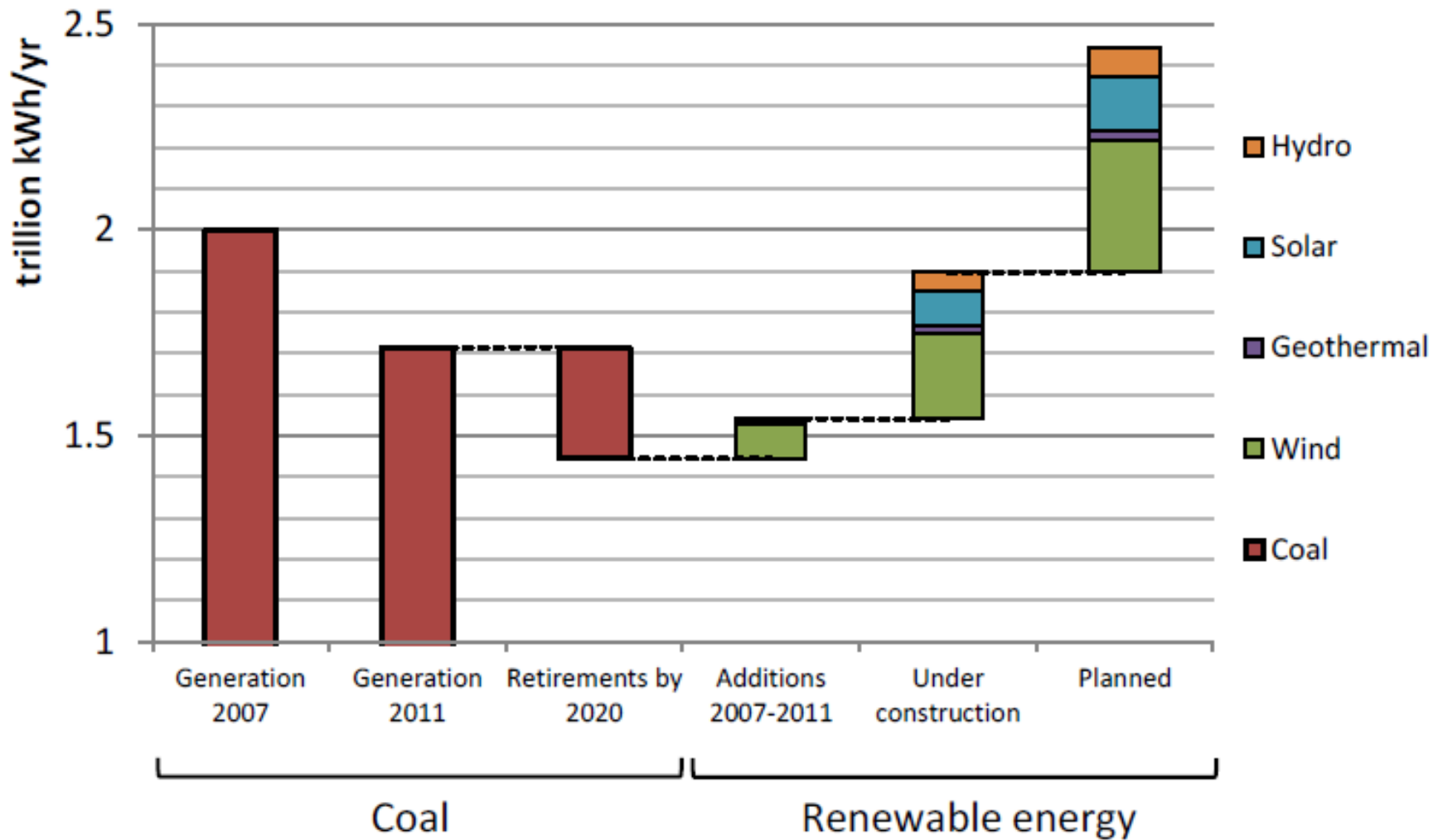
USA - coal power in decline

- Between 2007 to 2011, US coal-fired power generation dropped by 14 %, equal to the entire electricity consumption of California(1).
- Over 150 new coal plant projects have been cancelled since 2007.
- In 2001, coal provided 51 % of electricity in the U.S. By 2011, coal use had declined to 42%(2).

