

# Introduction to Solar Energy

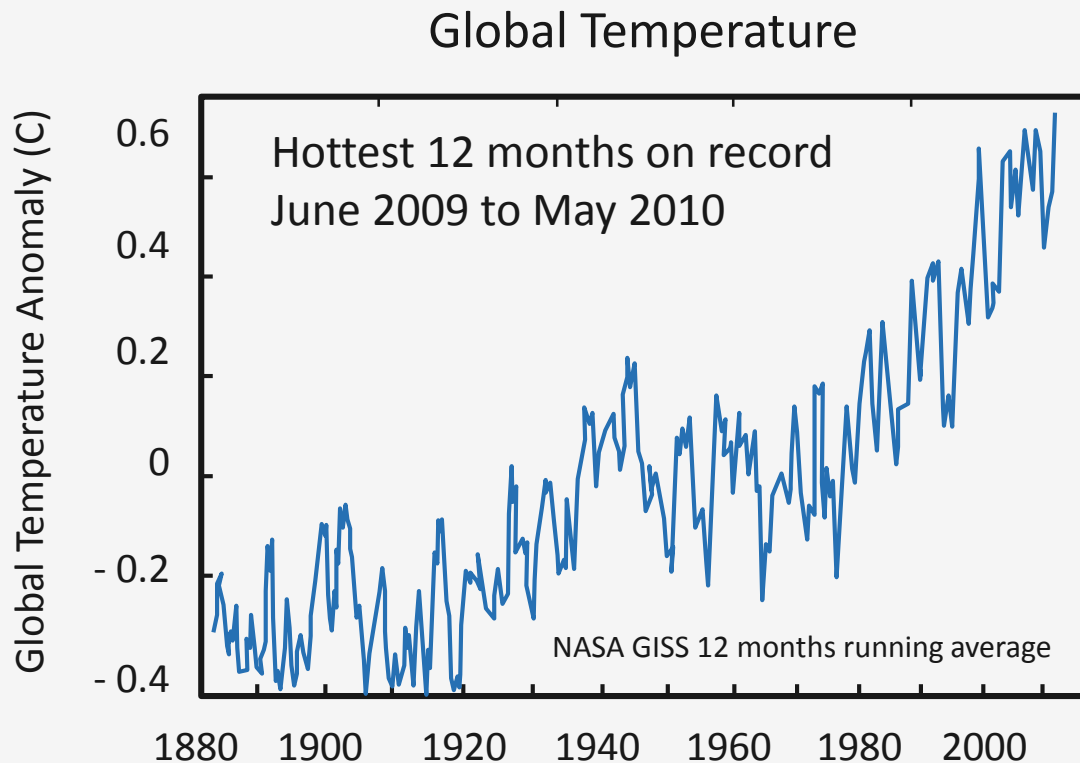
## Energy Conversion II

*Week 1.2.2*

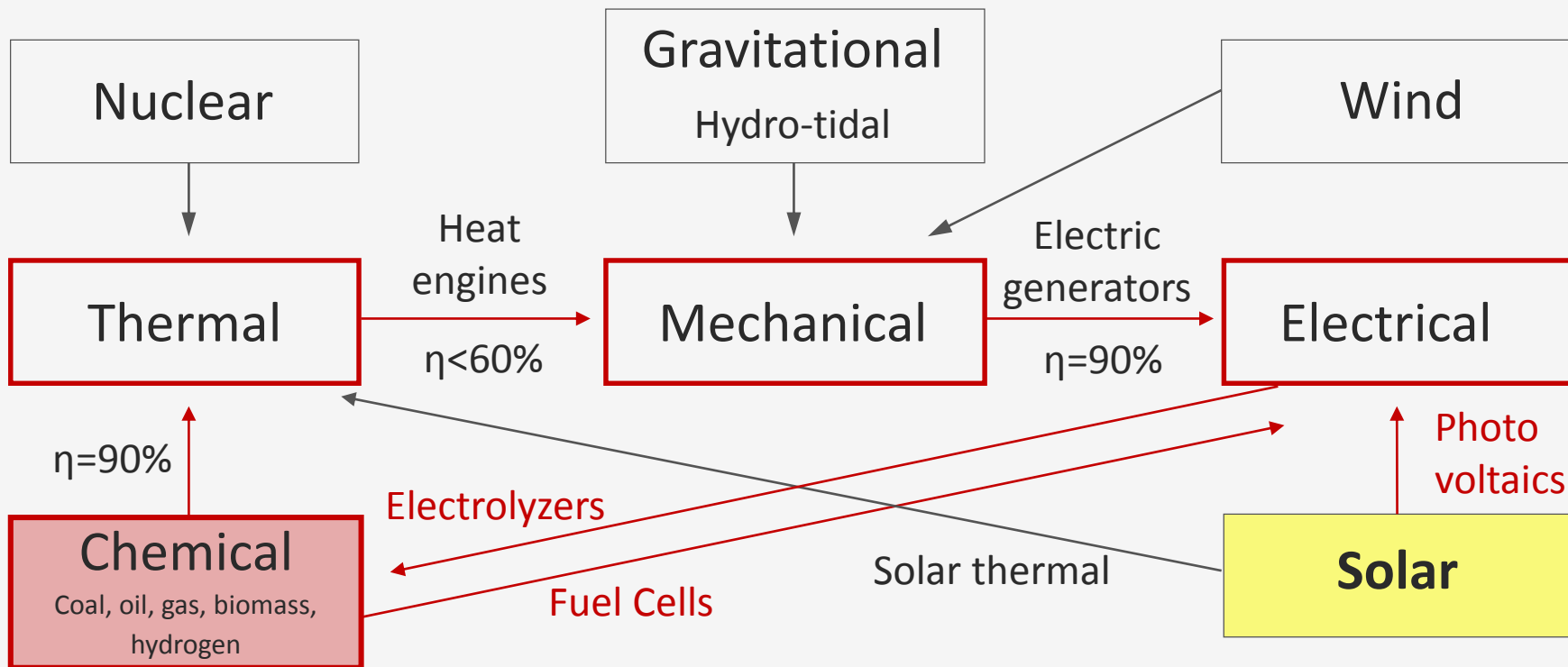
Arno Smets

# The Energy Problem

## Climate change

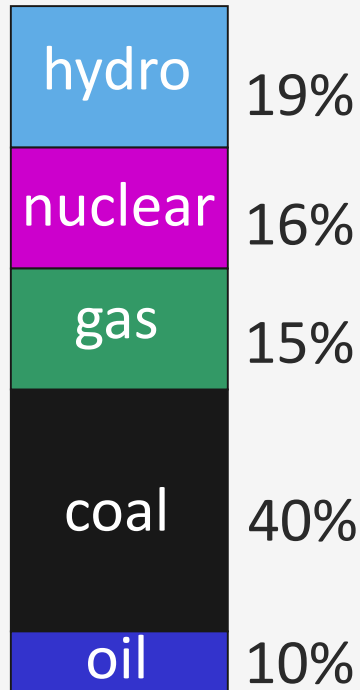


# Energy conversion

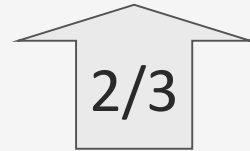


(Source: L. Freris, D. Infield, *Renewable Energy in power Systems*, Wiley 2008)

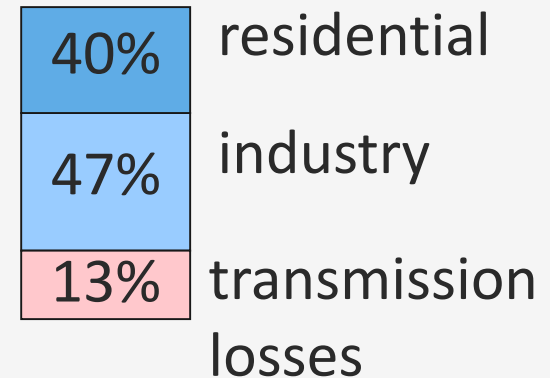
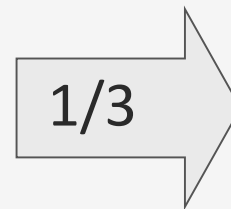
# Electricity generation 2007



