The Heat Transition Vision

The potential for heating and cooling in Parkstad Limburg

PARK STAD TRANS FOR MEERT

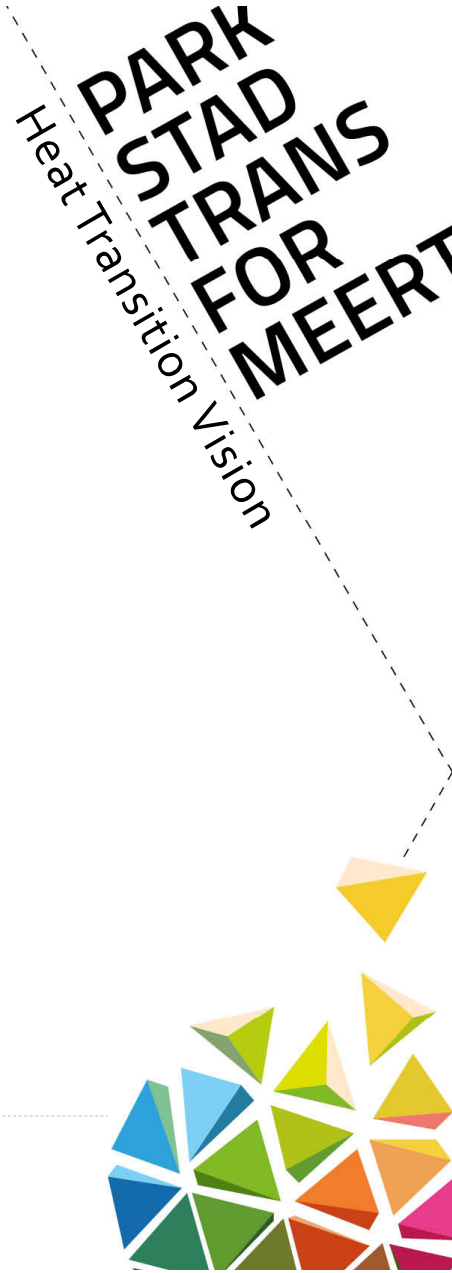
Crossing Boundaries - Special Session: Innovative district heating and cooling, and seasonal storage

Dr. Pim Derwort

parkstad stadsregio limburg

OUTLINE:

- Energy transition in Parkstad Limburg
  - The heating transition ('Transitievisie Warmte')
- National guidelines: Start analysis
- Identifying the potential for Parkstad Limburg
- Potential bottlenecks



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ENERGY TRANSITION IN PARKSTAD LIMBURG