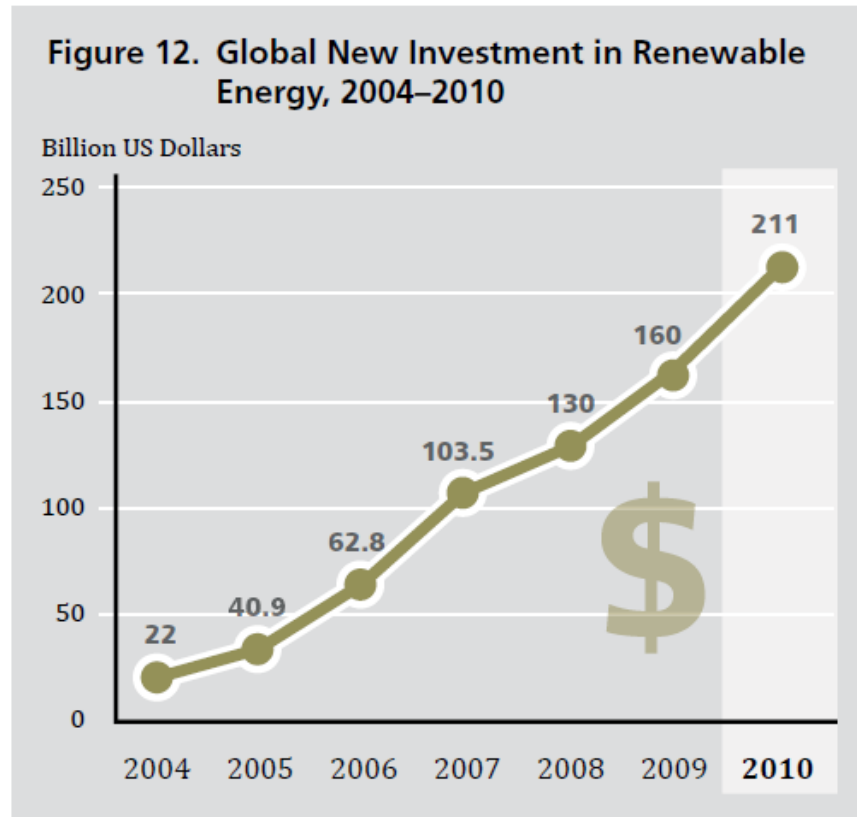
Changes in US power generation 2007-2011



