



De energietransitie:
De gebouwde omgeving, regio's en transport

RSAN Najaarsdag 2019



Energy transition

- Reducing emissions of CO₂
 - Energy production: decrease in the share of fossil fuels (coal, oil and gas) and an increase in the share of renewable energy sources.
 - Energy consumption: energy savings
 - Re-use; circularity



Energy transition

□ Social and technological innovation

- Fundamental changes in behaviour and regulation of citizens, business and governments
- Not automatically: urgency yet option value of waiting
- Transformation failures

Market failure	System failure	Transformation failure
Information asymmetry	Lack of physical and knowledge infrastructure	Lack of guiding vision
Knowledge spillovers	Obsolete regulations and social standards	Lack of demand articulation
External effects	Fragmented networks	Poor policy coordination
Excessive use of natural resources	Lack of relevant knowledge and competences	Lack of reflexivity and learning capacity
		Lacking sense of urgency



Energy transition

- Social and technological innovation
 - Fundamental changes in behaviour and regulation of citizens, business and governments alike
 - Change not automatically: urgency yet option value of waiting when uncertainty and irreversible investments
 - Transformation failures
 - Governance level: both local (city, municipality) and metropolitan area



Regions – challenges (non-exhaustive)

- Built environment (office and housing), industry, agriculture, mobility within the region
- Energy infrastructure
 - Power density of renewable energy, space required.
Spatial planning and public support
- Labour market
 - Investments: without adjustments, bottlenecks in the labour market
Timing
- Policy (what, how, where and when) & evidence-based decisions
 - Living labs, sense of the city (AMS)
 - Vesta MAIS (PBL)



Mobility & transport (non-exhaustive)

□ Mobility

- Electricity – distributed systems; what about biofuels or hydrogen?
- Car ownership reduces urban density
Air quality in cities vs spread of emissions?



Today's seminar

- Arjan van Timmeren
 - TU Delft & Amsterdam Institute for Advanced Metropolitan Solutions

- Gerlof Rienstra
 - Rienstra Beleidsonderzoek & Beleidsadvies BV

- Luise Koeppe
 - University of Groningen

- Francis Ostermeijer
 - VU Amsterdam

- Cai Yuanyuan
 - Utrecht University

- Folkert van der Molen
 - PBL Netherlands Environmental Assessment Agency

