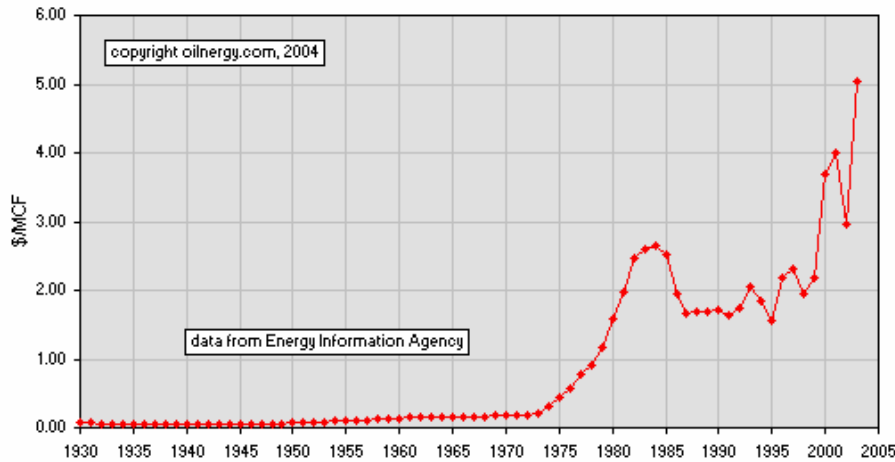


# Renewables 2004

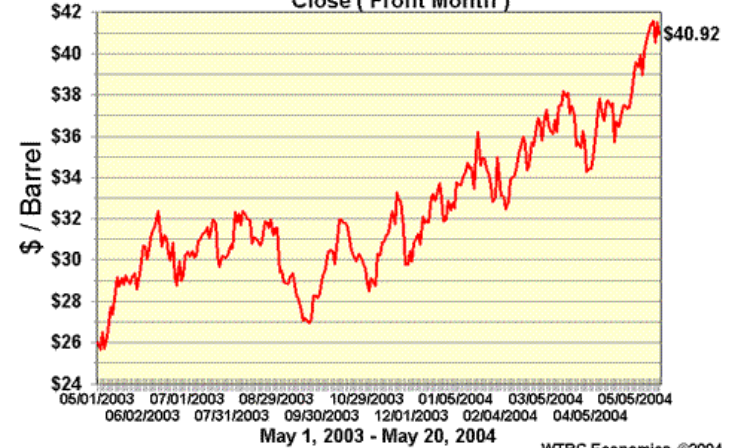
Rudolf Rechsteiner  
Member of Parliament  
Basel, Switzerland

