

# The All Gas District

**DEMONSTRATION OF THE ADDED VALUE IN  
USING HYBRID GAS AND ELECTRICITY  
INFRASTRUCTURES TO POWER A SUSTAINABLE  
NEIGHBOURHOOD**



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# CHALLENGES AND OPPORTUNITIES



Communities have strong ambitions to become energy neutral

- Increased local renewable energy production (sun and wind)
- High level of electrification (mobility, cooking, heating)

This poses challenges towards the electricity grid

- High production and demand loads
- Large imbalance between production and demand
- Grid investments required

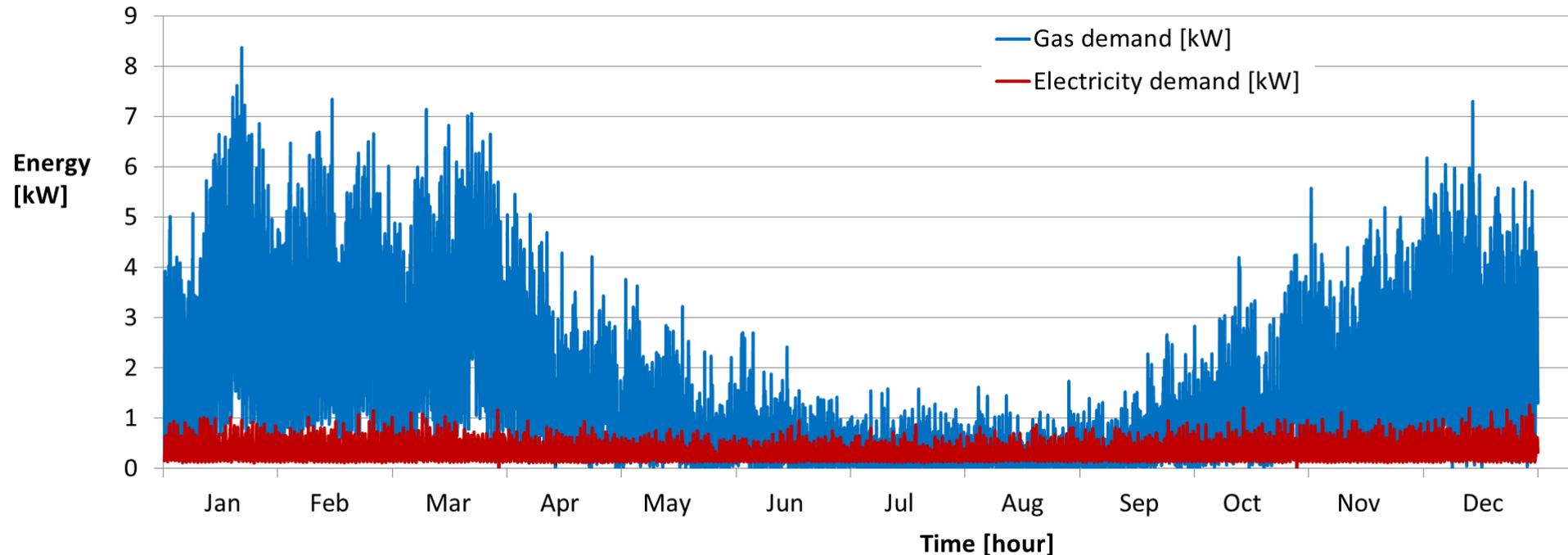
Meanwhile the gas grid is under utilized

- Reducing local gas demand (insulation and electrification)
- High gas availability
- High energy capacity
- Energy storage potential

# CURRENT SITUATION/CHALLENGES



Yearly energy demand profile typical Dutch household (3005 kWh electricity and 1523 Nm<sup>3</sup> natural gas)

