

# In 2040 werden Wind und Sonne 4% der globalen Energie liefern



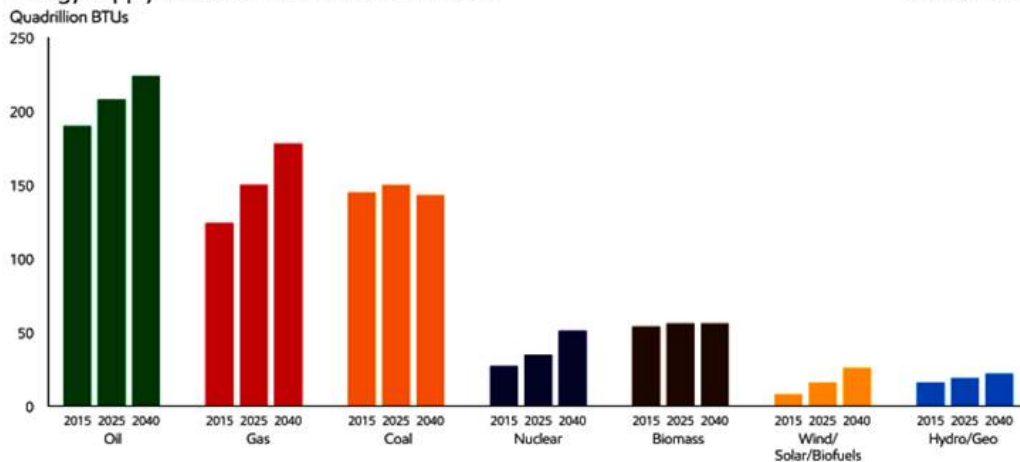
Hier einige Schlaglichter aus der Studie:

Möglicherweise müssen sie die aktuelle Uhrzeit bis zum jüngsten Gericht etwas näher an 12:00 Uhr stellen, wenn ExxonMobils Ausblick von 2017: Eine Prognose auf 2040 stimmen sollte. [Anspielung auf die Klimavereinbarungen von Paris in 2016].

## Supply – projections

Energy supply evolves to meet diverse demand

Screenshot page 35



- Oil remains the primary fuel, essential in transportation and chemicals
- Gas demand rises the most, largely to help meet increasing needs for electricity and to support rising industrial demand
- Oil and gas continue to supply about 55 percent of the world's energy needs through 2040
- Coal's share falls as the OECD and China turn to lower emission fuels
- Nuclear demand almost doubles 2015-2040 led by China
- Wind, solar and biofuels average combined growth of about 5 percent per year, reaching about 4 percent of global energy demand

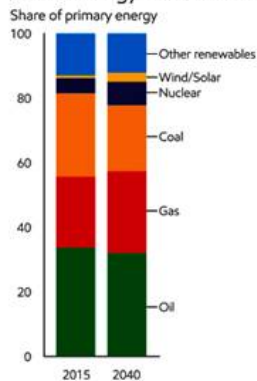
ExxonMobil: 2017 Outlook for Energy: A view to 2040

Erdöl und Erdgas werden auch 2040 weiterhin 55% der Primärenergie der Welt liefern. Während Wind und Solar ihren meteorischen Anstieg auf 4% fortsetzen werden

... Ja, ich weiß, dass Meteore nicht klettern können.

Screenshot page 13

### Global energy mix evolves

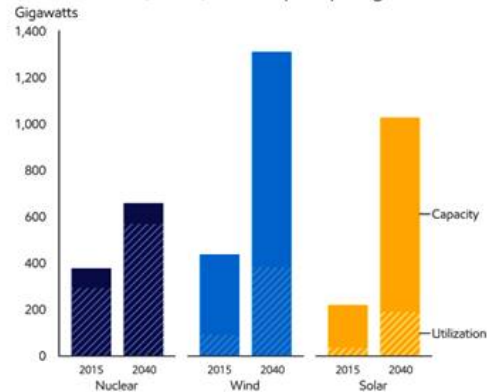


- Oil remains the world's primary energy source through 2040, meeting about one-third of demand
- Natural gas grows the most of any energy type, reaching a quarter of all demand
- Coal remains important in parts of the world, but loses significant share as the world transitions toward energy sources with lower emissions
- Nuclear and renewables see strong growth, contributing close to 40 percent of incremental energy supplies to meet demand growth

Screenshot page 28

### Electricity and power generation – projections

#### Global nuclear, wind, solar capacity surges



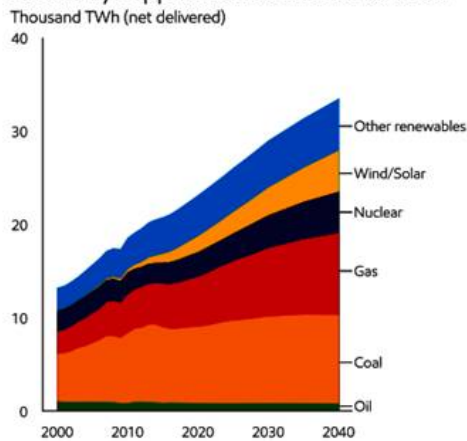
- Global nuclear, wind and solar see significant capacity additions
- Nuclear capacity grows by 75 percent 2015-2040, led by China
- Although utilization improves over time, intermittency limits worldwide wind and solar capacity utilization to nearly 30 percent and 20 percent, respectively
- Wind and solar together provide similar electricity as nuclear in 2040

