



Constructing a base case district heating model

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Introduction



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About QMPF

Background

- Corporate finance advisory business – specialising in energy and infrastructure sectors.
- 16 staff providing cross-sector services.
- FCA authorised and regulated.

Our Sectors



Energy and Renewables



Education



Infrastructure



Real Estate and Social Housing

Examples of recent experience in district heating projects

- Financial advice directly to several **Local Authorities** and other **public bodies** to support the team in developing **district heating business cases**.
- Advised on **LCITP, GHNF and HNF** applications for several different district heating projects.
- Advice to private sector investors on **acquisition and expansion of operational district heating projects**.
- Advice to Universities on their **Net Zero transitions**, including the decarbonisation of heat provision.

Project development and use of models

Technical / project options

Commercial / financial structuring

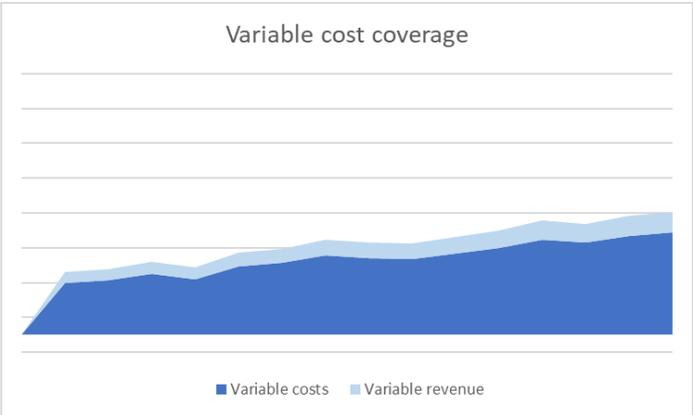
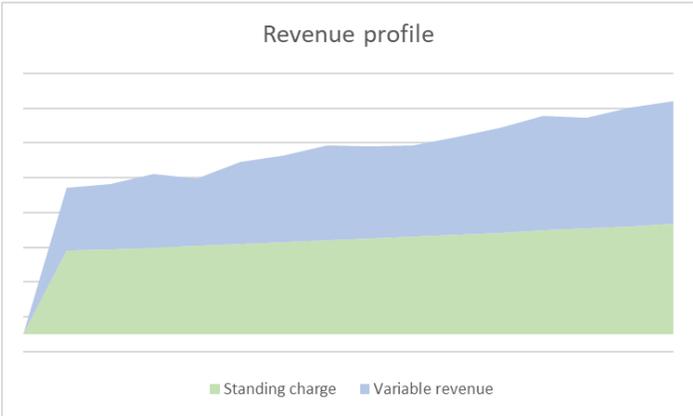
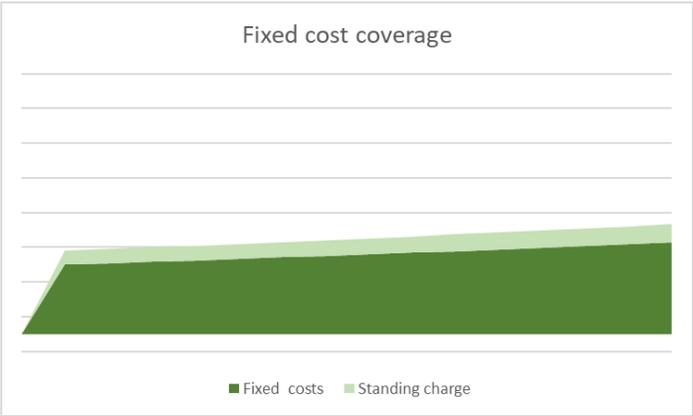
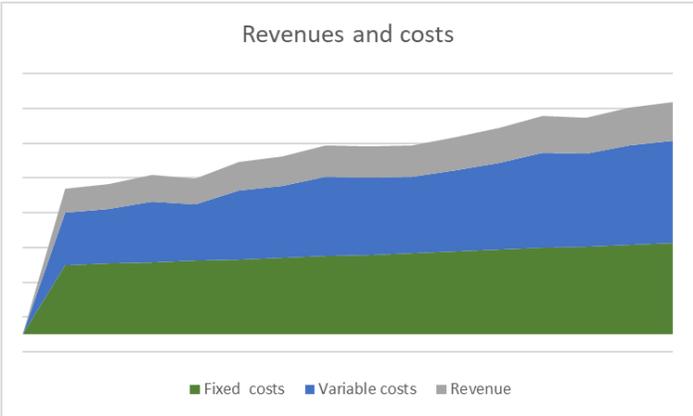
Techno-economic model

- Assess **technical options** to select optimal solution
- Focussed on **technical assumptions**
- Usually based on real, pre-tax **project cash flows**

Financial model

- Model **selected technical solution** to optimise structuring
- Builds in **economic assumptions**, e.g. inflation, business rates, interest rates.
- Builds in a **capital structure**, including tax where appropriate.

Financial model moving parts – heat tariffs



Financial model moving parts – connection fees

Methodology for calculation / allocation

Methodology	Pros	Cons
Avoided costs	<ul style="list-style-type: none"> • Easy to demonstrate saving to offtakers • Potentially easier to socialise shared capex 	<ul style="list-style-type: none"> • Difficult to assess? • Might not fully cover capex
Capex	<ul style="list-style-type: none"> • Cost coverage for network • Potentially easier to assess 	<ul style="list-style-type: none"> • Treatment of shared capex? • Difficult to coordinate?

Own funds

3rd party funds

Debt

Mezzanine

Equity

Return expectations



Security / risk mitigation



Grant / gap funding (e.g. GHNF, HNF)?

Model development

1. Techno-economic model vs financial model
2. Commercial structuring
3. Sensitivity analysis

Financial model considerations

1. Heat tariffs
2. Connection revenues
3. Assess economics