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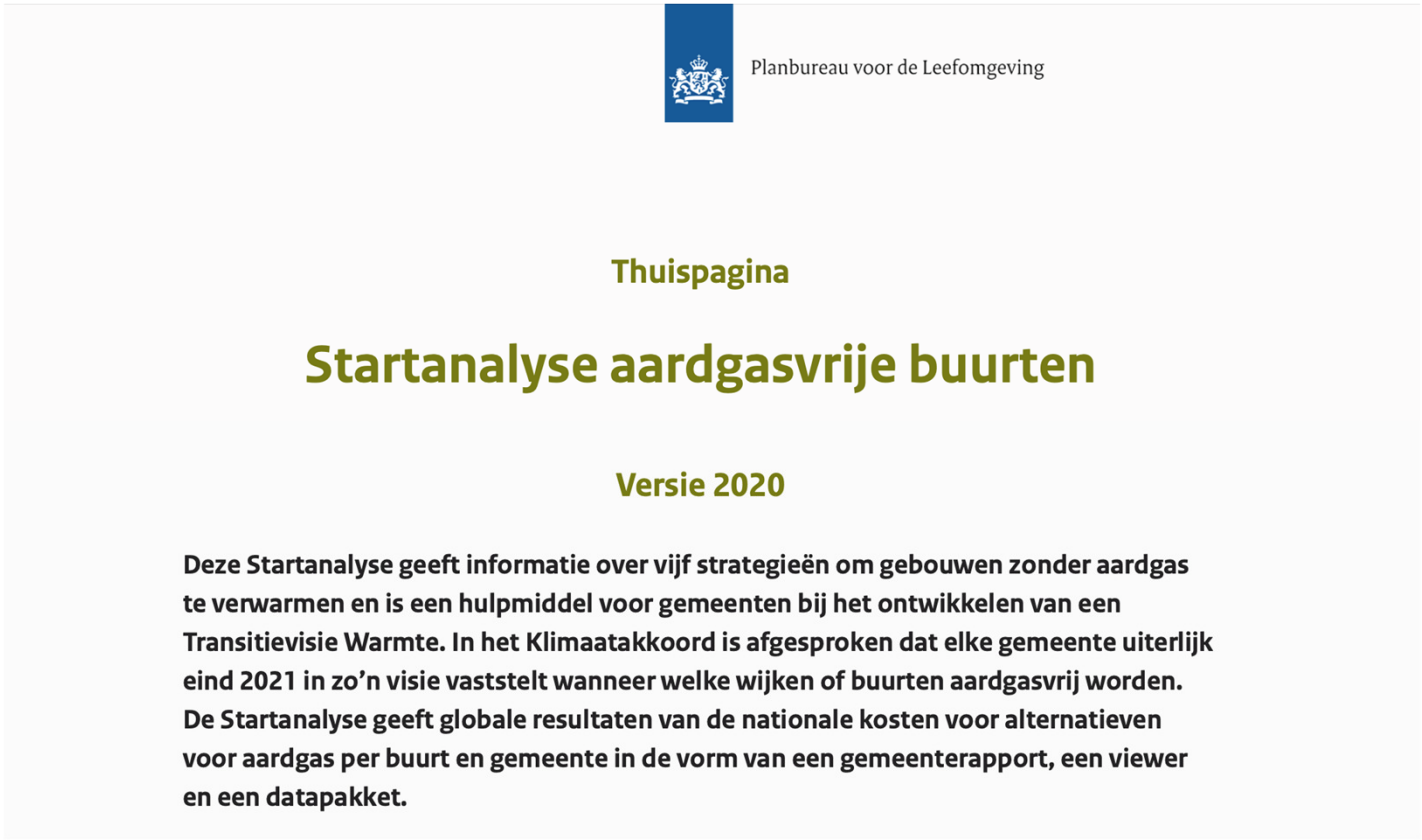
START ANALYSIS (ECW & PBL)



Planbureau voor de Leefomgeving

Thuispagina

Startanalyse aardgasvrije buurten

Versie 2020

Deze Startanalyse geeft informatie over vijf strategieën om gebouwen zonder aardgas te verwarmen en is een hulpmiddel voor gemeenten bij het ontwikkelen van een Transitievisie Warmte. In het Klimaatakkoord is afgesproken dat elke gemeente uiterlijk eind 2021 in zo'n visie vaststelt wanneer welke wijken of buurten aardgasvrij worden. De Startanalyse geeft globale resultaten van de nationale kosten voor alternatieven voor aardgas per buurt en gemeente in de vorm van een gemeenterapport, een viewer en een datapakket.

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THE FIVE STRATEGIES (START ANALYSIS)

Strategie 1
Individuele elektrische warmtepomp

Strategie 2
Warmtenet met midden- tot hogetemperatuurbron

Strategie 3
Warmtenet met lagetemperatuurbron

Strategie 4
Groengas

Strategie 5
Waterstof

Three scenario's are modelled:

1. 2019: Energylabel –B or better
2. 2020: Energy label –D or better
3. 2030: Strategy 1-3 only (due to limited availability of green gas and/or hydrogen in the near future)

The model calculates the strategy with the lowest national costs in € / tonne of CO_2-emissions avoided.

