Passive renovation in Roosendaal and a few more issues

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Passive renovation congress - Oslo

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Passive renovation in context

- Beyond regulation and practice
- Modern methods of construction
- Airtigtness + ventilation
- International product sourcing
- Investment and scenario planning

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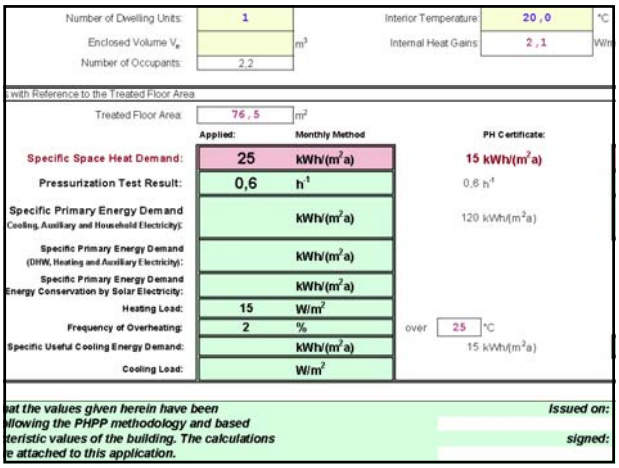

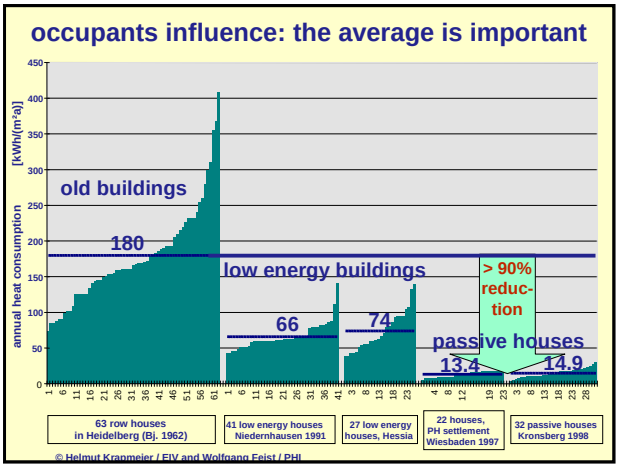

Where do we stand

- 200 kWh/m2 - existing building stock
- 100 kWh/m2 – standard renovation
- 50 kWh/m2 – new homes
- 25 kWh/m2 – passive renovation
- 15 kWh/m2 – passive housing

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Current renovation practice

- Building Code only requires U value 0,4 and low E glazing for renovated components.
- No better ventilation than mechanical exhaust

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15 kWh/m2

Continuous insulation

- U values in range of 0.10 – 0.15 W/m²K
- U glazing in range of 0.5 – 0.8 W/m²K
- U window frames around 0.8 W/m²K
- No thermal bridges
- No unwanted air leakage

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- Energy labelling system is not able to cope with passive house components:
  - Best U value 0,24 W/m2K by default
  - Best windows 1,5 W/m2K


PassiefBouwenKeur®

CERTIFICAAT

Passiefbouwen Keur voor Sleephelling

2. Modern methods of construction

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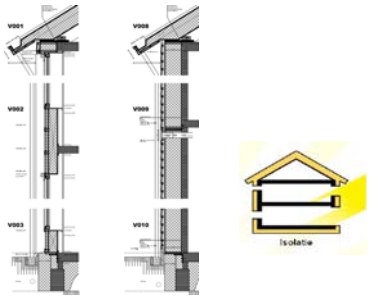

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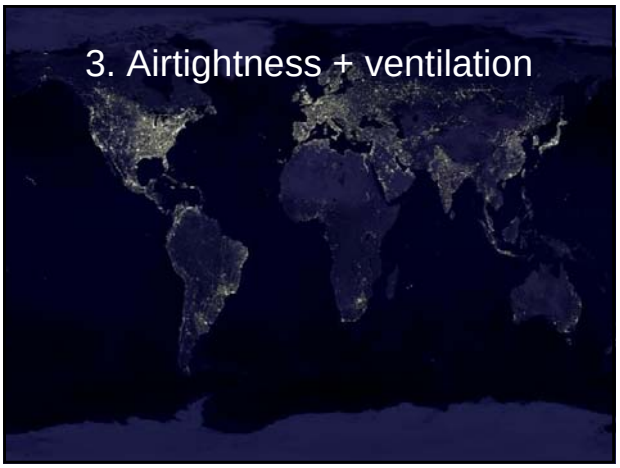

15 kWh/m2

A breathing indoor environment

- Balanced ventilation with heat recovery
- Operable windows
- Summer night ventilation

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Summer night ventilation

- Ventilation rate between 4 – 20 depending on climate and temperature difference
- Night ventilation allows building to cool during evenings and night

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4. International product sourcing

- Passive house timber frame elements and window frames not standard available in The Netherlands, whilst more common in Germany, Austria

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European construction market ?