# Oil & Gas at a threshold – soon too expensive for many

U. S. Wellhead Natural Gas Price

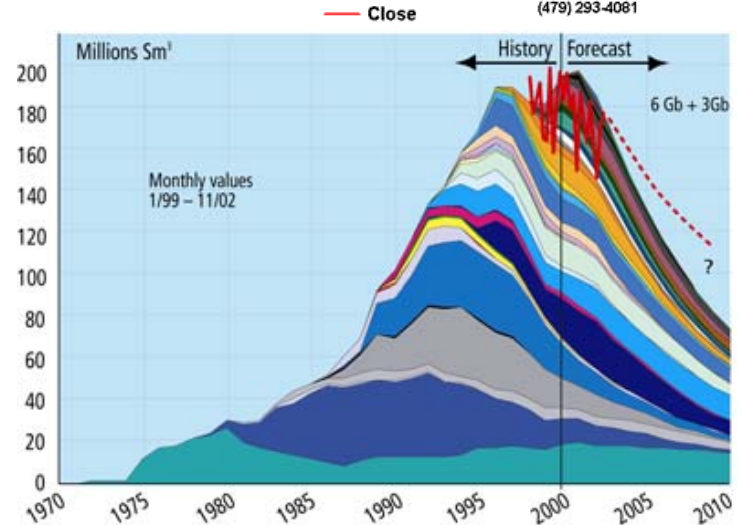
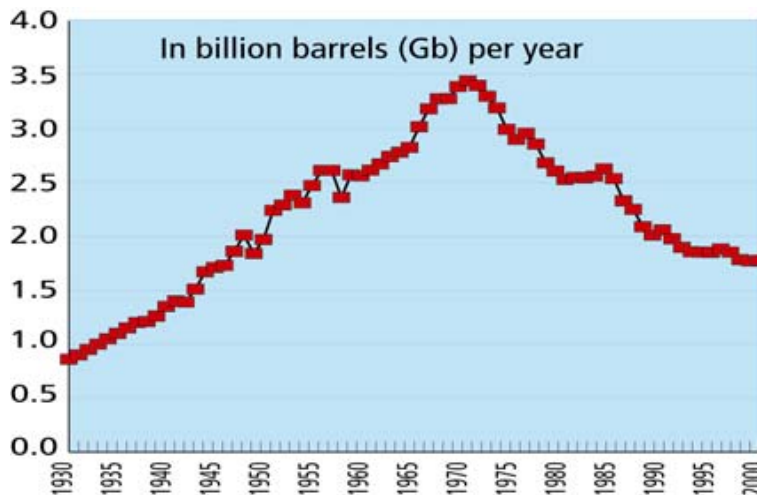


NYMEX Crude Oil Futures Close ( Front Month )