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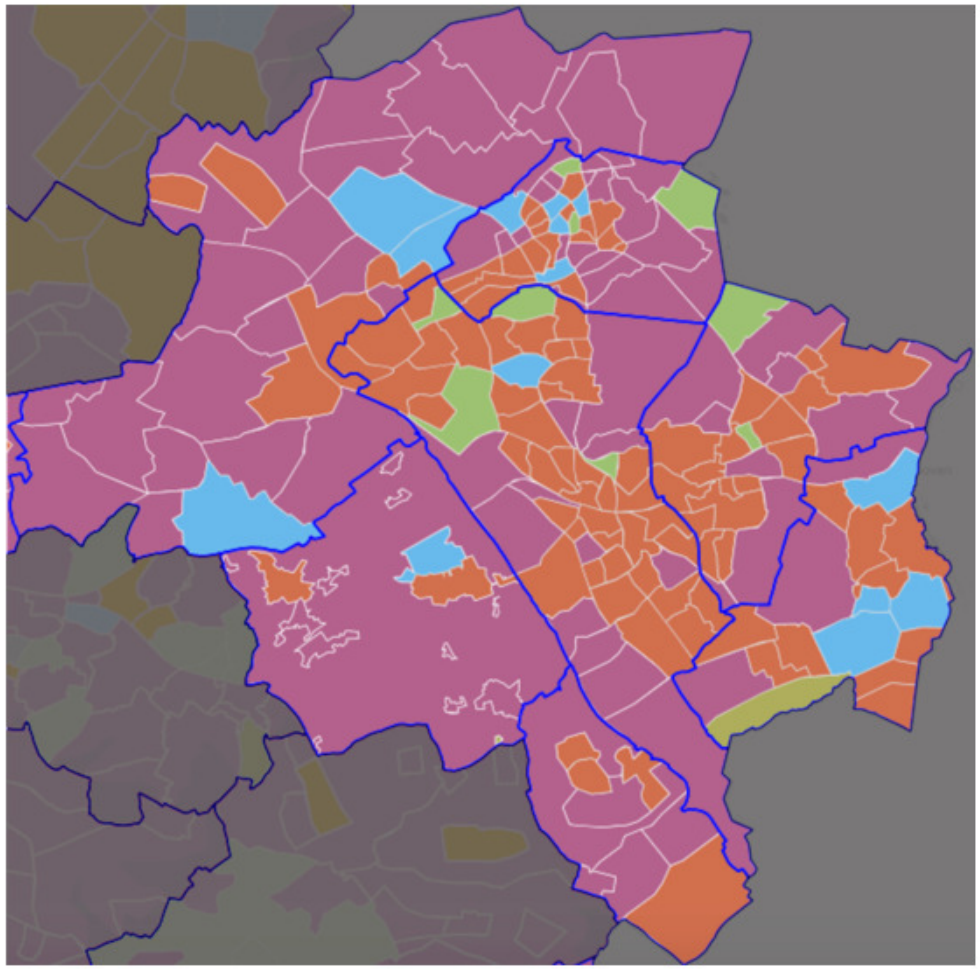

Parkstad Limburg with label B or higher

- S1: individual electric heatpump
- S2: heatnet with MT or HT source
- S3: heatnet with LT source
- S4: green gas with hr-boiler