- Construction market is national
- Quality certificates, building specifications, pre-conditions for insurance etc
- all refer to national definitions

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- Need for international harmonisation or international recognition of
  - Quality certificates of passive house components

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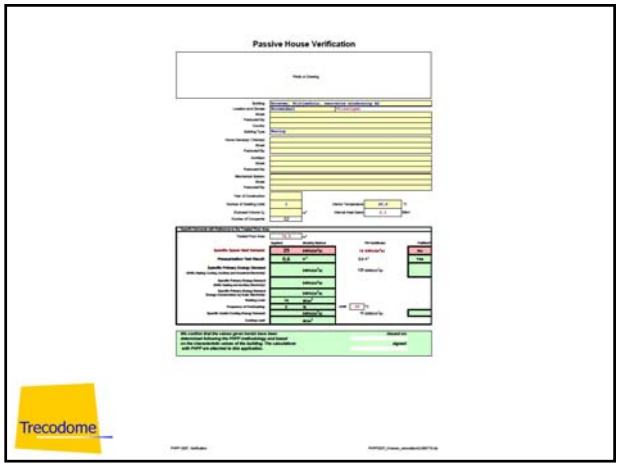
5. Investment + scenario planning



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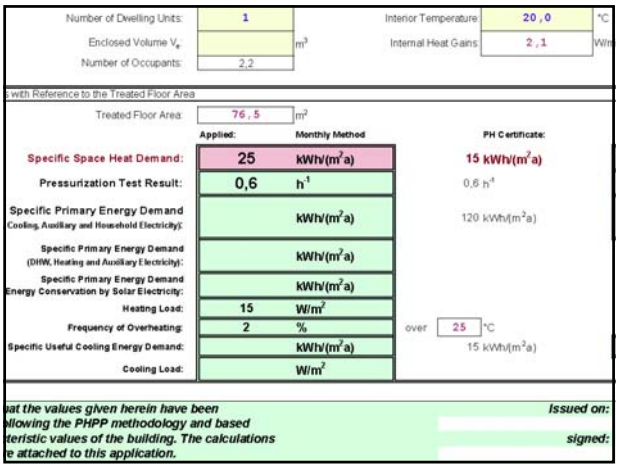

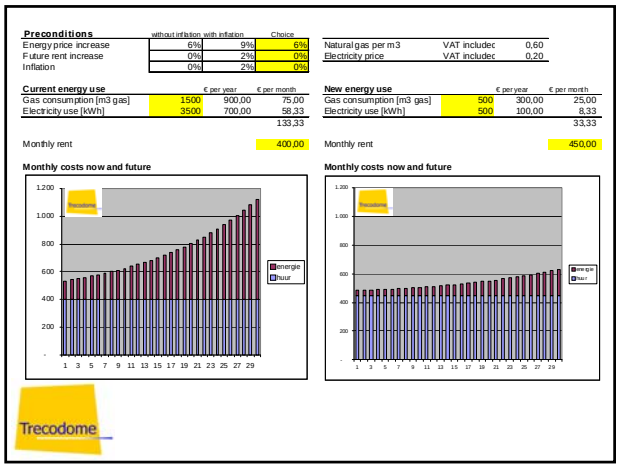

KEM model

- Trecodome developed scenario model for housing associations
- Energy investment – rent increase – value increase
- Tenant and landlord perspective

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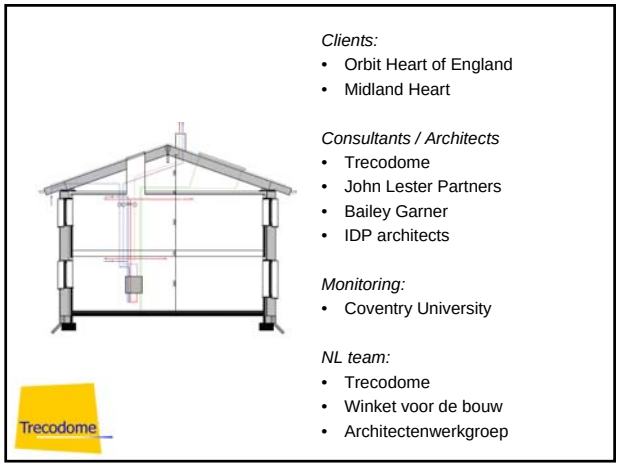

7. Dezhou - China

4th International Solar Cities Initiative World Congress

ISCI
International Solar Cities Initiative

16 – 19 September 2010
Dezhou - China

Solar Energy Changes Life

Call for abstracts:

- Urban Planning and transportation
- Low Energy Buildings
- Solar Cities Examples and Policies
- Renewable Energy Technologies
- Energy Infrastructure

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You don't have to pay for energy you don't use

THANK YOU

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