



# Heat Network Regulation – Implications for Local Authorities

## APSE CONFERENCE

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**PART 1**  
**What Are You Talking About?**










# Heat Networks

Heat networks supply heat to multiple buildings from a **central source**.

Can be **district heating** (multiple buildings) or **communal heating** (single building with multiple units).

Uses **underground and overground insulated pipes** to distribute heat.

**Key heat sources include:**

-  **Combined Heat and Power (CHP)**
  -  **Energy from Waste (EfW)**
  -  **Industrial waste heat**
  -  **Renewable sources (biomass, heat pumps, geothermal)**
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# Benefits

## **Carbon Reduction:**

More efficient than individual gas boilers, supporting net-zero targets.

## **Cost Savings:**

Centralised heat production enables economies of scale.

## **Energy Security:**


Reduces dependency on gas imports and enhances local resilience

## **Flexibility:**

Can integrate diverse heat sources and transition to low-carbon alternatives.

# Decarbonisation

UK Climate Change Act 2008 and Paris Agreement commitments require CO2 reduction

 The Climate Change Committee estimates 18% of UK heat must come from heat networks by 2050.

 Integration of **low-carbon technologies** such as:

 Heat pumps (ground, air, and water source)

 Biomass and biogas

 Hydrogen-ready networks

 CHP with carbon capture



# Barriers

## Financial Barriers

High upfront capital costs.

Long payback periods and uncertain return on investment.

Limited access to institutional investors

## Regulatory & Commercial Barriers

Lack of planning and development incentives.

Requirement for long-term heat demand contracts.

Uncertainty around future regulation and price controls

## Consumer Protection & Competition Issues

Potential monopoly risks.

Lack of transparency in pricing for consumers.

Need for customer protections similar to gas and electricity markets



**Part 2**  
**Aren't The Rules Changing?**



# Policy – Time for a Change



## **Heat and Buildings Strategy (2021):**

- £3.9bn funding for heat decarbonisation.
- Introduction of efficiency schemes and consumer protections.



**Energy Act 2023:** Establishes Ofgem as the regulator for heat networks.



## **Government Funding Programmes:**



**Green Heat Network Fund (GHNF):** Capital funding for new low-carbon heat networks.



**Heat Network Efficiency Scheme (HNES):** Supports improvements in existing heat networks.



**Heat Networks Investment Project (HNIP):** Previously provided capital investment for new projects.

# Regulation

## Regulatory Framework

**Energy Act 2023** introduced authorisation requirements.

**Heat Networks (Market Framework Regulations) 2025** to be implemented.

## General Prohibition

From **April 2025**, operating a heat network requires an authorisation from Ofgem.

Authorisation applies to those supplying heat, cooling, or hot water

## Scale of Challenge

Over **14,000 heat networks** in the UK.

Operators include local authorities, landlords, property developers, energy companies, universities, and hospitals.

Wide range of business models, requiring flexible regulatory approaches.

## Timeline

**April 2025:** Existing heat networks deemed authorised.

**January 2026:** Most authorisation conditions take effect.

**January 2028:** End of initial period for new networks.

## Regulated Activities

**Operation:** Controlling thermal energy transfer.

**Supply:** Providing heat, cooling, or hot water to consumers.

Operators and suppliers may have overlapping responsibilities.

## Consumer Protections

Energy Ombudsman role in handling complaints.

Fair pricing and compensation mechanisms for service failures.

Vulnerable customer support measures.

# Zoning

## Heat Network Zoning







### Heat Network Zoning Pilot (HNZP):

- Identifies areas best suited for heat network deployment.
- Mandates certain large buildings to connect.

### Energy Act 2023 Provisions:

- Establishes zoning methodology.
- Designates local and national authorities to enforce zoning rules.
- First heat network zones announced in October 2024.

# New AZP Delivery Models

-  Two Models: DA Model (Promoter exits after development) and GS Model (Promoter stays involved with golden share). 
- SPV Structure: Both models use a project-specific SPV; GS Model adds a shareholders' agreement for ongoing governance.
-  Development Fee: Promoter pays capped development costs; no adjustments for overspend.
-  Exit Rights: In DA Model, developer can opt out after development; in GS Model, developer must proceed under agreed terms.
-  Termination Payments: £1 fee if unviable; Abort Fee (120% uplift) if termination without proper cause.
-  Payment Timing: Development payments made monthly, subject to annual caps.

# Don't forget the old rules (PLEASE)

## Land Acquisition & Planning Permission:

- Heat networks often require access to third-party land.
- Challenges in obtaining planning approval.
- No compulsory purchase rights (unlike gas and electricity projects).