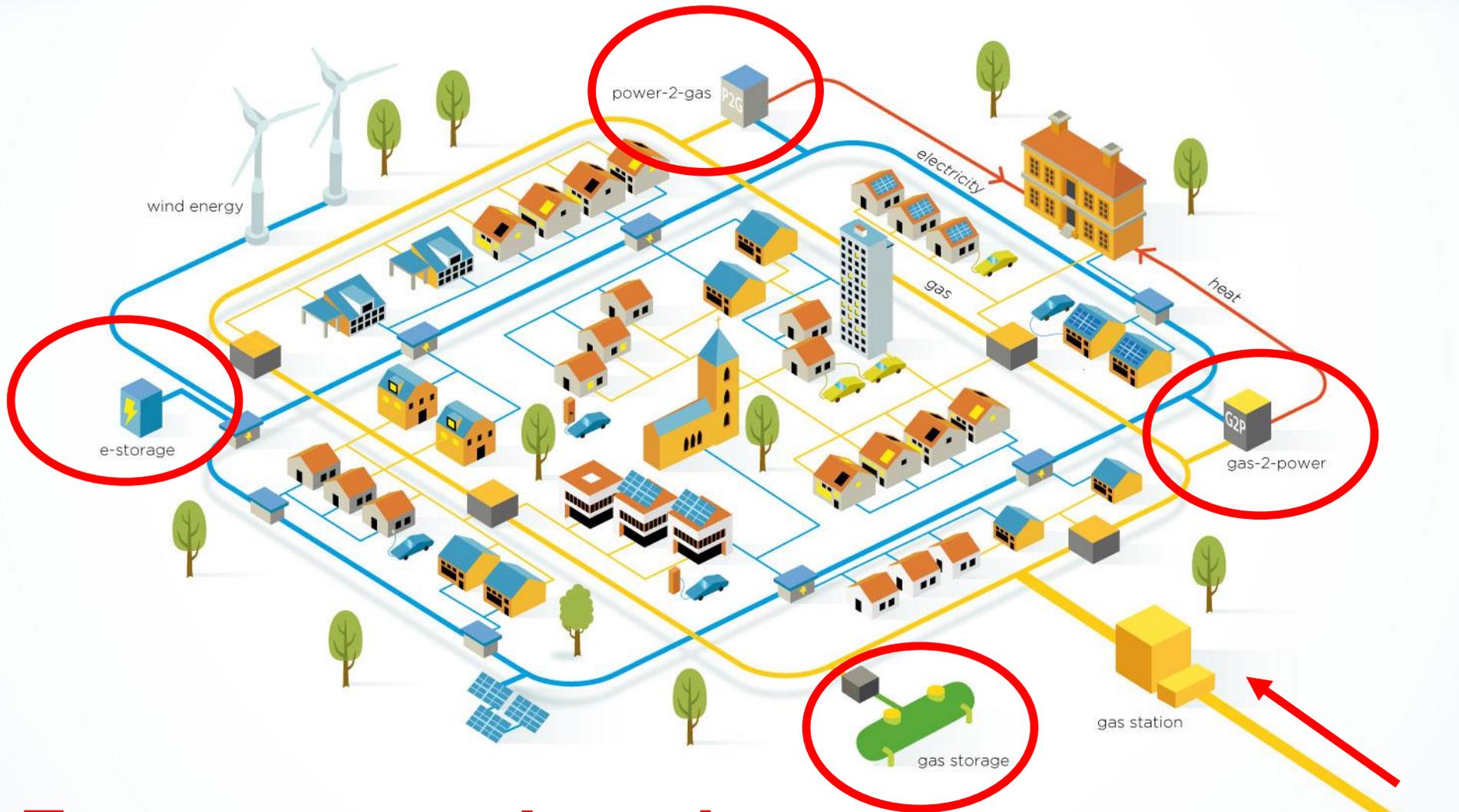


## Consumption:

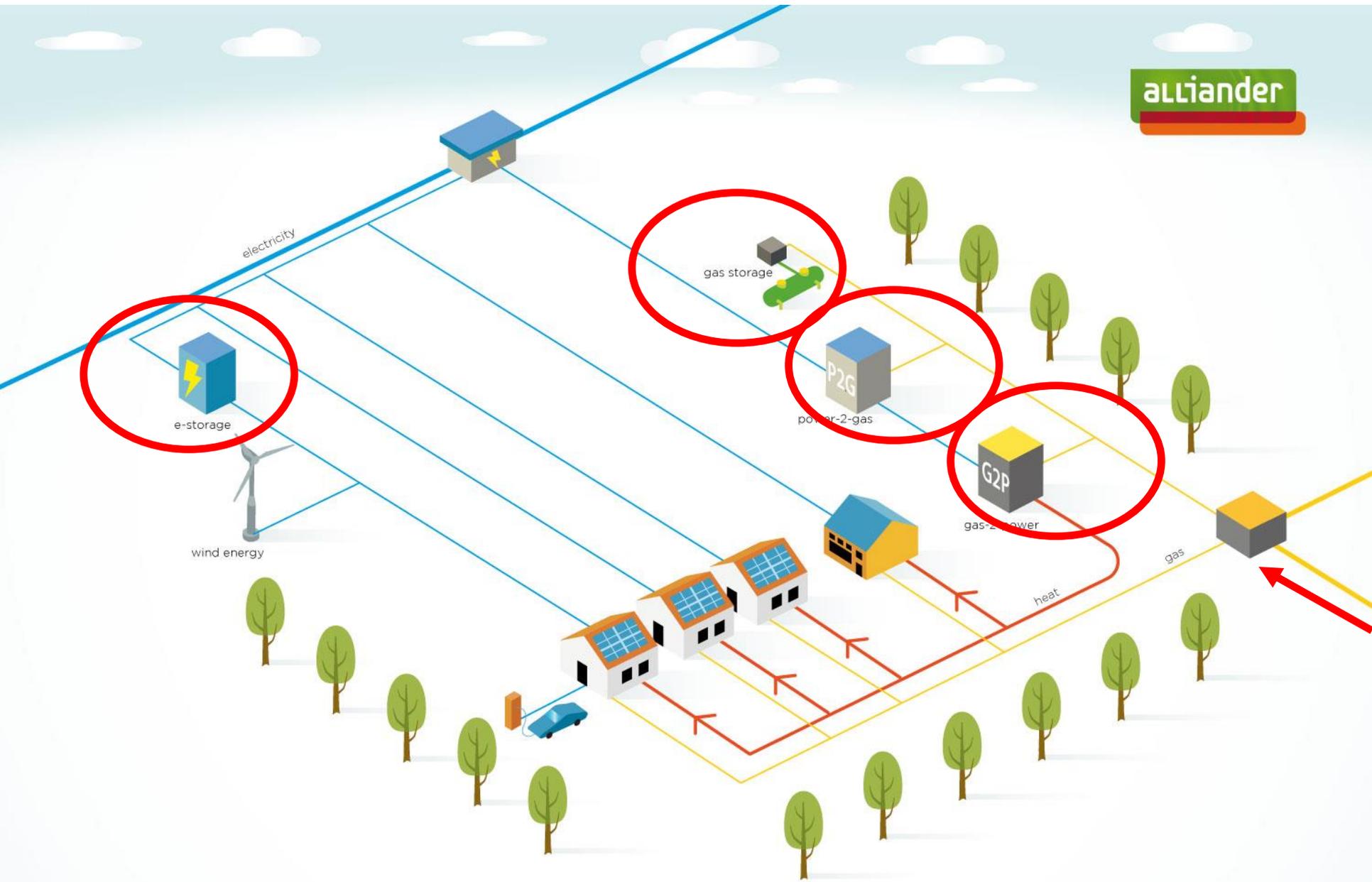
- 3005 kWh
- 15230 kWh gas (1523 Nm<sup>3</sup>)

## Distribution capacity per household:

- 1.2 kWe
- 15 kW gas (1.5 Nm<sup>3</sup>/hr)

