

DISTRICT HEATING RULES.....OK!

(In the right place!)

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RULE 1 – size to 'real' heat demand

- Heat demands are falling
- Therefore DH losses become higher percentage
- Heat demand per kilometre is crucial
- CHP Heat:Power under 500kW is 1:1.5
 - more heat than electricity
- Are modern/future homes the right place for DH?
- Smaller systems may not be viable?

RULE 2 – Use high insulation standards & wide Delta T

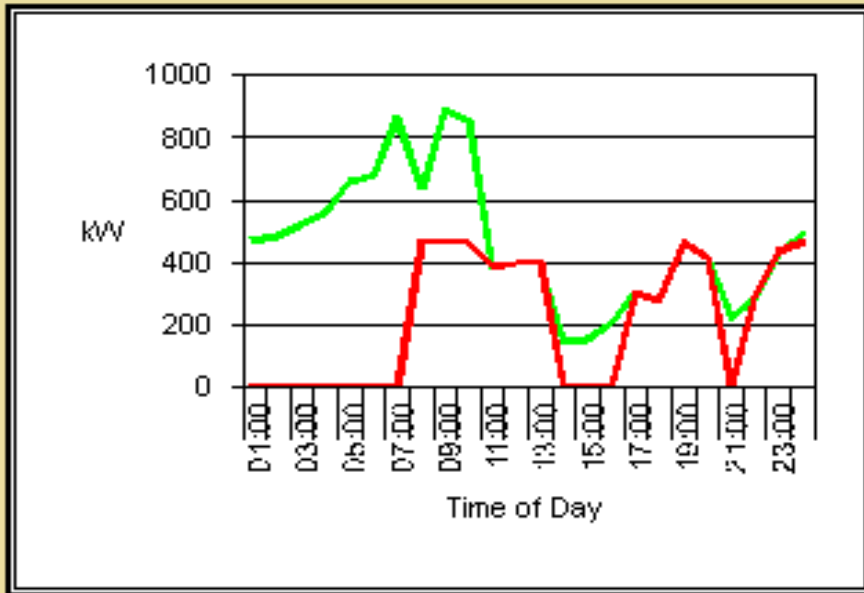


Source: Vital Energy

RULE 3 – Thorough feasibility studies

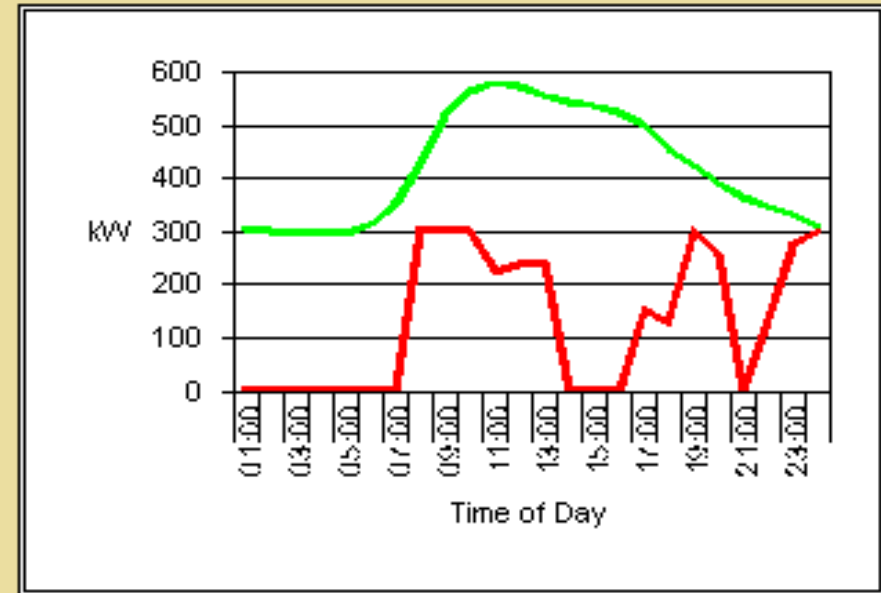
- The site heat and electricity demand must be properly assessed to prevent any CHP from being incorrectly sized
- Whole life costs including maintenance & tax