Coal retirements versus renewable energy deployment

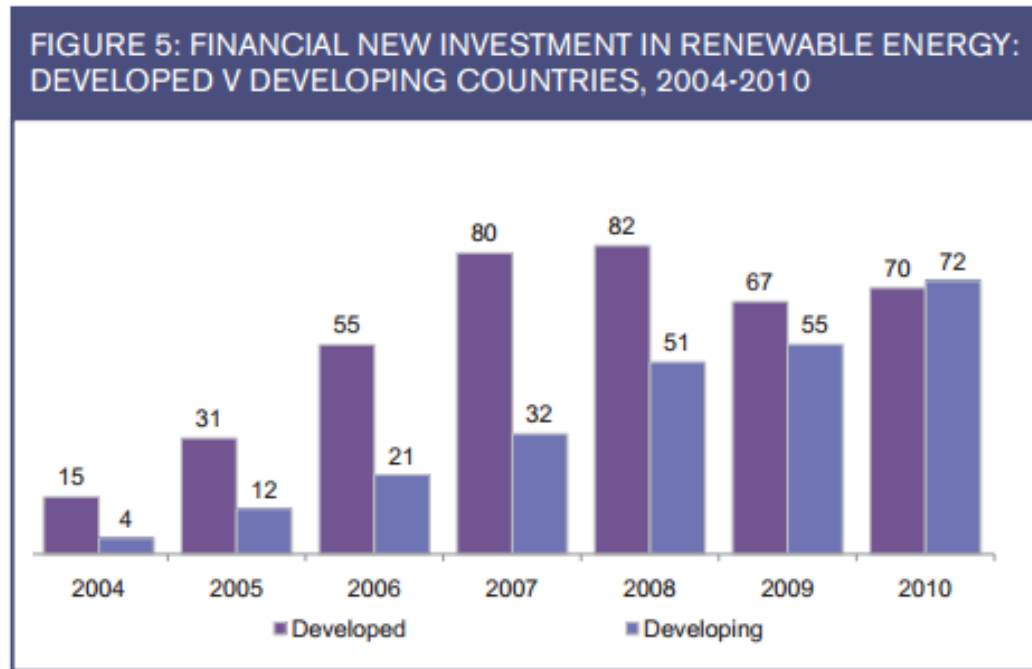


World trends – RES investments



REN 21, 2011 Global Status Report

RES are growing in developed and developing countries

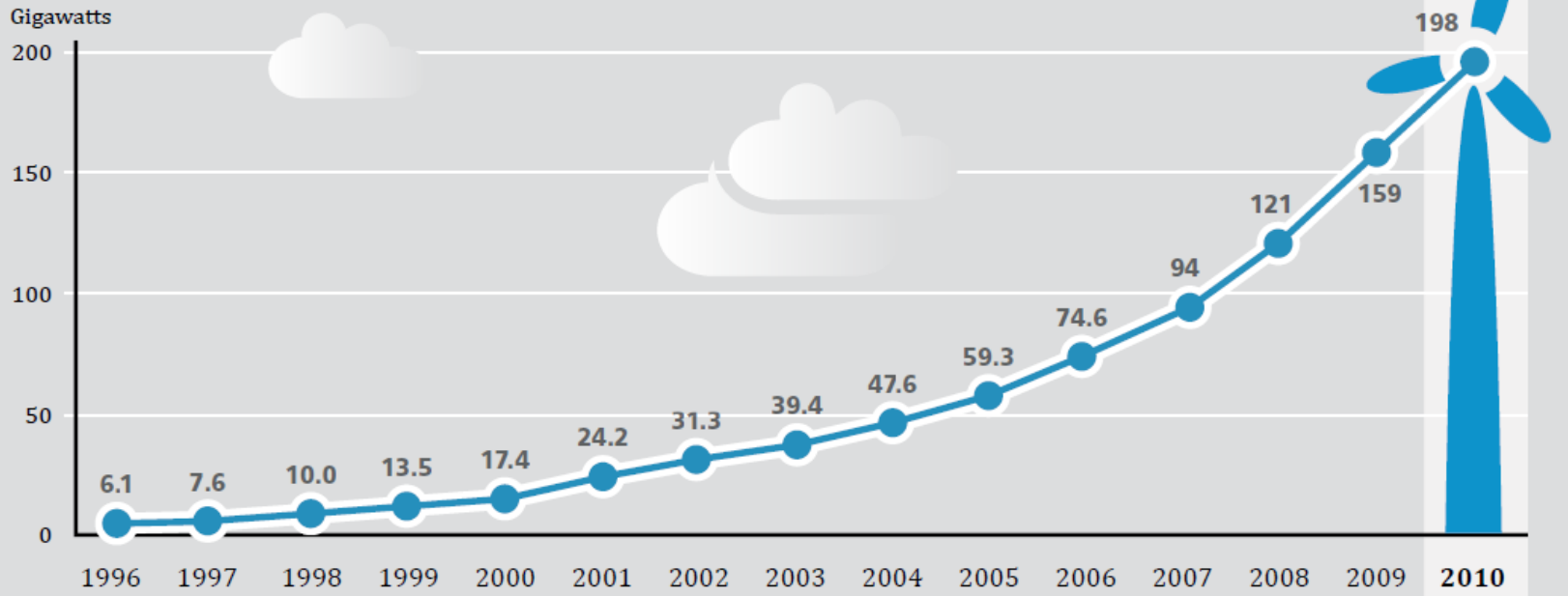


New investment volume adjusts for re-invested equity. Total values include estimates for undisclosed deals

