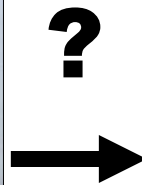


# Sustainable Energy Future

## Opportunities and challenges after Fukushima

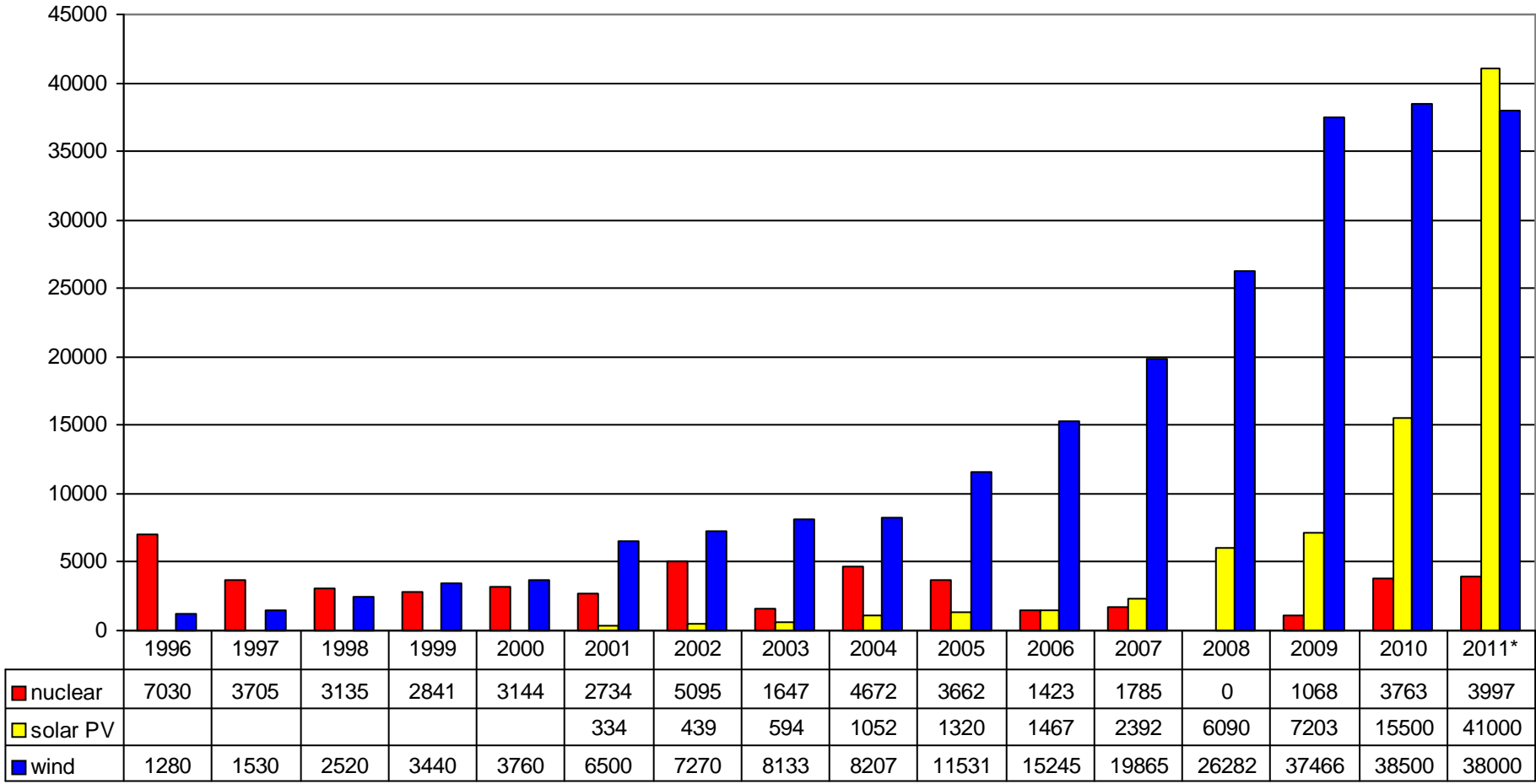


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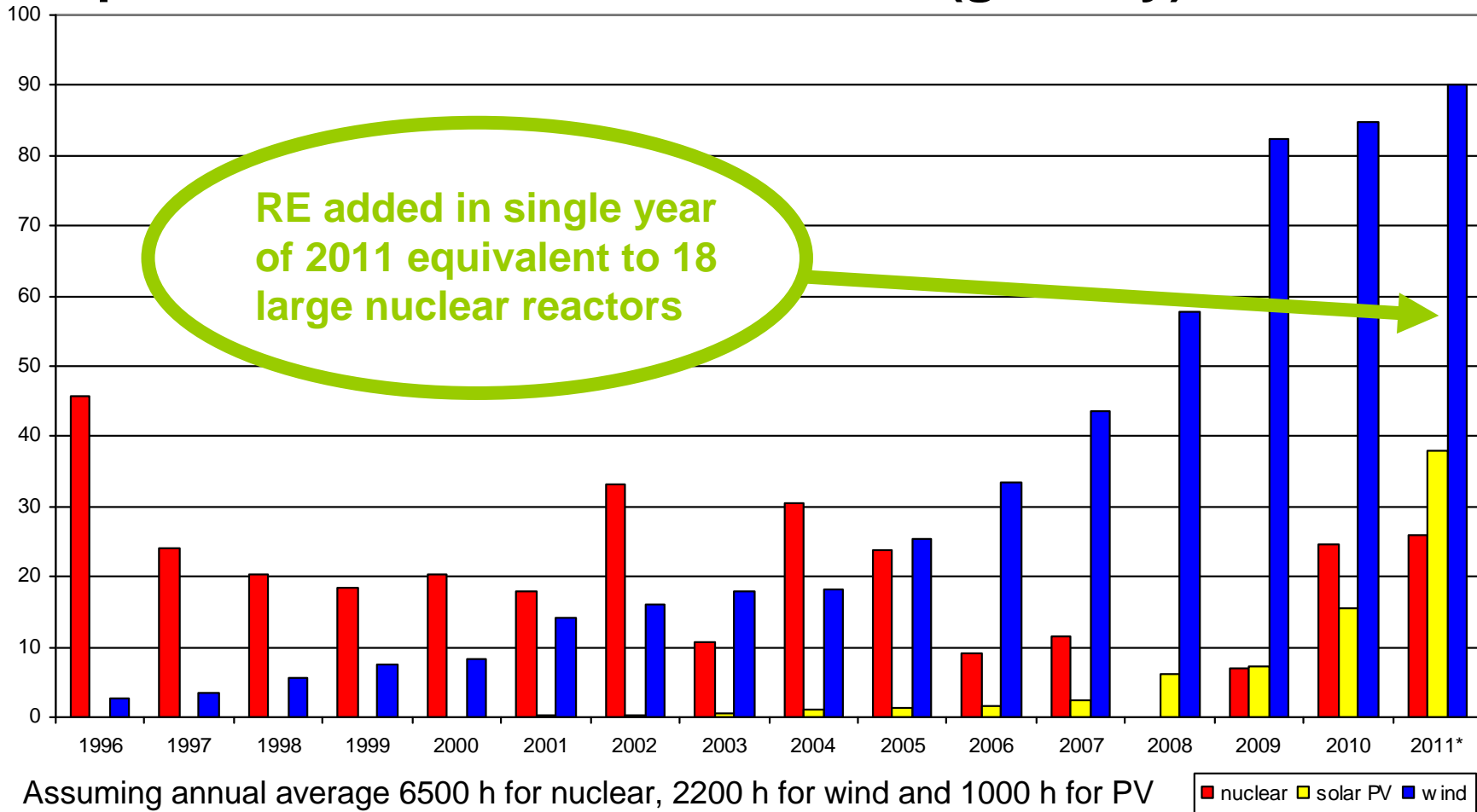