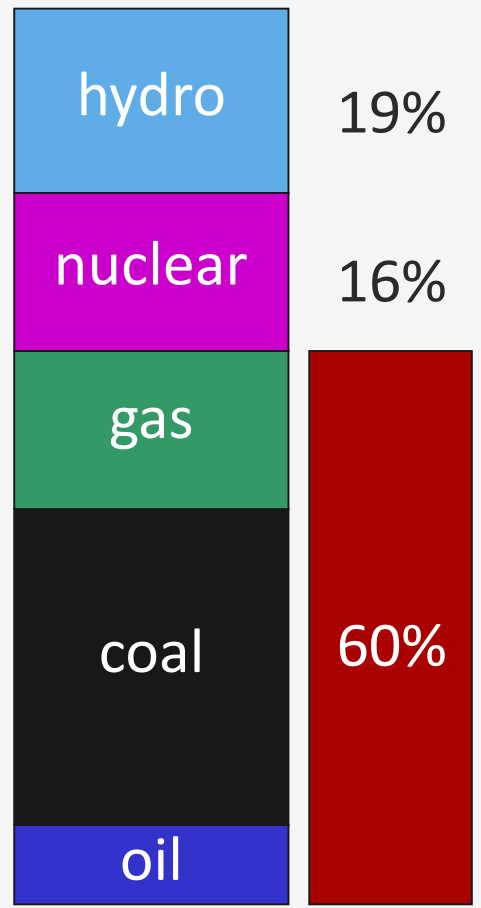
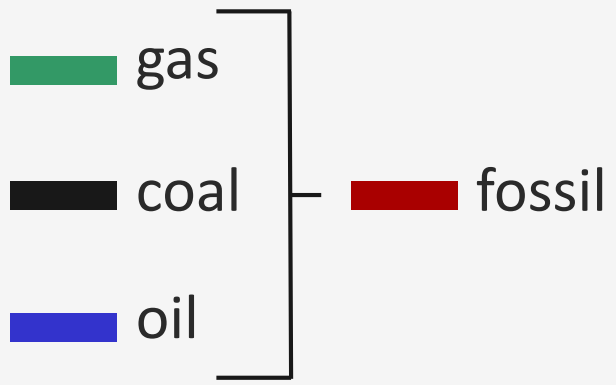
Conversion losses



Electricity consumption

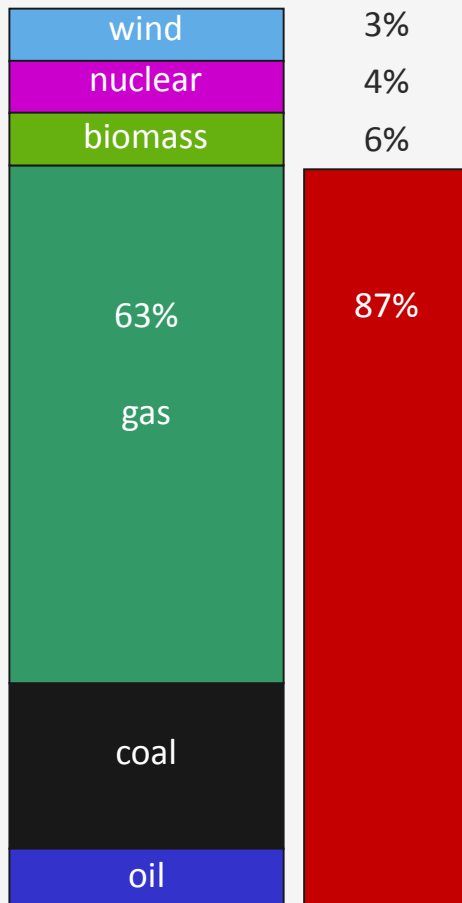
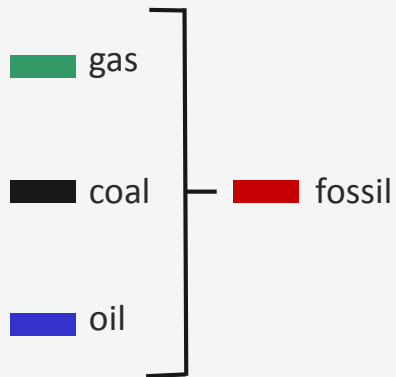