Source: Bloomberg New Energy Finance, UNEP

World trends – wind energy

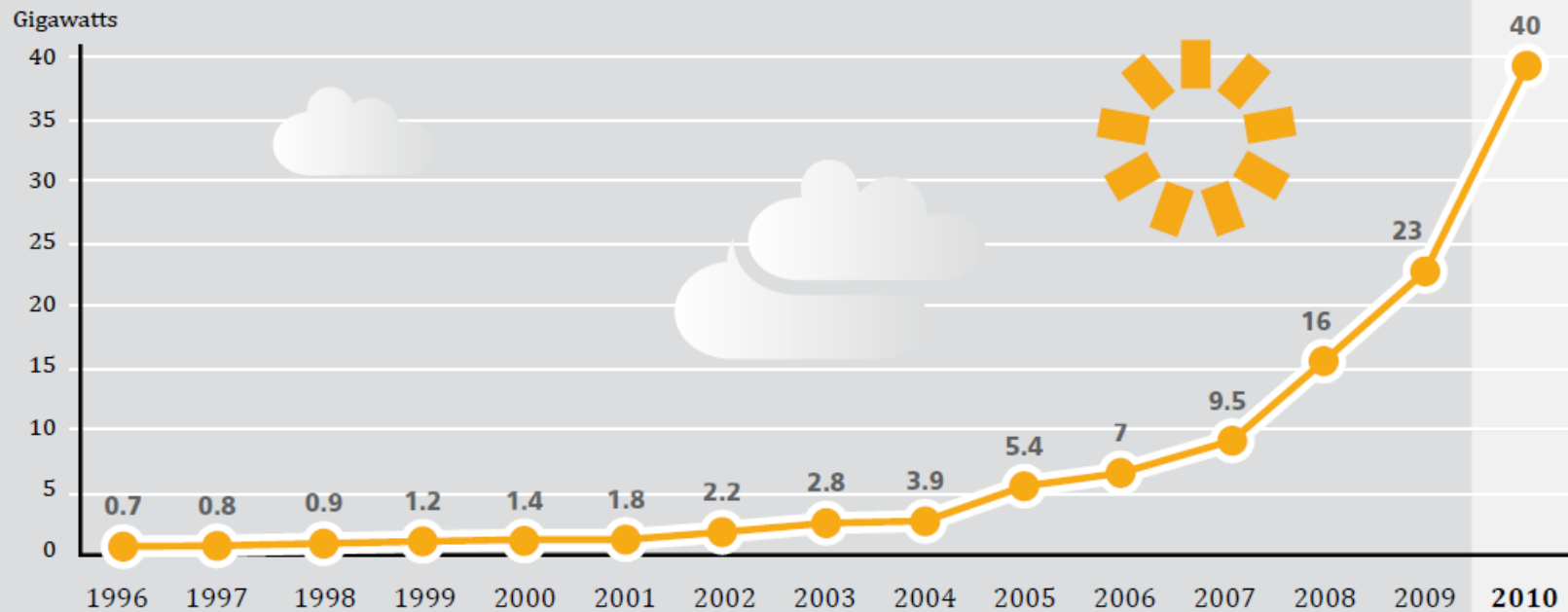
Figure 5. Wind Power, Existing World Capacity, 1996–2010



Source: GWEC,
WWEA, EWEA,
AWEA, MNRE,
BMU, BTM
Consult, IDAE,
CREIA, CWEA

World trends – solar PV

Figure 7. Solar PV, Existing World Capacity, 1995–2010



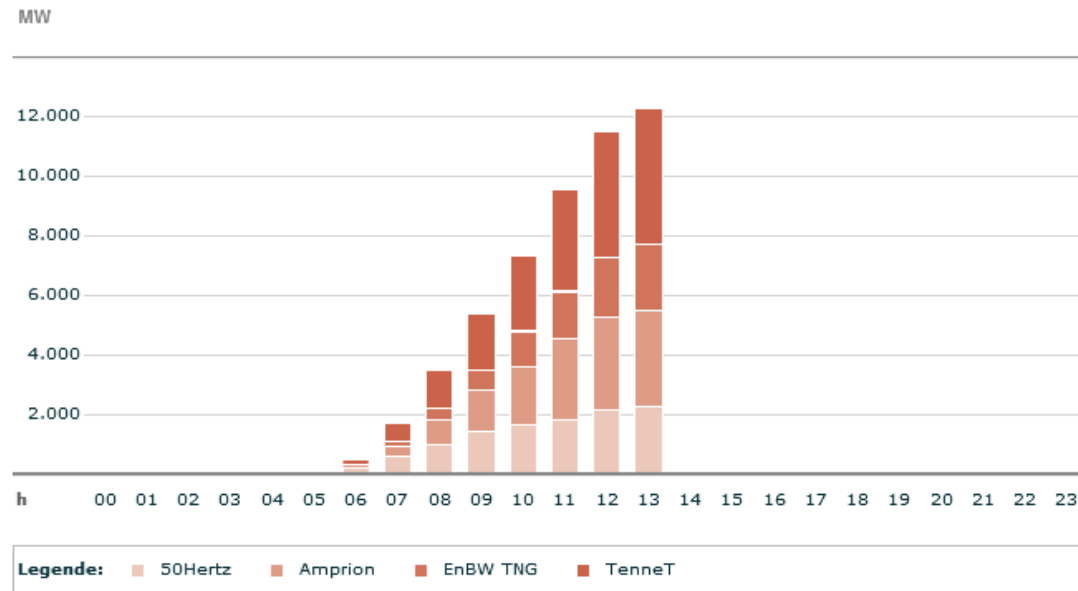
Source:
PV News, EPIA

Solar production in Germany (16.5.2012)

