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THE ENERGY TRANSITION IN FLANDERS: HOW TO STIMULATE THE PRIVATE SECTOR?

Summary

- Flemish Climate Policy targets for 2020 almost mission impossible
- Not enough private sector investments in sustainable energy
- Still too many barriers, multi-disciplinary of nature
- Involves all players in liberalised energy market
- ABM as a framework for examining the effects of potential solutions?
- Can deliver valuable input for the decision processes of all involved stakeholders.

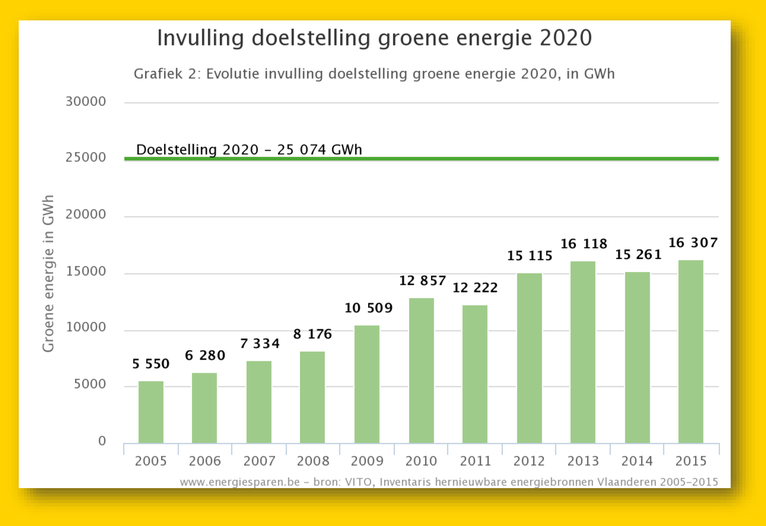
1. Problem Setting: are the Flemish Climate Policy Targets 2020 a Mission Impossible?

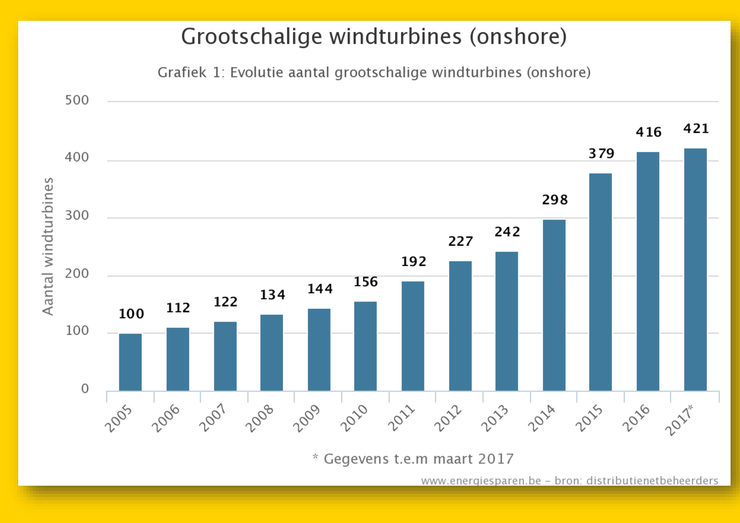
Primarily due to residential sector!
E.g: private sector investment in PV is not going according to plan

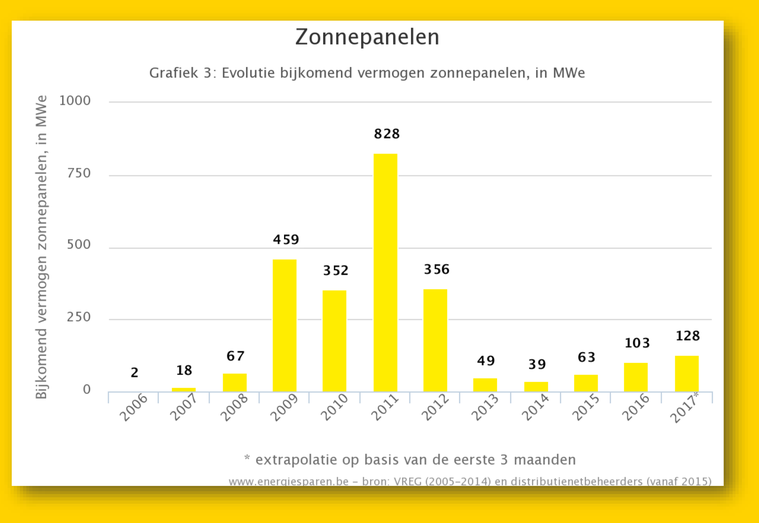
PV capacity category	% of investment target for 2017 realized on 31/08
<10 kW	82%
10 – 250 kW	16%
> 250 kW	-3%