# Annually added new power generating capacities of nuclear, wind and PV (globally), in MW



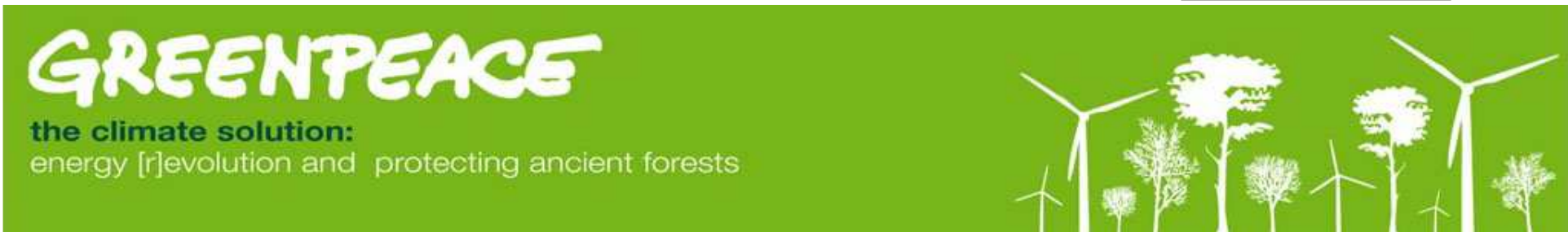
Reference: PRIS (nuclear), EWEA (wind), EPIA (solar to 2010)