DE/AT **DE** AT

Angezeigter Zeitraum: 16.05.2012, 00:00 Uhr - 16.05.2012, 23:59 Uhr

Letzte Aktualisierung: 16.05.2012, 16:00:53 Uhr



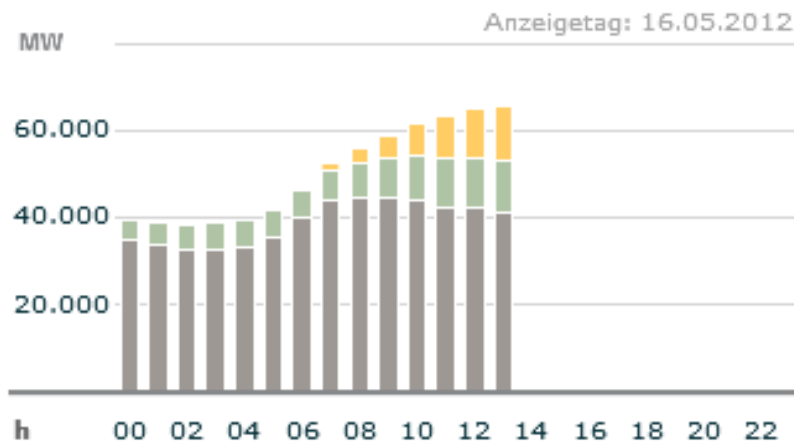
Wind and solar production – predictability (Germany - 16.5.2012)

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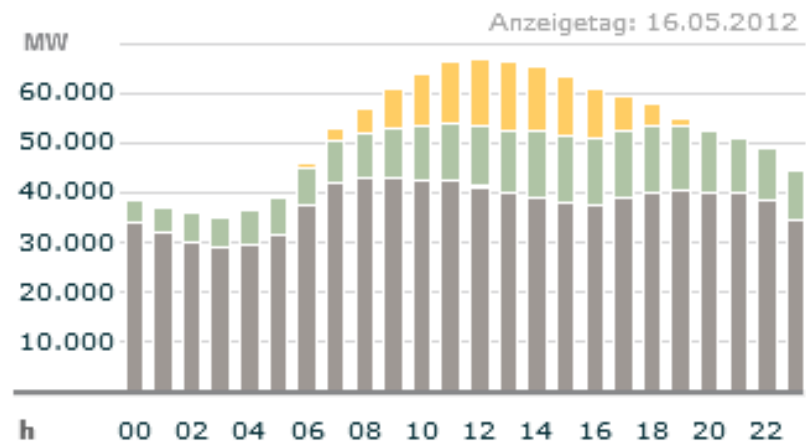
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Actual production (current)