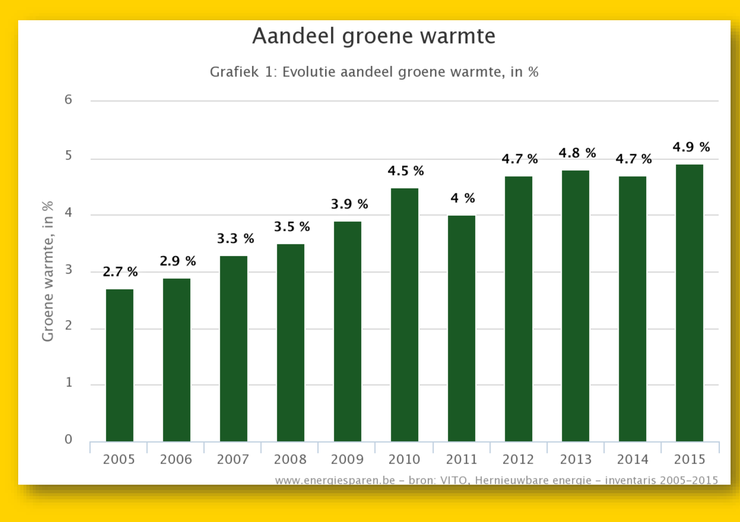
Source: PV Vlaanderen

➔ increased engagement of private sector necessary to attain climate policy targets!









2. Research question: how to increase the involvement of the private sector in sustainable energy generation?

Barriers:

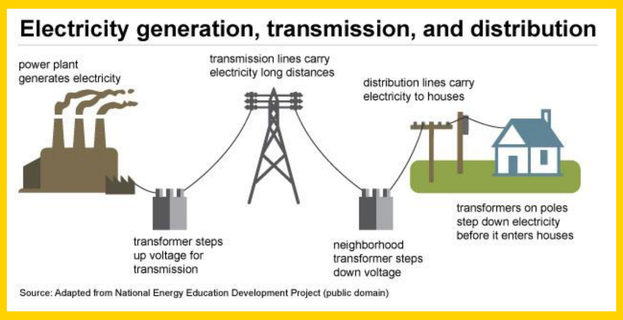
- uncertainty about changes in subsidy schemes
- low share of energy in total costs of companies
- long payback times vs core business
- high share of distrbution grid tariffs in energy price
- regulatory constraints on novel energy concepts
- etc.

➔ non-technical and multidisciplinary in nature!!

Potential solutions:

- collective local energy concepts
- rethinking the gas & electricity distribution tariff system
- alternative business models:
  - ESCO
  - cooperatives
  - 'salderen op afstand'
  - etc.

Involved stakeholders:



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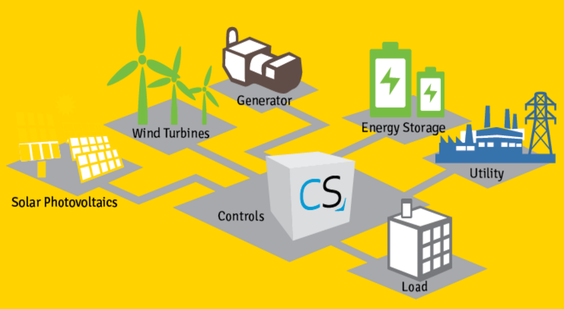


Complex problem!

3. Methodology: Agent-Based Modelling?

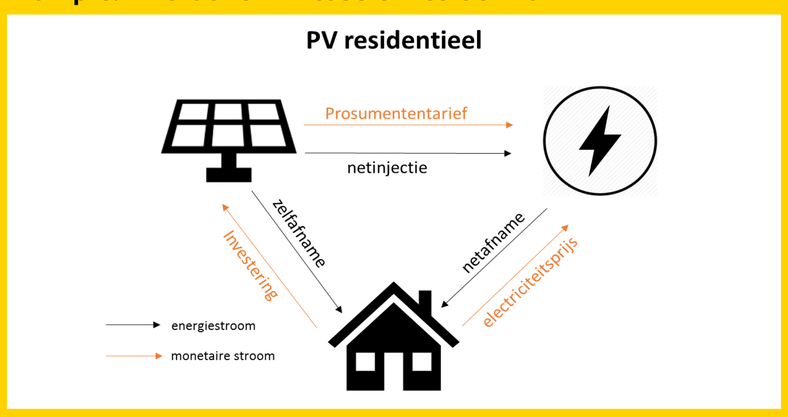
What is ABM?

- modelling approach for complex socio-technical problems
- consiting of interactions between individual agents whose behaviour is defined by sets of rules
- in order to study the effects of these interactions on the overall system

Why ABM?

- Energy system transition effects on multiple stakeholders
- ABM can deliver insights on how different stakeholders react to new market paradigms
- Can serve as decision support tool for the energy transition

Example: interaction in case of residential PV



BISEPS

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