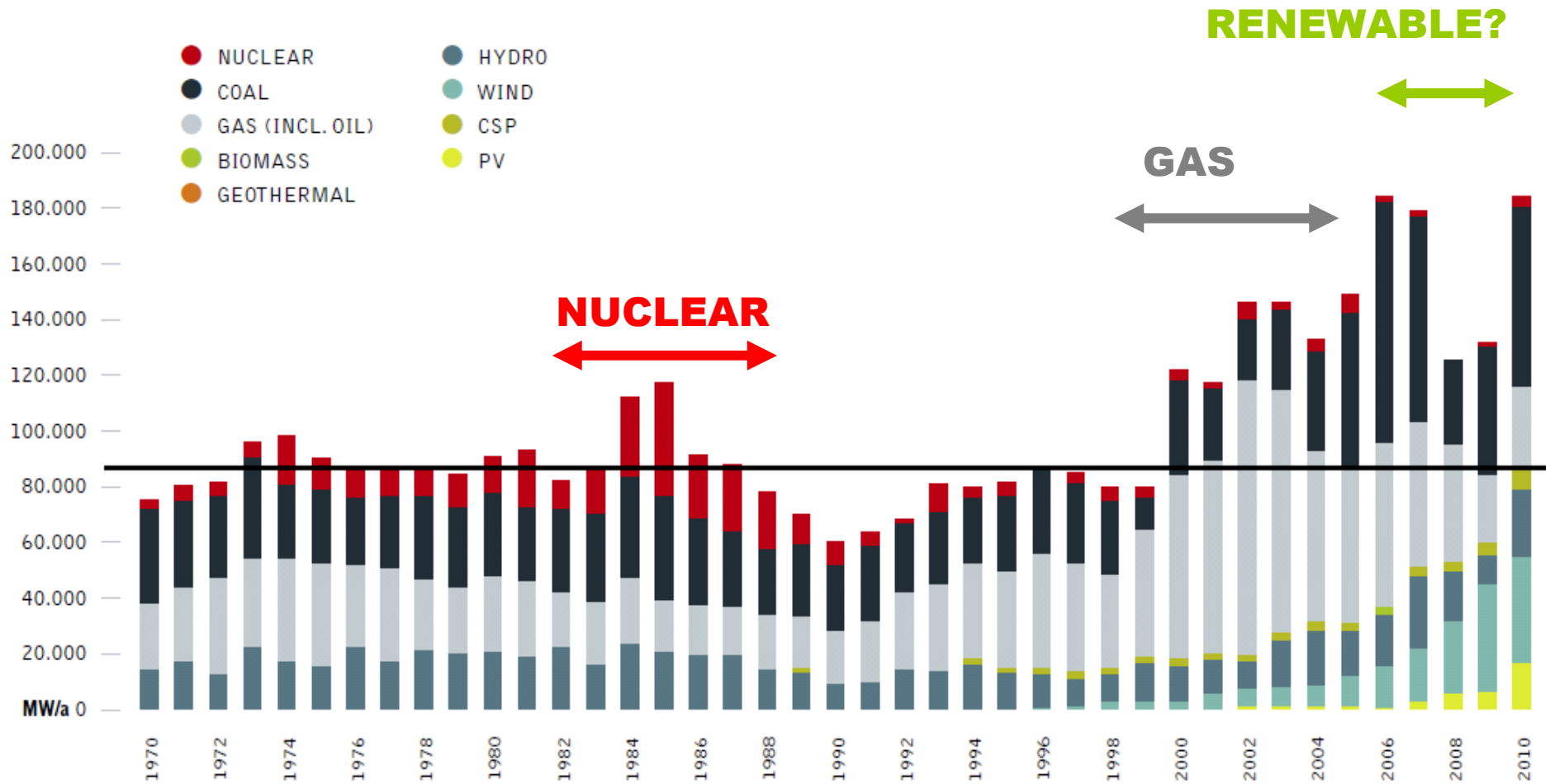
# Power generating potential from newly added capacities of nuclear, wind and PV (globally), in TWh



Reference: PRIS (nuclear), EWEA (wind), EPIA (solar to 2010)



