NL-Progress
DSM, DG, RES and Storage
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Progress

- NL-country report
- Questionnaire
- Pilots
- Process
  - Plenary meeting 4 febr. 2008 Amsterdam
  - Bilateral meetings
    - NUON/Continuon
    - Essent
    - Eneco netbeeer
NL country report

- Currently one of the most reliable in the world (ring network and no LV-overhead lines)
- Liberalised but not privatised
- Trade and distribution split
- Automated meter reading to be introduced (nta-2155)
- DG, RES, DR/RES drivers
  - Transition to renewable and durable development
  - Growing role of electricity as energy carrier
  - Ageing grid
  - More intelligent and active electricity system necessary as small customers became prosumers --> new roles of stakeholders
- New markets for system services
Macro-level changes

- Efficient gas fired CHP as a transition technology; now 40-50 % of electricity
- Incorporation of increased proportion of offshore wind energy
- micro-CHP as a successor of the high-efficiency boiler (now in 6 million households)
- new PV-subsidy
- advanced storage at micro- and macro-level
- link to mobility applications
- scenarios to 2020 and 2030
Possible storage possibilities on offshore island
Questionnaire: grid characteristics
Questionnaire: transport (D -> NL -> B)
DG/RES, DSM and Storage Pilots/products

- 48 microgen/whispergen micro-CHPs meadow test
- CRISP fieldtest; use flexible loads and generation to accommodate wind imbalance in commercial cluster
- 10 MicroCHP in households; LV cluster
- Plugwise; control and monitor household appliances via internet service model
- Qurrent -> Richard Branson contest winner (500000 Euro)
- Nightwind; use large cooling loads to accommodate wind imbalance
- Fenix VT-1 and -2
- PV-subsidy scheme