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Nuon Marketing and Sales

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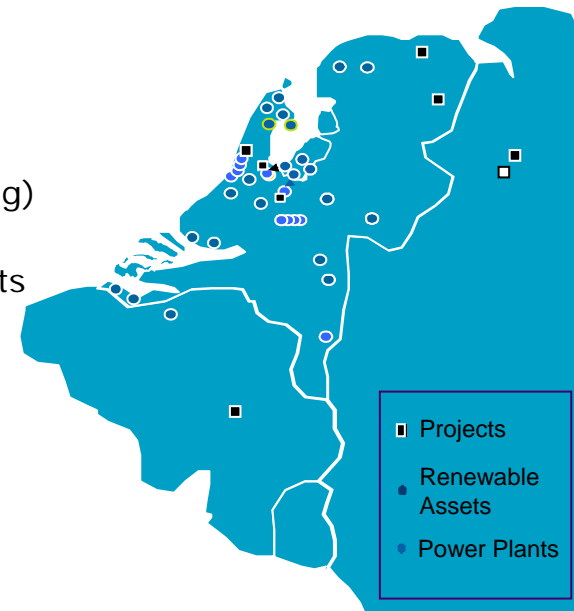
Smart Energy Homes

The West Orange Initiative

NUON

Company Introduction

- **Energy Service provider** → Production, Trade, Supply (e & g)
- **Market Leader in NL** → 4 GW Capacity / 4.2m e & g contracts
- **Entrant in Belgium & Germany** → Very fast growing



MISSION

“We are an inspiring energy company creating sustainable value and growth by setting new standards”

VISION

We aim to be an international integrated energy company, that:

- 1) achieves 'first quartile' financial results
- 2) is a trusted energy adviser for our customers
- 3) leads the way in reducing CO2 emissions
- 4) is an attractive employer

Primary consumer focal points

- Price (e / g) = Priority 1
- Comfort = Priority 1 (ex aequo)
- Footprint = Priority 3

Nuon will be acquired by Vattenfall 1st of July, pending approval of EU Competition Authority

Energy savings potential is substantial...

- **Average annual consumption Dutch retail customers**
 - 3500 KWh electricity & 1820 cubic meter gas
- **Some investment related saving opportunities for existing houses**
 - Retro-fit insulation 35% (gas)
 - Upgrade to high efficiency boilers 20% (gas)
 - Upgrade to energy efficient appliances 27% (electricity)
- **Level of energy consumption is strongly influenced by customer behavior**

Challenge:
How to help consumers make energy consumption smarter?

Smart Energy – Role of meaningful information

Energy Management test (Display):

- Direct meaningful feedback (e/g)
- Stand alone, wireless touch screen, connected to internet

Outcome - Factual

- Average savings: power & gas

Outcome – Behavioral

- More efficient use of household devices
- Switching off and lowering heating

Outcome - Motivation

- Least motivated consumers saved most energy!!



Significantly higher Energy Saving investments (compared to control group)

The West Orange initiative



What? Proof Smart Energy Homes (SEH)

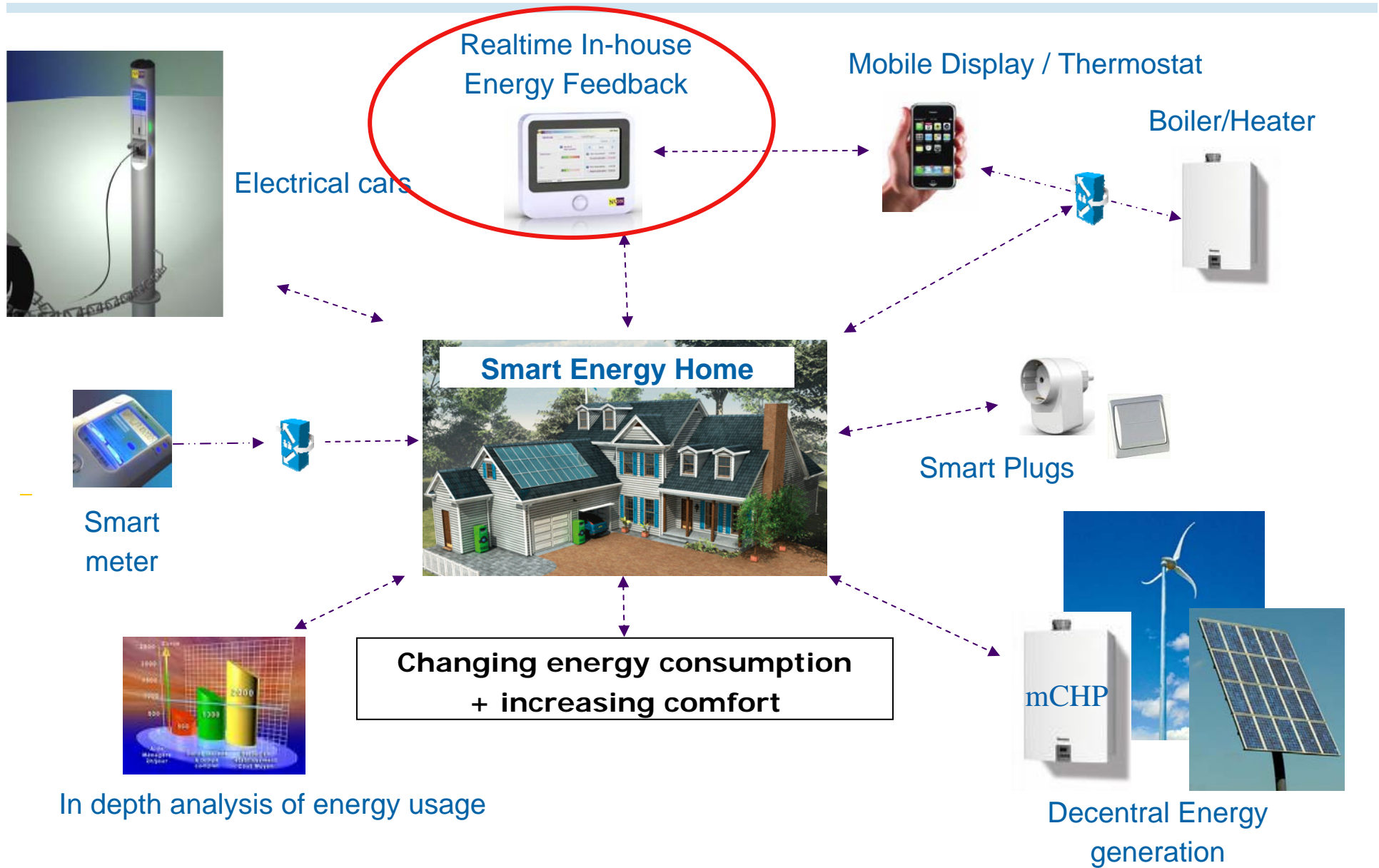
- Residential In-home Energy Feedback (energy insight)
- Residential Energy Management (energy control)
- 500 households (pluriform demographics)

Why? Substantiate energy saving potential on large scale

- Target = 14% structural energy saving per household (13% CO2 reduction)
- Goal = validate results and potential with scientific research
- Goal = Proof marketability of solution based on true customer valuation

Timing? Start: July Finish: December 2010

Goal = affordable + meaningful - Smart Energy Homes



Thank you for your attention

Questions.....?

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