Worldwide generation  
**20,202 TWh**



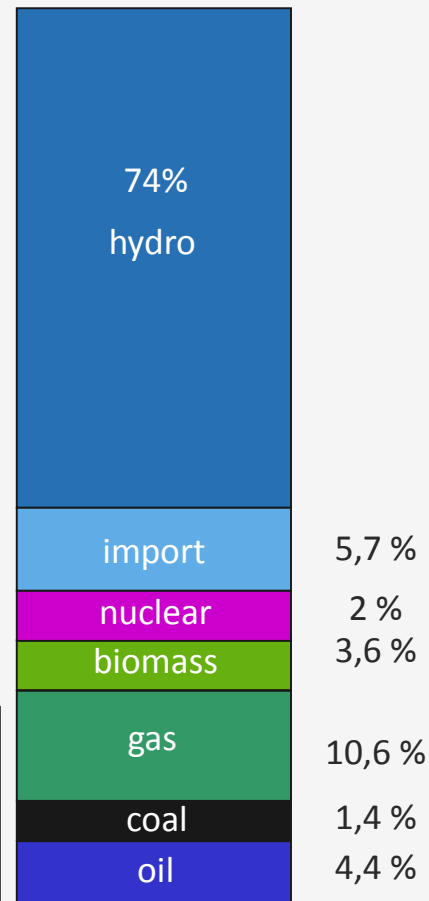
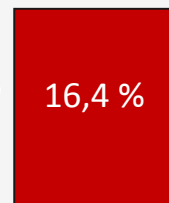
5000 x 0.5 GW  
Nuclear power plant

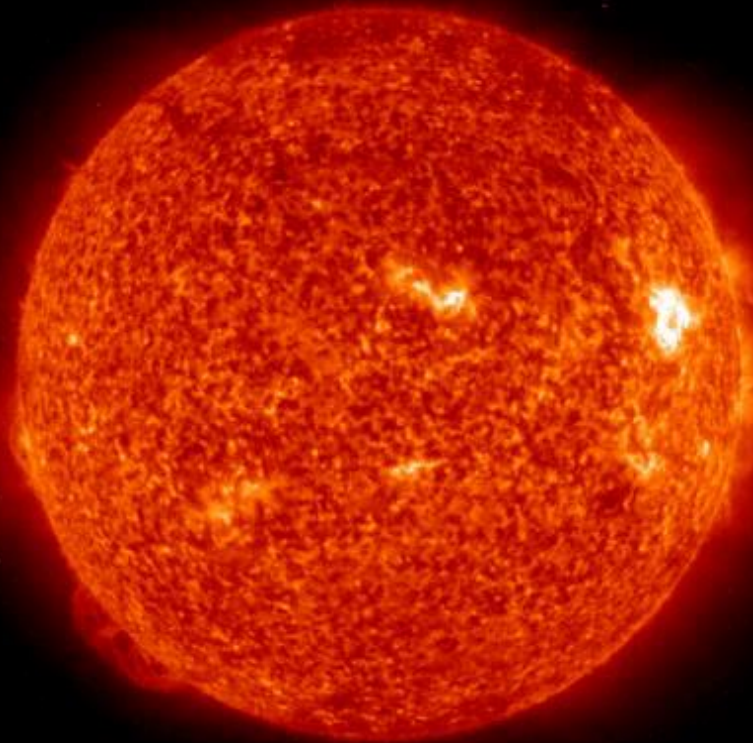
Netherlands  
103 TWh



Brasil  
413 TWh

16,4 %





*(Source: NASA)*

**Thank you for your attention!**