# Global power plant market 1970 - 2010

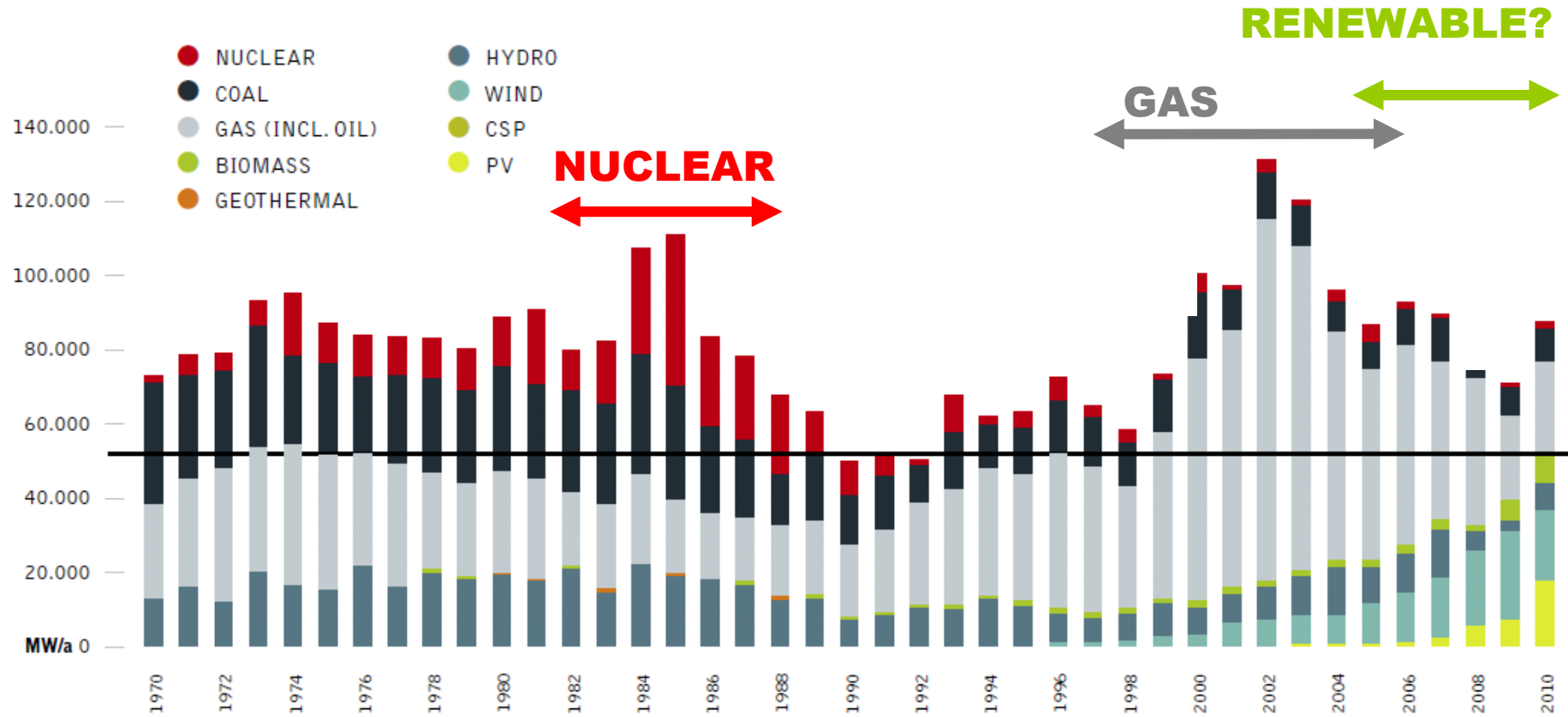


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Reference: Platts, IEA, Bryer (compiled by Teske)



# Global power plant market 1970 – 2010, excluding China



source PLATTS, IEA, BREYER, TESKE.



# But... still a fragile industry

## NEX substantially underperformed MSCI the last 5 years

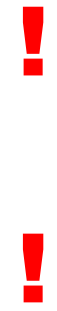
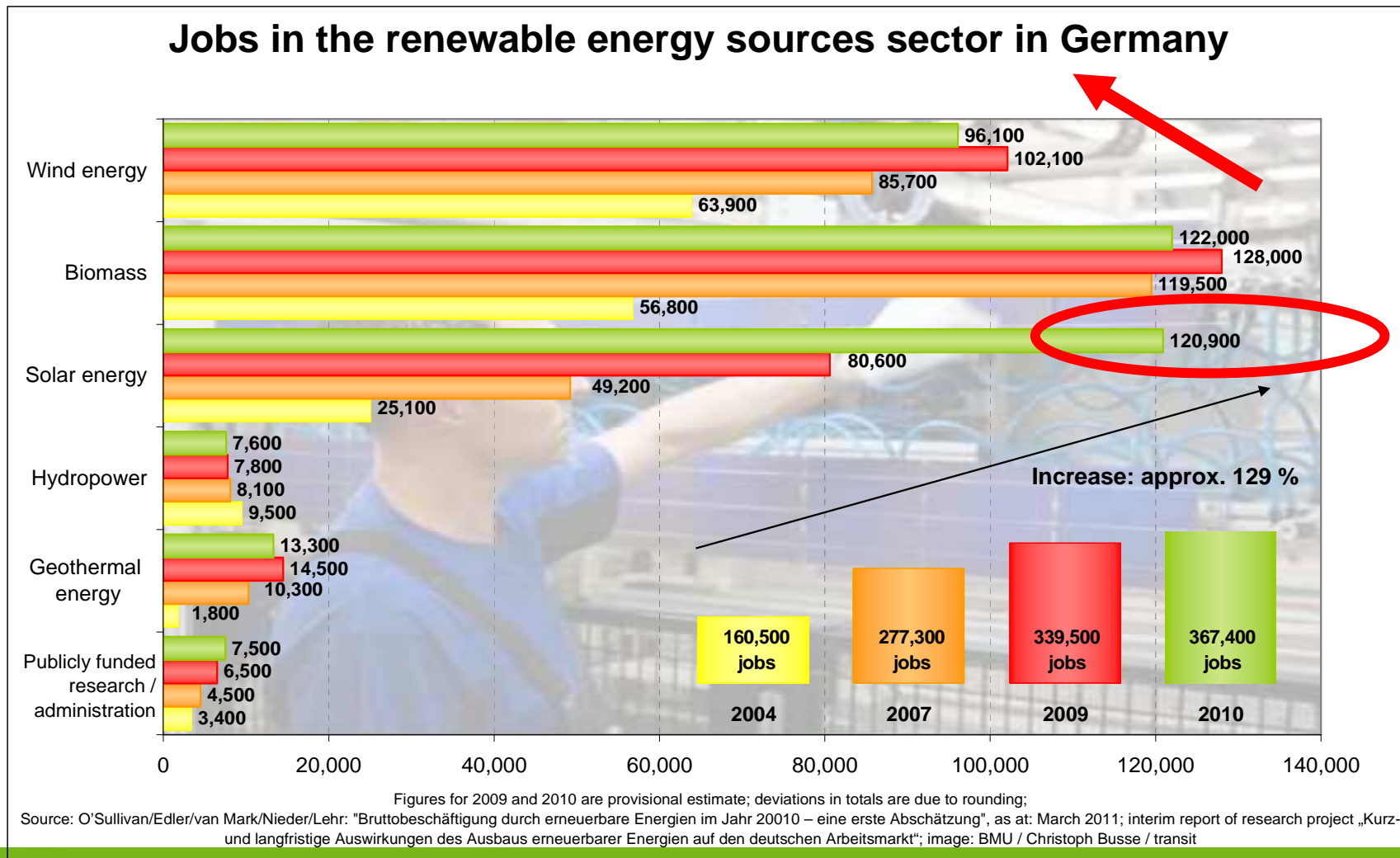