August - Heat Demand Profile



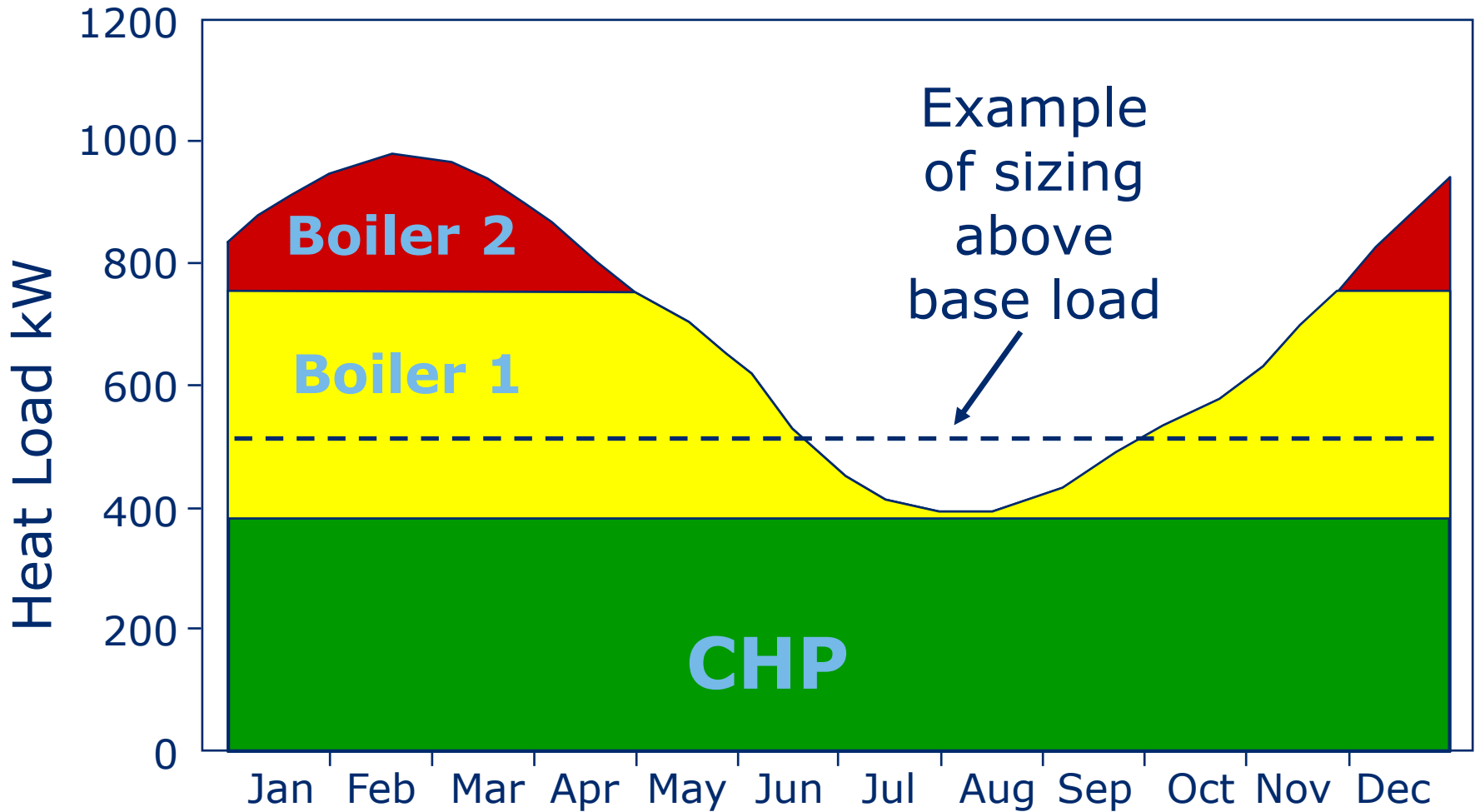
— CHP — Building

August - Power Demand Profile



— CHP — Building

RULE 4 – Year round heat demand & right across the day



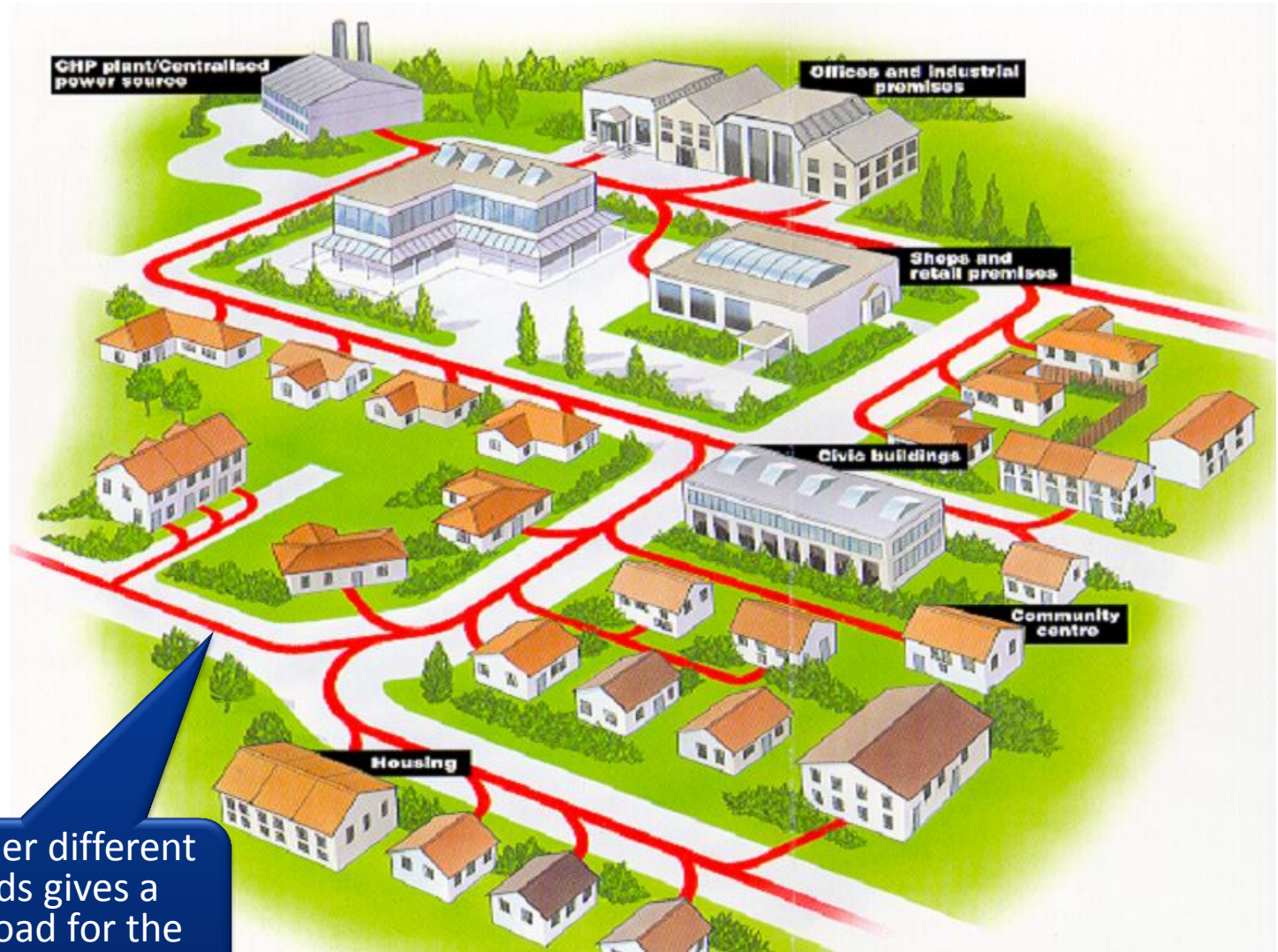
RULE 5 – include storage

- **PIMLICO oldest district heating system in the UK**
- **established in 1950**
- **3.1 MWe & 4.0 MWTh of CHP engines**
- **3 x 8 MW gas fired boilers**
- **2,500 cubic metre heat storage**