### ExxonMobil: 2017 Outlook for Energy: A view to 2040

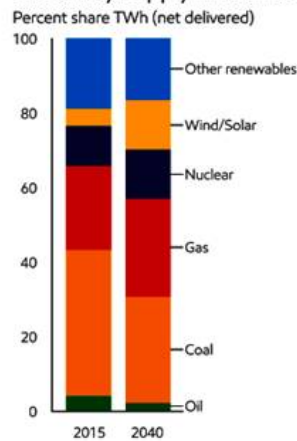
Während die Wind- und Solarkapazität schnell ausgebaut wird, wird die Nutzenanwendung nachhinken.

*Auch wenn wir die konventionelle Stromerzeugung auf Null setzen, wird das mit Wind und Solar nicht viel besser ...*

Electricity supplies reflect diverse sources



Electricity supply mix shifts



- World shifts to less carbon-intensive energy for electricity generation, led by gas, renewables (wind, solar) and nuclear
- Electricity supplies from coal plateau around 2035 as natural gas, nuclear, wind and solar continue to grow
- Coal provides less than 30 percent of world's electricity in 2040, versus about 40 percent in 2015
- Wind and solar electricity supplies grow about 360 percent, approaching 15 percent of global electricity by 2040
- Renewables growth supported by policies to reduce CO<sub>2</sub> emissions

### ExxonMobil: 2017 Outlook for Energy: A view to 2040

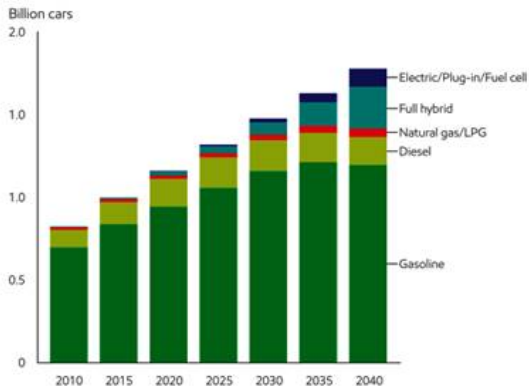
Wind und Solar werden auch im Jahr 2040 nicht 85% des Stroms der Welt liefern. Allein Kohle wird noch doppelt so viel Strom erzeugen wie Wind und Sonne zusammen.

Was ist mit Elektrofahrzeugen (PEV powered electric vehicles)? Werden sie nicht die Welt vor dem Klimawandel retten?

## Transportation – projections

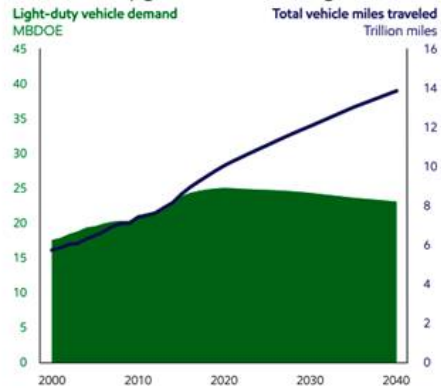
Screenshot page 18

Global fleet increases and diversifies



- Driven by increases in personal income and population, the global fleet of cars, SUVs and pickups grows about 80 percent to approximately 1.8 billion vehicles
- Conventional cars (primarily gasoline-powered) will remain the most popular due to their cost, functionality and increasing fuel efficiency
- Full hybrid vehicles reach approximately 15 percent of the fleet, though many hybrid features, such as start-stop engines, penetrate into conventional vehicles
- Electric vehicles penetrate the small to mid-size car segment across the world, and in certain places grow faster with policy support

Fuel economy gains stem demand growth



- Improving new-car fuel economy will enable energy demand to peak in the 2020s, even as total miles traveled increases significantly to 2040
- Out to 2040, energy demand decreases in the OECD more than it increases in the non-OECD, driving down global LDV energy demand
- Although energy demand peaks, personal mobility continues to increase globally as total miles traveled by all cars, SUVs and pickups rises to almost 14 trillion in 2040
- About two-thirds of energy savings reflect more efficient internal combustion engines, with the balance resulting from adoption of hybrid or electric vehicles

## ExxonMobil: 2017 Outlook for Energy: A view to 2040

Hybridautos werden 15% globalen Anteil erreichen. Vollstromer werden sich schüchtern bei 5% bewegen.

*Alle sarkastischen Bemerkungen waren absichtlich – David Middleton*

Veröffentlicht auf WUWT am 4. Januar 2017

Übersetzt durch Andreas Demmig

<https://wattsupwiththat.com/2017/01/04/wind-and-solar-to-provide-4-of-global-primary-energy-by-2040/>