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# But... still a fragile industry

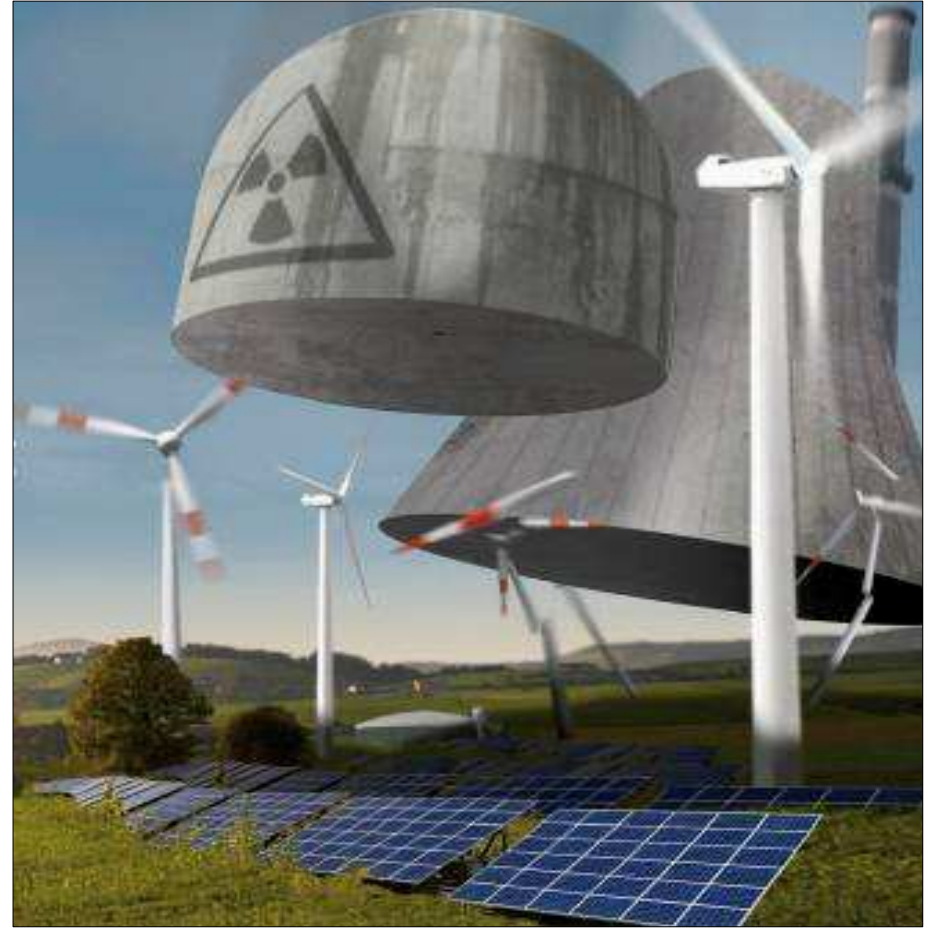


# There are still many barriers to be removed

## Need to stabilize proper policies

- Priority access to grid?
- Feed in tariffs?
- Priority dispatching?
- Renewable energy or “Low Carbon” energy?
- Fossil and nuclear subsidies?

