Introduction

• Stedin (2 mio consumers) & Enexis (2,7 mio consumers)

“Always energy for our consumers, safe, reliable, affordable and sustainable”
Projects
[dream to small scale reality]

Projects regarding demand response
Projects [dream to small scale reality]

**SMART STORAGE**

Stroom gebruiken die lokaal is opgewekt, dat is een duurzame energieloosung. Maar dat is er ook lokale opslagcapaciteit nodig, bijvoorbeeld in transformatorstations. Enexis maakt het energieplan klaar voor dit soort nieuwe, duurzame ontwikkelingen.

**ENERGIEPROJECT HOOG DALEM**

Projects regarding storage
Projects
[dream to small scale reality]

Smart Charging

Projects regarding EV
The traditional Energy landscape

Clear roles
The actors in the energy landscape all have a clear and well defined role. There are producers who produce energy. There are entities who transport and distribute. And there are energy consumers.

Predictable
Supply and demand are predictable. As a consequence the network load can be predicted with a high degree of certainty.

Infrastructure “build to last”
The energy network is build to last decades. Investments in the net are justified by their long technical and economical lifespan.

Customer: energy consumers
Producer & Supplier

DSO Stedin: the central grid
The landscape is going through an energy transition. The energy transition causes a change of the entire energy landscape. This is why:

- New players enter the energy market
- New requirements for the grid: for instance, counterbalancing the unpredictable supply and demand
- Data streams: in addition to gas and electricity, a large amount of data will pass through our systems
- These developments have an impact on technology, regulations and customer behaviour.

Increasing unpredictability

Sustainably generated energy is less well predictable. Peak shaving is highly important in order to keep the load of the grid and the costs under control.

Other grids

There are local grids, which are not managed by the traditional grid operator. These must be connected to the central “backbone” grid in case local production fails.

- Prosumer: More fluctuation in demand and supply, the grid reacts to balance this fluctuation.
- Electric cars: charging consumes energy, car delivers electricity.
- Known and new producers and suppliers.
- Local storage: Changes the load of the grid.
- Data: demand, supply, consumption, status of assets, privacy, security.
To be solved......
Demand Side Management

- Bringing the separate components together
  - Small testbeds to integrated real-life situations

- Further development of techniques
  - E.g. Like solar panels, storage

- Engage consumers/prosumers

- Regulation addressed to new situation
  - Tasks for DSO, government support

- Market change
  - New roles, players. (aggregator for instance)
Next steps

• Think big, act small

• Transparency (together we come further)

• So dream will become reality.... 😊

Thank you!