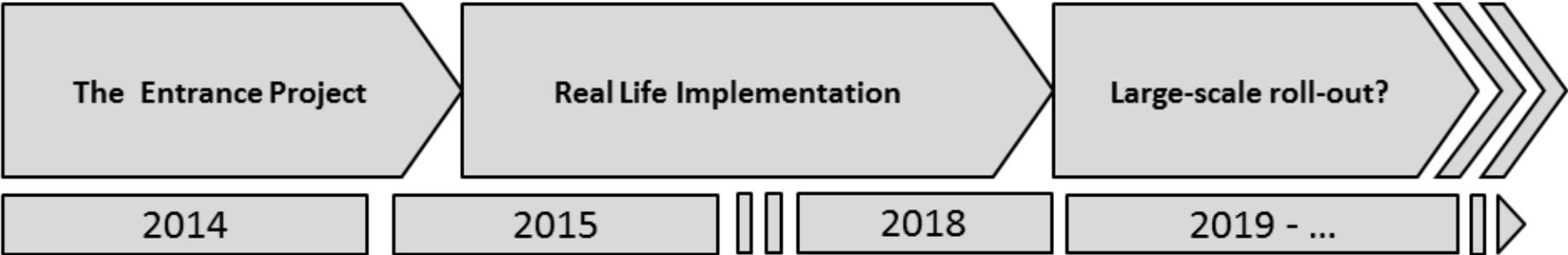
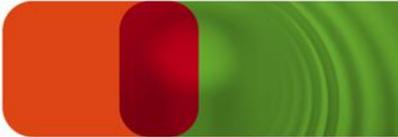


**Energy neutral ready**



**Energy neutral ready**

# Project



**Technical**

**Economical**

**Institutional**

**Societal**

# The all gas district



Helping local communities to achieve their ambitions and facilitating the energy transition by

- Using the existing local electricity grid
- Using the existing gas grid
- Adding technologies to create an integrated energy system
- Taking societal, economical, institutional and technical aspects into account

Making communities:

# Energy neutral ready



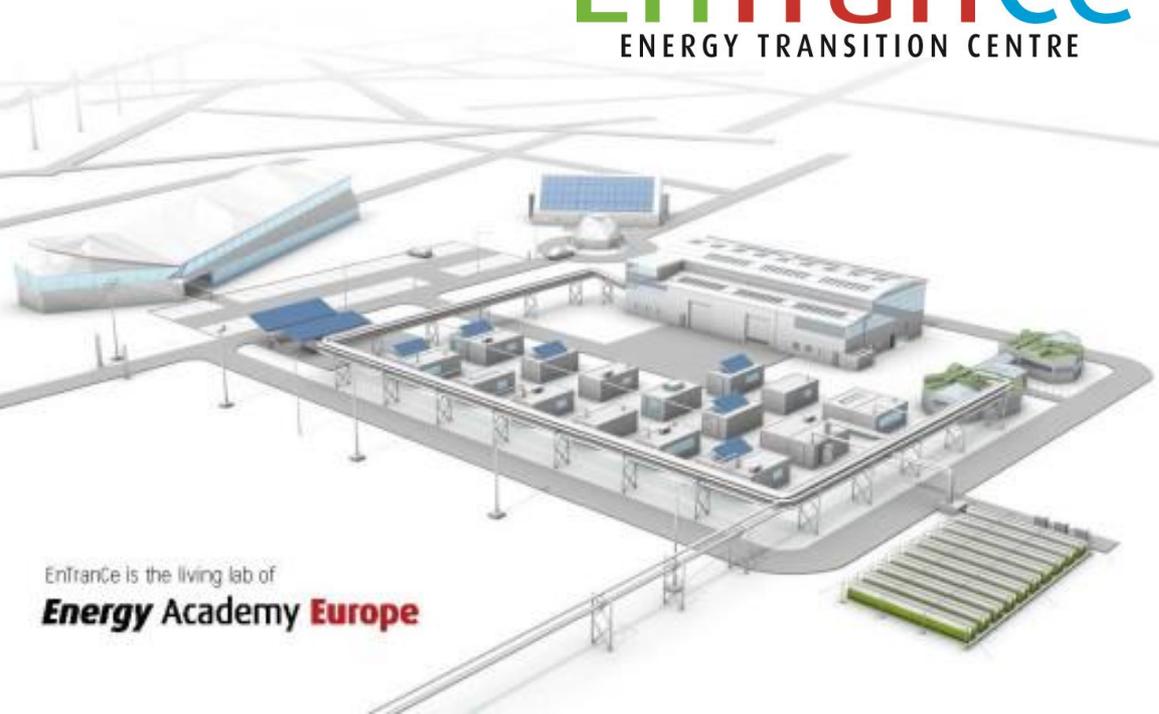
Thank you fore your attention!



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