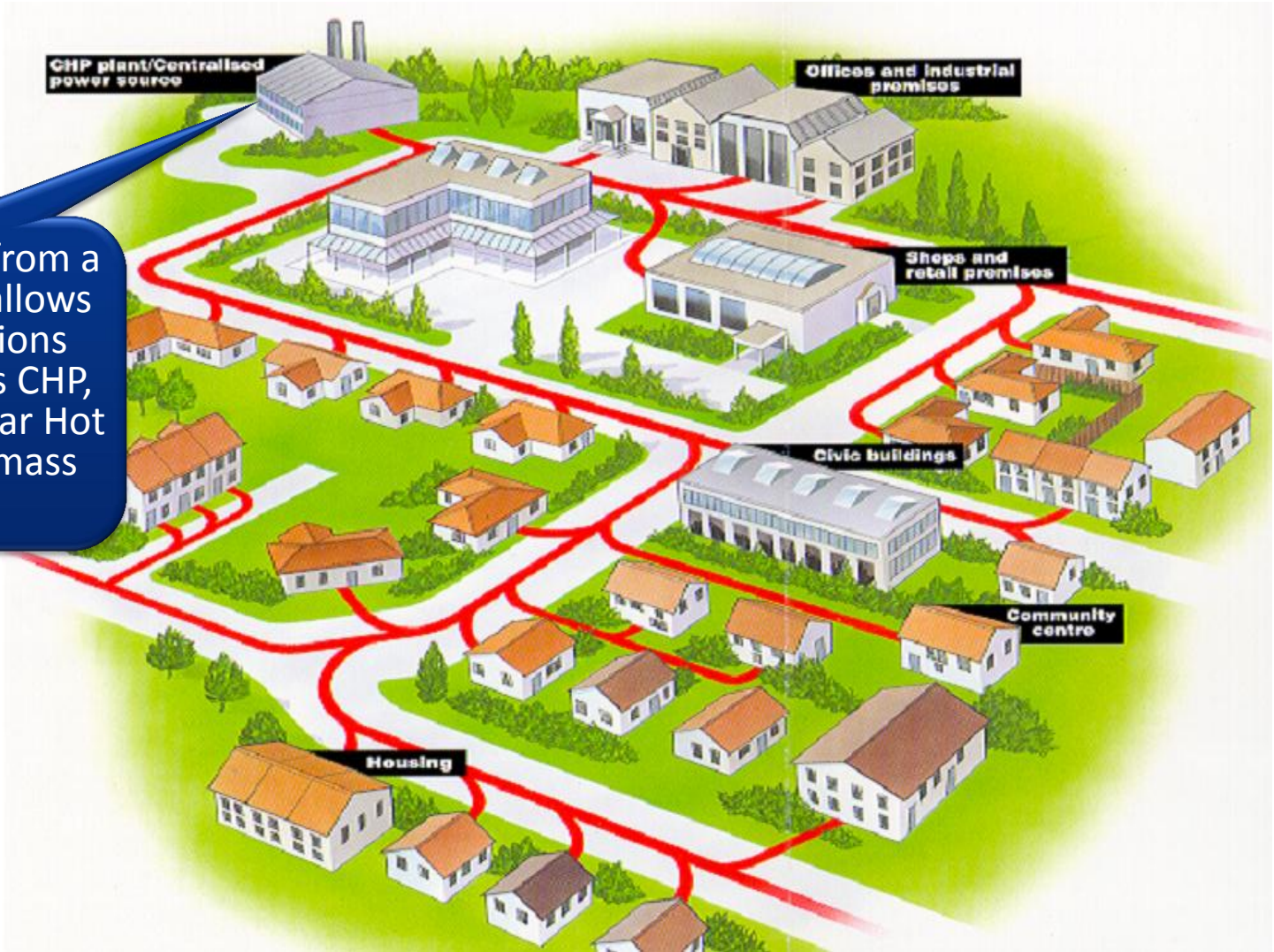
Source: Pimlico District Heating

RULE 6 – a mix of building types



Adding together different building loads gives a steady base load for the central plant

RULE 7 – opportunities for future low carbon technologies



Supplying heat from a central source allows a range of options including biogas CHP, Heat Pumps, Solar Hot Water and biomass heating

RULE 8 – Size matters!





District Heating can bring:

- Cost savings
- Less emissions
- Security of supply



CIBSE Home

- [CHP Home](#)

- [Group Objectives](#)

- [How to Join](#)

- [Committee](#)

- [CIBSE CHP Policy](#)

- [CHP Seminar Presentations](#)

- [CHP Data Sheets](#)

Combined Heat & Power and District Heating Group

CIBSE CHP & DH Group Home

The CIBSE Combined Heat & Power (CHP) & District Heating (DH) group raises awareness and disseminates knowledge about both the technical and economic aspects of CHP including both conventional equipment and new developments such as fuel cells and micro CHP. Membership is open to any building professional - you will get a free e-newsletter plus access to CHP information and events.

Mission Statement

To increase the awareness of the potential benefits of CHP and encourage members to consider CHP as a matter of course.



Benefits of CHP in buildings:

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CHP-DH Group on LinkedIn



Tweets

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CIBSE CHP-DH Group 30 Nov
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Sainsbury's opens three Triple Zero stores inc onsite CHP + offsite anaerobic digestion biogas injected into network bit.ly/1jUpK83

Expand

CIBSE CHP-DH Group 30 Nov
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DECC running three Combined Heat and Power (CHP) workshops with site visits - Reducing Energy

PLANNING TO FAIL! NO WAY!

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