but also lower hurdles in financing renewable energy investments



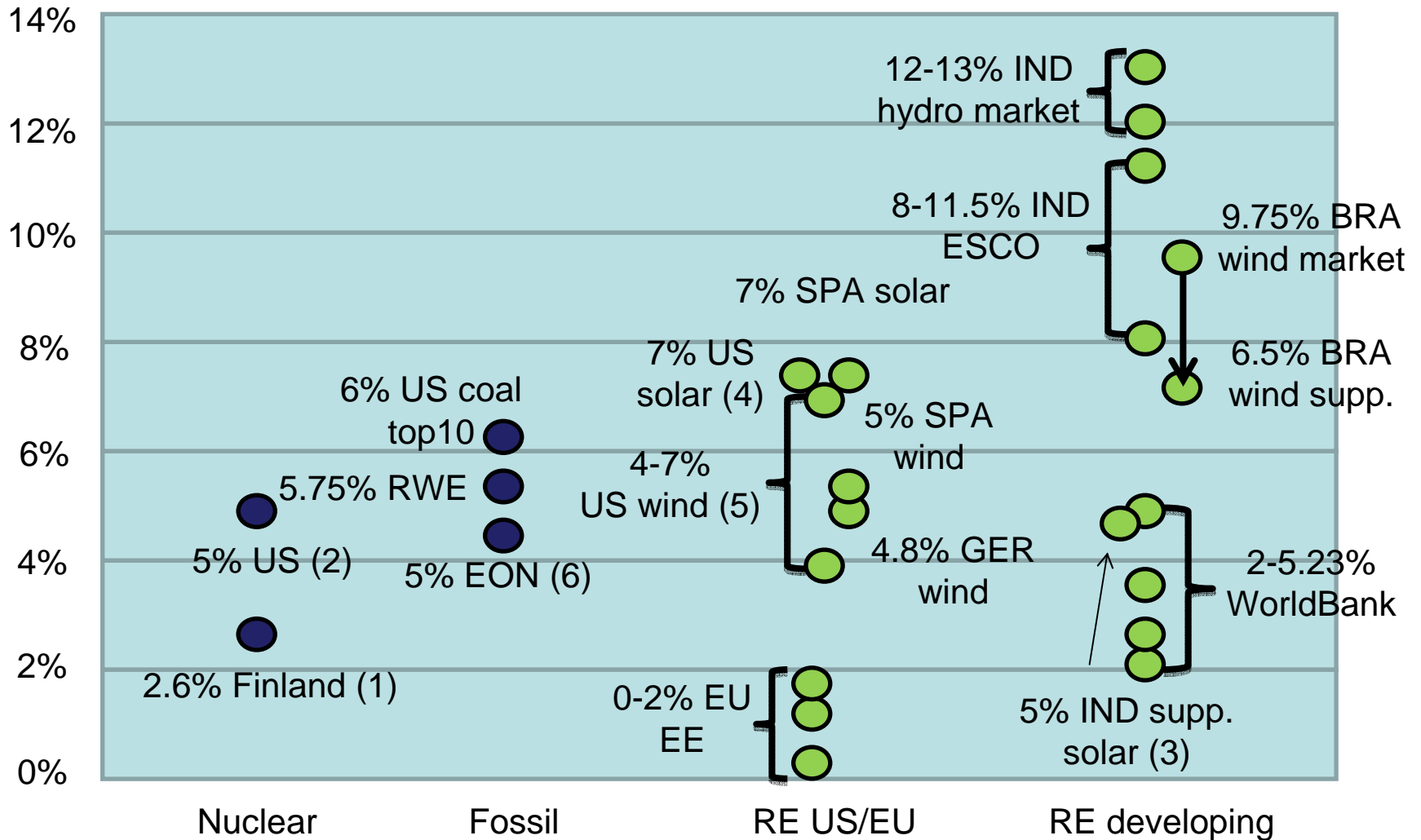
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# Higher cost of debt for renewables



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# Lowered cost of finance can decrease costs of solar and wind substantially

Chart B: LCOE Sensitivity to Debt Cost  
(% nominal interest rate)

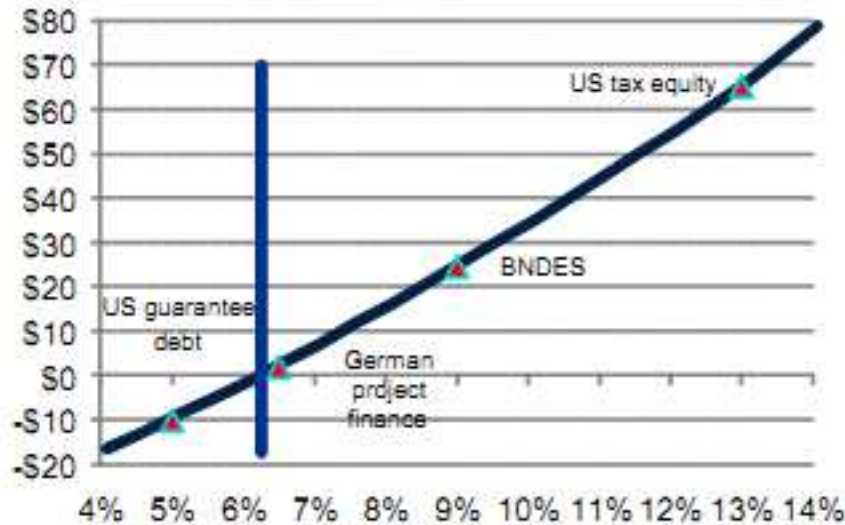
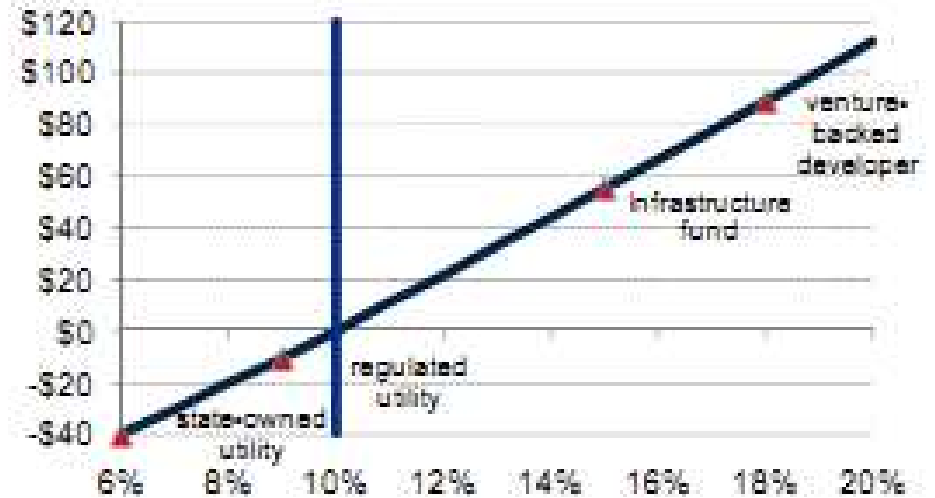