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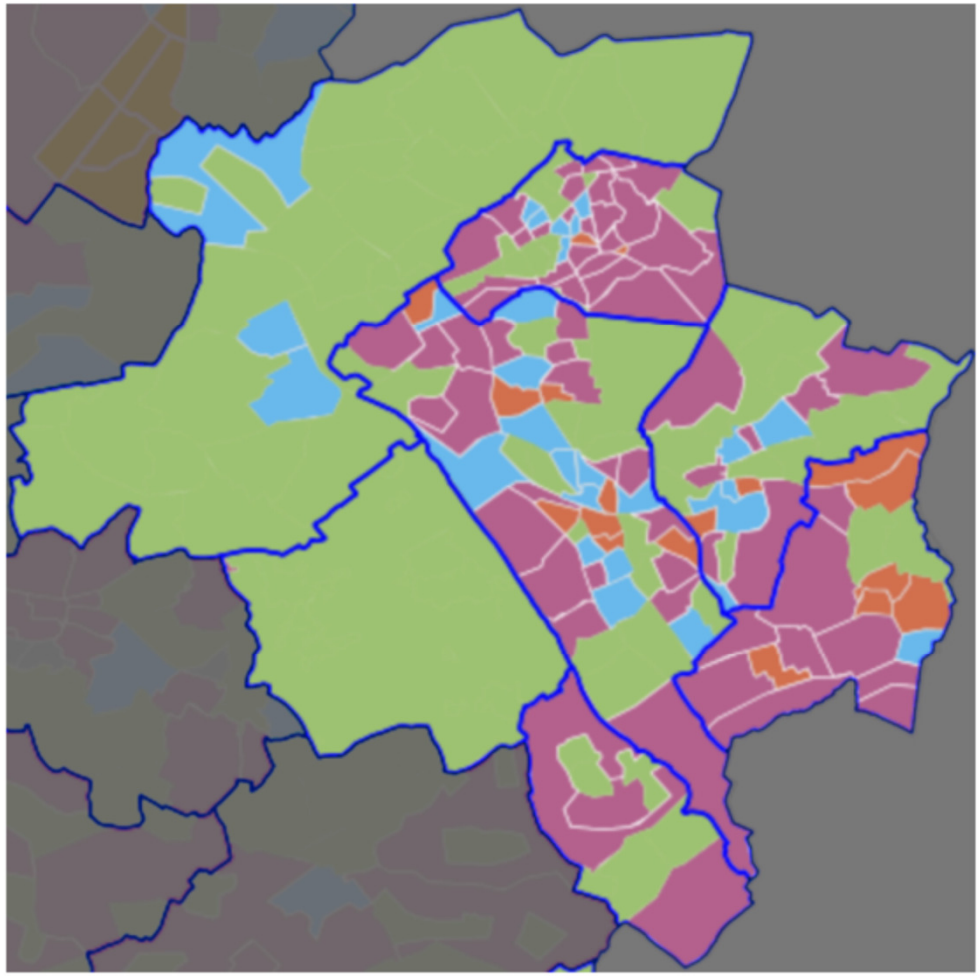

Parkstad Limburg with label D or higher

- S1: individual electric heatpump
- S2: heatnet with MT or HT source
- S3: heatnet with LT source
- S4: green gas

