

## Future Perspectives of 2nd Generation Biofuels

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- Assessing **sustainability** of 2nd generation biofuels compared to alternatives
- Assessing the **potential** of 2nd generation biofuels for the future Swiss mobility (2015, 2030)
- Policy recommendations for biofuels support
- Available as book: <http://www.vdf.ethz.ch/> → „biofuels“



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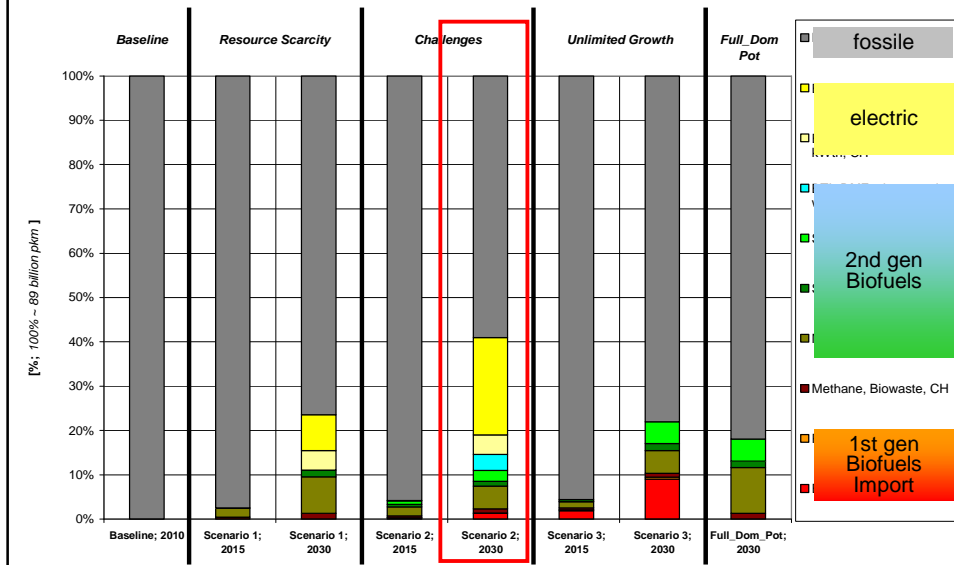


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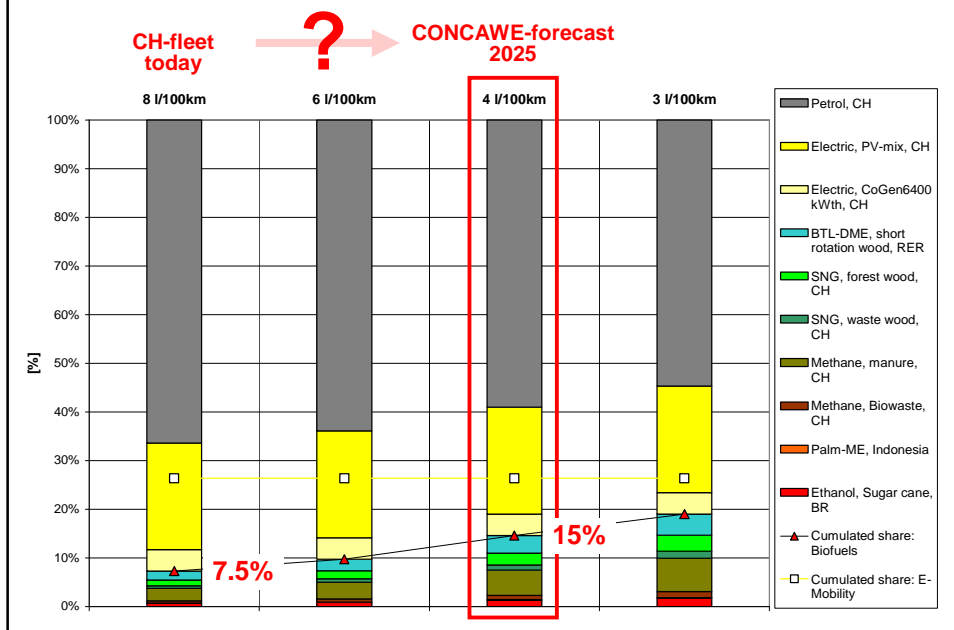
## Boundary scenarios

Impact factor	Resource scarcity	Challenges	Unlimited growth
Oil price	High	High	Low
Eating habits	Crops (veg.)	Meat	Meat
Food price index	Food crisis	Food crisis	Normal food supply
World econ. growth	Recession	Boom	Boom
Swiss policy	Subsidies for food	Sustainable biofuels	Sustainable biofuels
Global energy & climate policy	Emission red. treaty	Emission red. treaty	No treaty

## How much fossil mobility can be substituted?

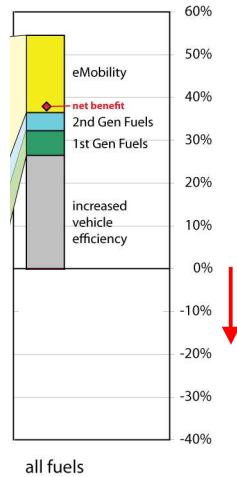


## The importance of car efficiency!



## How much GHG-emissions could be saved?

GHG Savings



Potential GHG savings for CH in the year 2030 assuming a rapid technology development (scenario „challenges“)

(Zah et al. 2010)

## Conclusions

- „Sustainable“ production of 2nd gen biofuels is generally possible
- The production potential is however limited by the availability of **land** and **waste**
- Max. **8%** of Swiss individual mobility could be fueled by biofuels in 2030 – more than 50% from national production
- Biofuels will complement eMobility in **long distance transport** and in **aviation**



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