Chart F: LCOE Sensitivity to Cost of Equity (%)



Example: base case cost of solar (\$240/MWh) from WEF and BNEF (2011)

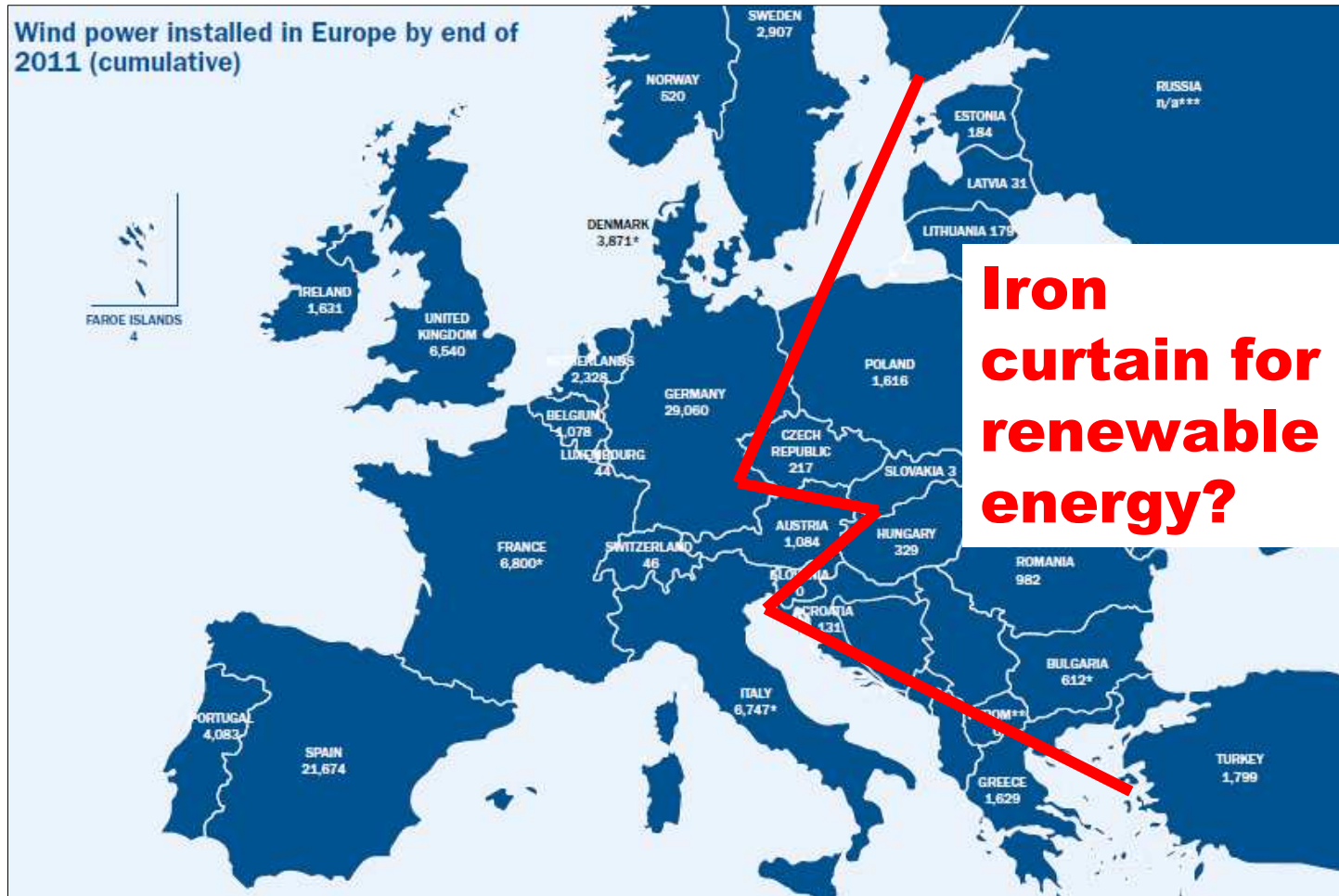
- Lowering cost of equity from 18% to 9% would cut the cost by \$100/MWh – a drop of 42%
- **Lowering cost of debt from 13% to 5% would cut the cost by \$75/MWh – a drop of 31%**