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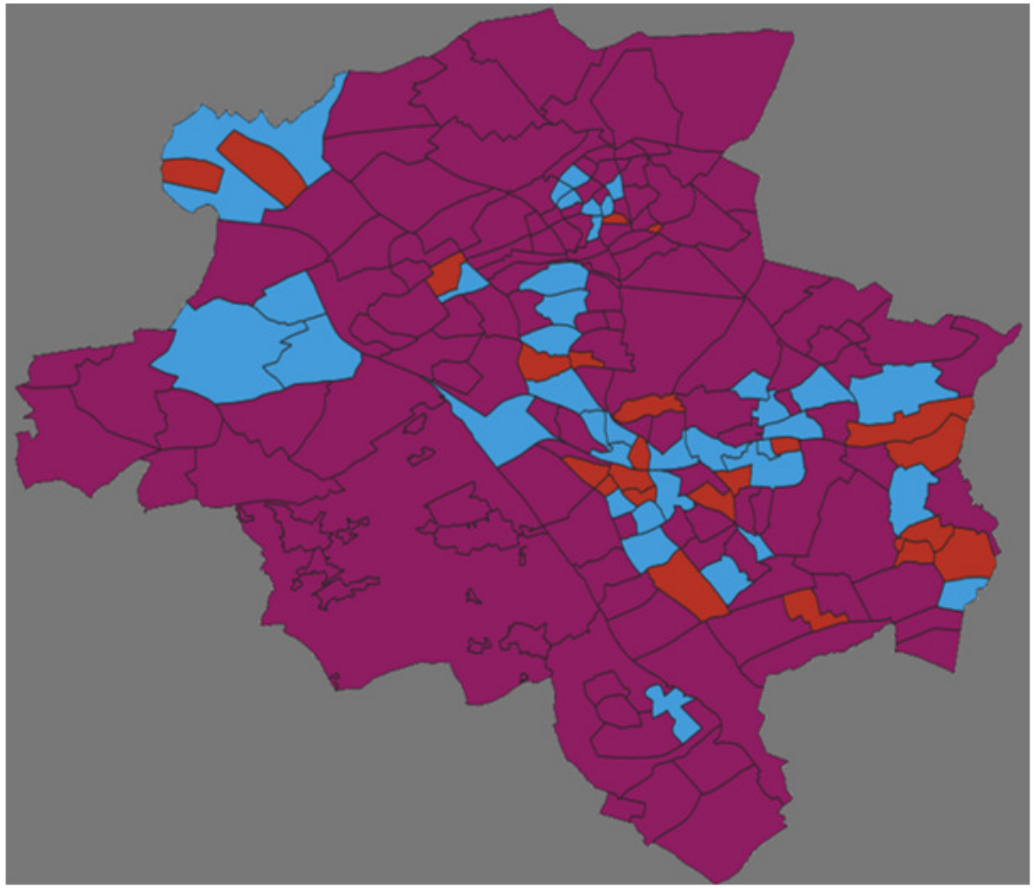

Parkstad Limburg 2030 with label D or higher

- S1: individual electric heatpump
- S2: heatnet with MT or HT source
- S3: heatnet with LT source
- ~~S4: green gas~~

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POTENTIAL BOTTLENECKS:

- Technological: Focus on on proven technologies may limit innovation
- Technical: Shortage of medium- and high temperature heat sources
  - Potential solution: Cross-border initiatives (e.g. Herzogenrath)
- Financial: High investment cost (€40.000,- per household) in region with persistent socio-economic deprivation
- Practical: No one-size-fits-all solution
- Governance: No extra capacity for municipalities, limited internal expertise available
  - Potential solution: Collaboration between municipalities

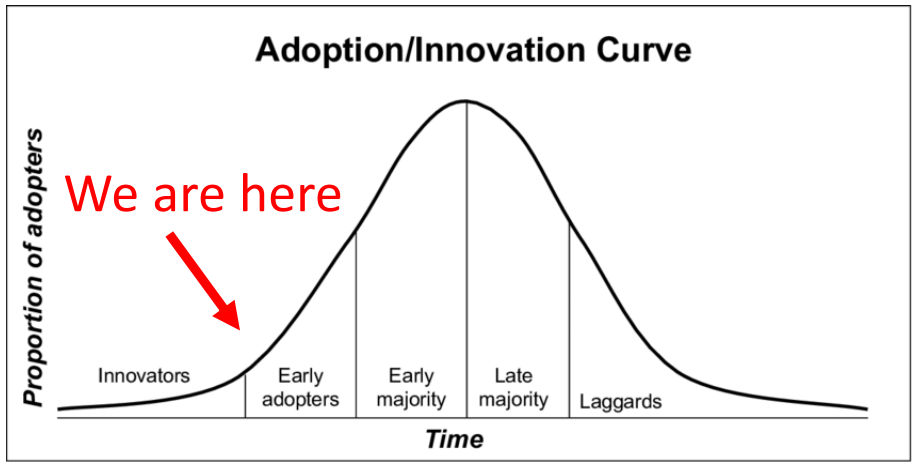
TRANSITION:

noun

noun: **transition**; plural noun: **transitions**

the process or a period of changing from one state or condition to another.

"students **in transition** from one programme to another"



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