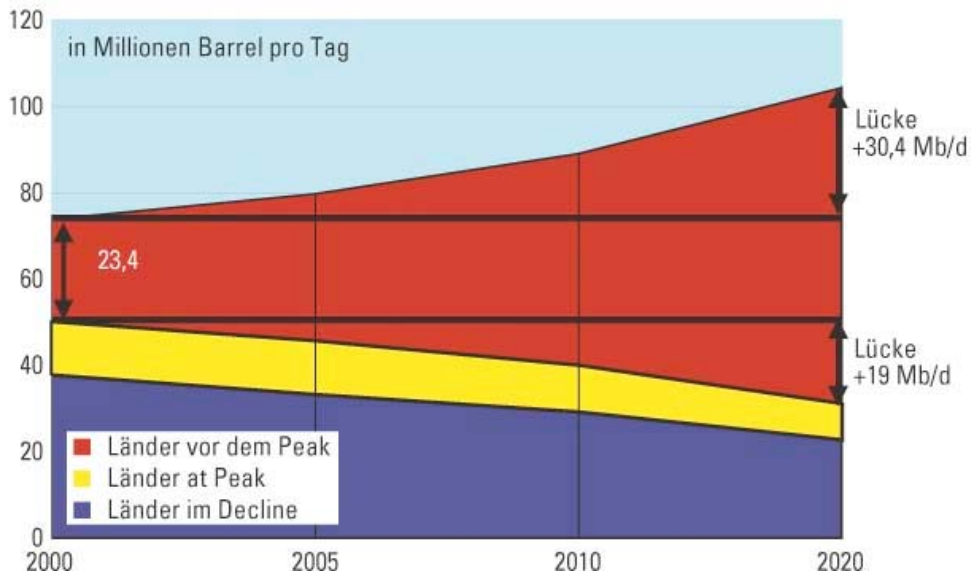


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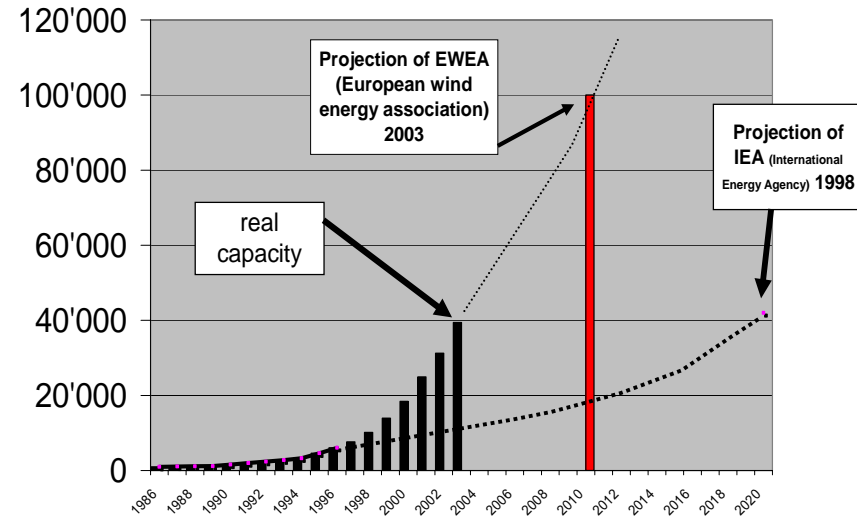
In billion barrels (Gb) per year



# IEA: disastrous recommendations



Wind energy capacity MW world wide



- Wrong IEA 1998/2000/2002 outlook on oil & gas:
  - 20-25-\$-oil for another 25 years with growth rates of 1.6% per year
  - where are the six Saudi Arabias to fill the oil gap ?
- IEA ignores cost reductions and potentials of wind & RE
- Regular Promotion of coal, gas, oil, nuclear
- Ignoring externalities of conventional energy

Stop wrong consulting

# Leave or abolish the IEA

(IEA = International Energy Agency)

- IEA (and IAEA) are most misleading intergovernmental bodies on energy
- Ignoring depletion and sinking marginal returns of oil and gas
- Consistently wrong in outlooks on gas and oil prices
- Ignoring and obstructing Kyoto goals
- Politically controlled by big companies with a bias for fossil (and nuclear) energy

# Renewable energy success must be locally organized

- Develop solid market analyses
- Look for adapted technologies with
  - High energy return on investment
  - High local production share
  - Local businesses for construction and maintenance
- Start with local daily needs:
  - light, cooking, pumping water, maybe hybrid solutions
- Avoid conversion losses – use heat, electricity, biomass directly and with fewest losses possible

# Efficiency

- The „home work“ for efficiency is not done anywhere yet.
- Huge resource untapped, so
  - Let's adopt „best available practices“ by compulsory standards
  - „dynamise“ best available practices by regular “contests” with best new technologies becoming new standards
  - Broaden the scope of minimal efficiency standards to any energy consuming activity
  - Adopt loan schemes and bails for additional costs of efficient technologies like solar homes and solar cars
  - Fund costs in the energy sector by minimal taxes on non-renewable resources.
- Adopt renewable energy standards for certain functions like heating or light as an incentive for efficiency

# Renewables

- Renewables are local / regional
- Develop a local energy mix
- Targets as a percentage of overall demand
- Short term and mid term targets more important than far away goals.
- Look for mass production and continuity
  - R & D is not enough, organize markets and market introduction
  - organize continuous demand by feed-in-tariffs or obligations (for example compulsory solar heaters)

# Create an IRENA

International renewable energy agency

- Measuring renewable potential
  - Solar insolation
  - Wind potentials, geothermal and biomass
- Regional management of electrical grids
  - Backup for intermittency and electricity security
  - HVDC high voltage direct current transmission
- Technology certification and standards
- Global and Regional Research