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# Extra barriers in Central/Eastern Europe



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# Extra barriers in Central/Eastern Europe

## 1. Extreme pro-nuclear bias

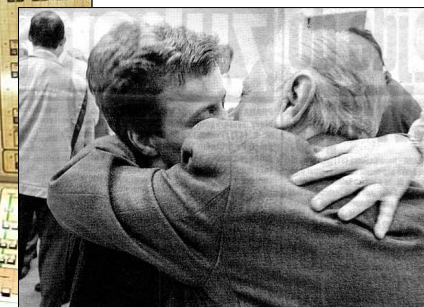
### (Czech SUJB) “nuclear regulator”

- Publicly promoting nuclear power
- Active intervention in energy policy making
- Oppressing dissent opinions

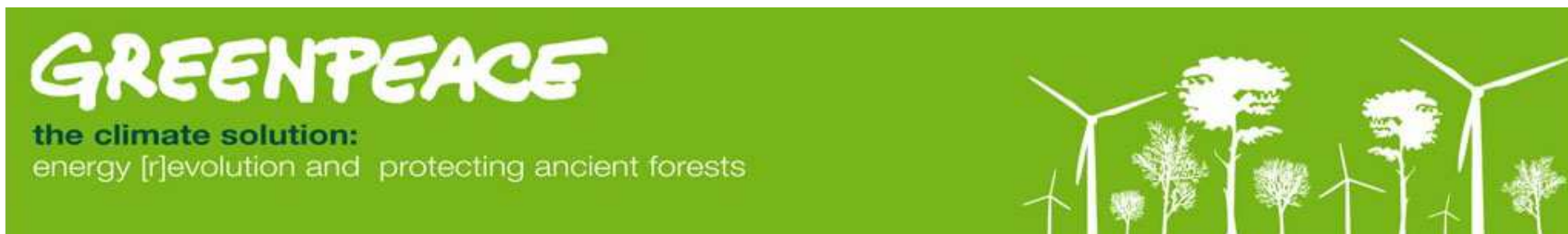
### (Czech) stress tests a farce

- No single reactor “unsafe”
- Renewable energy blamed as single largest risk factor (!)

➤ EU nuclear safety directive weak and toothless



*in photos: Dana Drabova, chair of SUJB*



# Extra barriers in Central/Eastern Europe

## 2. Extreme corporate power

### CEZ politically & economically dominating

- Own paramilitary commandos
- Massive windfall profits (2 billion EUR/y)
- Huge influence over main political parties, practically writing its own legislation
- Multi-billion contracts to companies with anonymous or hidden owners, possibly linked to CEZ managers

➤ EU market and utility regulation fails to deliver



*In photos: CEZ commando*



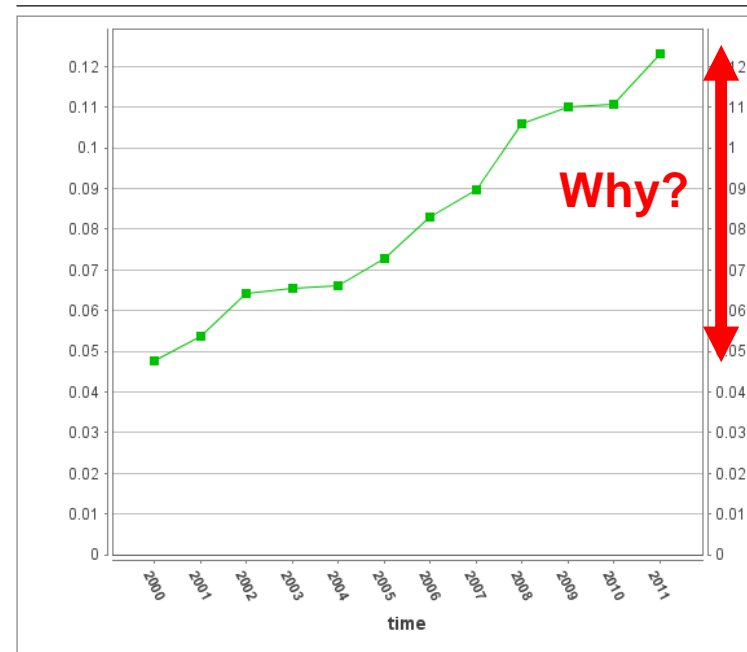
# Extra barriers in Central/Eastern Europe

## 3. Extreme anti-renewable pogroms

- Drive up costs: more than doubled since 2000 (year of Temelin nuclear power plant start up)...
  - ... but blame renewable energy for it, although it contributed less than 5 %
  - Screw feed in tariff to make money yourself, and then kill the industry  
*2009/2010: bonanza for chosen ones*  
*2011: moratorium on new PV and wind*  
*2012: the Czech energy regulator announced to stop FIT for any new installations*
- **EU renewable targets and mechanisms need stronger implementation incentives**

Electricity prices for household consumers  
€/kWh

This indicator presents electricity prices charged to final consumers. Electricity prices: ... [more](#)



Reference: Eurostat

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# Thank you for attention!

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