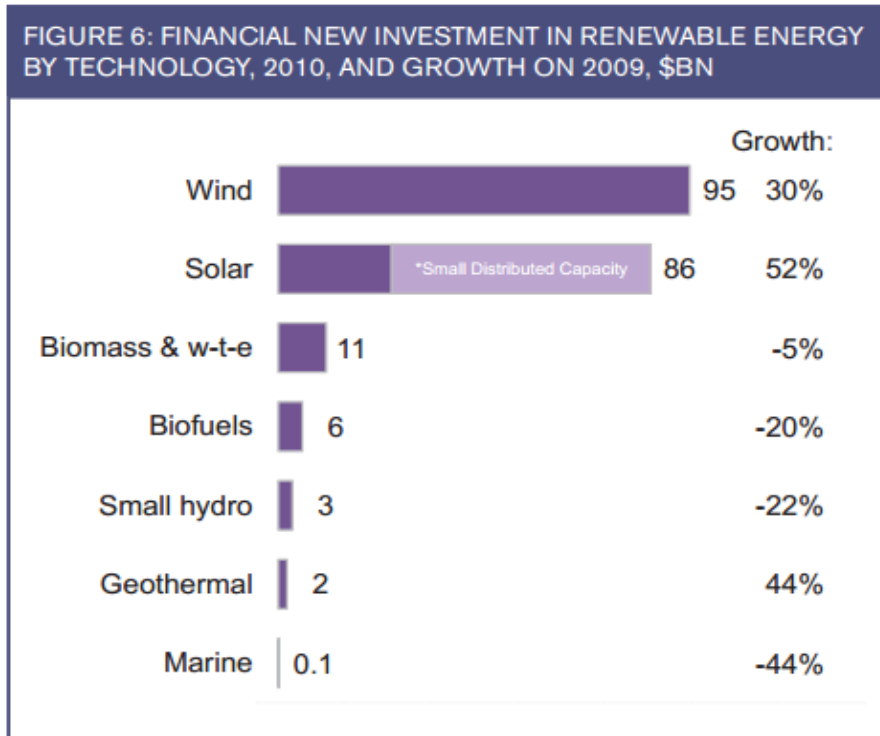


Planned production (current)



Legende: ■ Konventionell ■ Wind ■ Solar

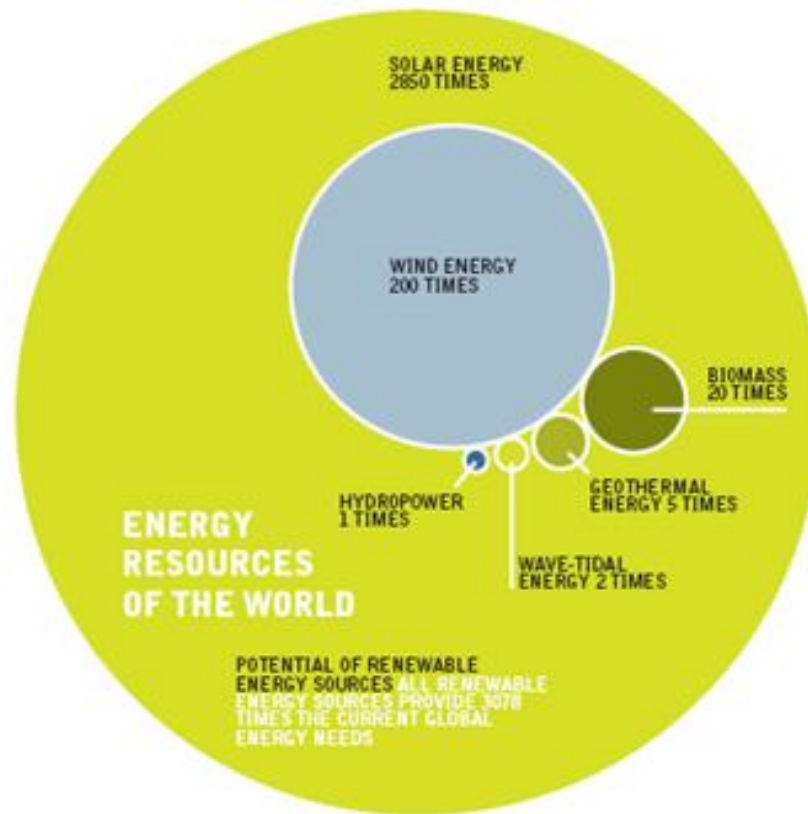
Renewable energy technology growth



New investment volume adjusts for re-invested equity. Total values include estimates for undisclosed deals.

Source: Bloomberg New Energy Finance, UNEP

Energy resources of the world



source WBGU

SEE Future?

- Economic development could rise energy demand. Without measures energy demand would press on energy price.
- Energy demand rise will be slower than economic growth.
- Energy production would need to lower carbon footprint (pressure on coal!).
- Green energy and efficiency can boost green growth and new jobs in the region.
- Energy efficiency can increase competitiveness and reduce energy poverty.

Crucial objectives for energy transition:

- Take low carbon energy future seriously,
- Enhance energy efficiency (saving) and energy demand management,
- Secure a much higher share of renewable energy in energy systems by adopting long term and midterm emissions and renewables obligatory targets,
- Invest in grid upgrade and smarter grids.

Time to think:

- Do you know what are the potentials of renewable energy and efficiency in the SEE region?
- Do you acknowledge the opportunities from energy revolution energy pathway (developments, energy price, jobs, health benefits, energy security)?
- Did you compare different energy pathways and evaluate them, before taking investment or political decision?

Do you dare to make a vision?



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