# Redirect funding!

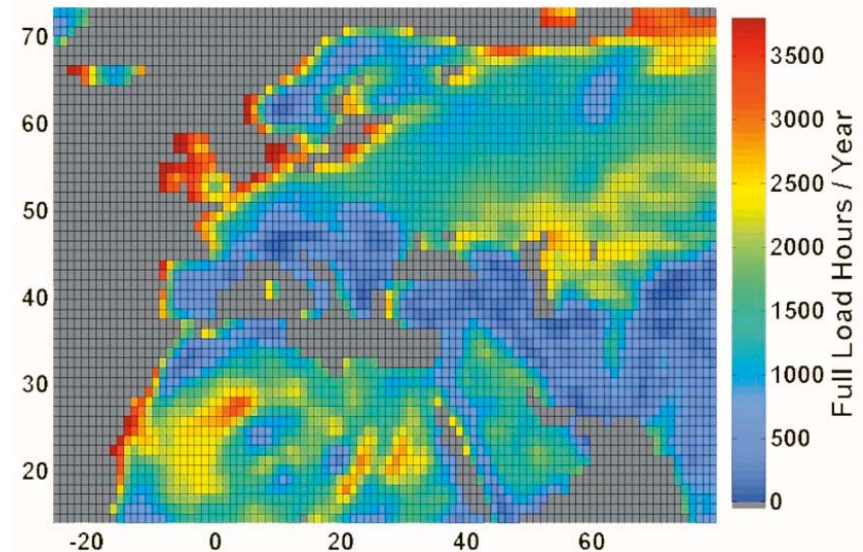
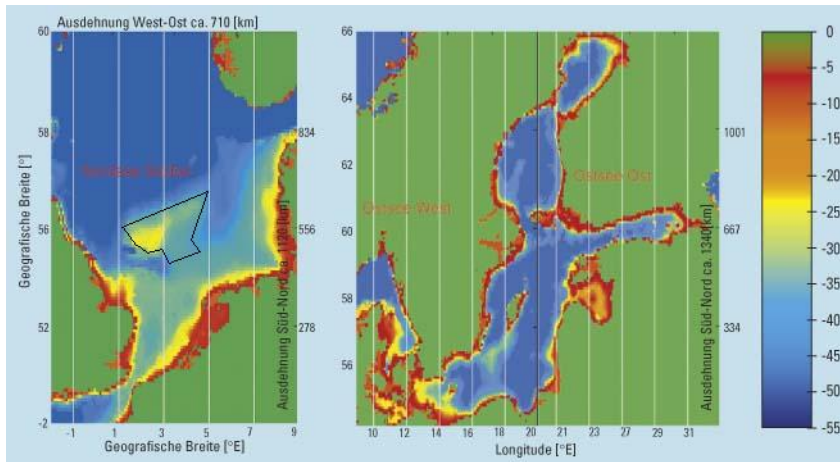
There is enough money in the system!

- Stop non-renewable research funding
  - Stop funding nuclear and fossil research
  - Stop funding related technologies like hydrogen
- Stop subsidies for non renewable infrastructure
- Internalize costs of conventional energy

# Promote better tariff frameworks (I)

- Stop rebates for accelerated electricity consumption
- Start ecological tax reform: Lift non-renewable energy prices (gasoline, coal, gas, heating oil) and lower payroll taxes and finance infrastructure
- Introduce cost covering feed-in-tariffs for electricity from renewable sources
- Introduce Real time Tariffs

# Lower overall costs by continental capacity management



- Create HDVC-lines continent-wide
- Make hydro storage available for nations with no storage
- Use fossil fuels like nat gas for capacity management instead of base-load power.

# Better frameworks (II)

## Introduce feed-in tariffs for Imports

- Lower costs from renewable energy by importing electricity from best places
- Buy renewables from neighbours (like off shore Denmark) or continental partners (Russia, Marocco, Ukraine)
  - Technology Transfer
  - Fossil fuel exports substitution
  - Beneficial for international environmental frameworks like Kyoto-Protocol
- Create transmission agreements.

# Millions of people have reduced life expectancy

## Document health consequences of nuclear and fossil

- Free WHO from the IAEA-muzzle to report on nuclear accidents like Chernobyl
- **Res. WHA 12/40 vom 28.05.1959: Artikel 1, § 3:** "Whenever either organization proposes to initiate a program or activity on a subject in which the other organization has or may have a substantial interest, the first party shall consult the other with a view to adjusting the matter by mutual agreement
- **Artikkel 3, § 1:** "The International Atomic Energy Agency and the World Health Organization recognize that they may find it necessary to apply certain limitations for the safeguarding of confidential information furnished to them"