## Infrastructure & Consent Requirements:

- Highways authority consent for pipework installation.
- Water company consent for works near public sewers.
- Consideration of business rates on energy centres.



## Leases & Tenant Consultation:

- Impact on lease agreements and landlord obligations.
- Consultation required under the Landlord and Tenant Act 1985.



## The Heat Network (Metering and Billing) Regulations

-  Set minimum rules for installing meters, controlling consumption, and issuing accurate heat bills.
-  Aim to make heat use transparent, drive energy efficiency, and align heat billing with electricity and gas sectors.



## Landlord and Tenant Act 1985

-  Imposes landlord duties to repair heating systems in short residential leases.
-  Limits landlords to recovering only reasonable heating costs through service charges.

## CIBSE/ADE Heat Networks Code of Practice

-  Sets minimum technical and operational standards across the full DHN project lifecycle.
-  Aims to ensure heat networks are efficient, reliable, and deliver long-term environmental benefits.

## Heat Trust Scheme

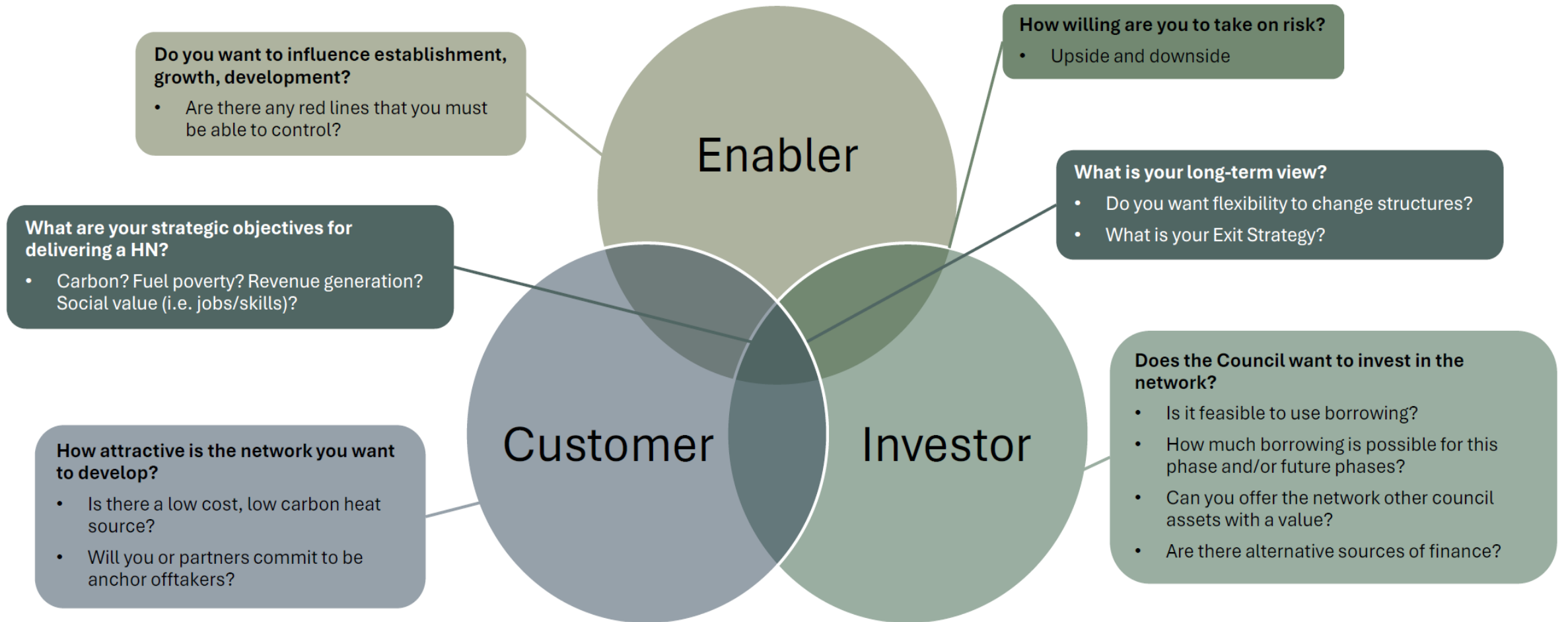
-  Provides voluntary customer service and consumer protection standards for DHN users.
-  Offers independent complaints handling through the Energy Ombudsman for scheme participants.



**PART 3**  
**These Heat Networks Sound Fun – I want one**

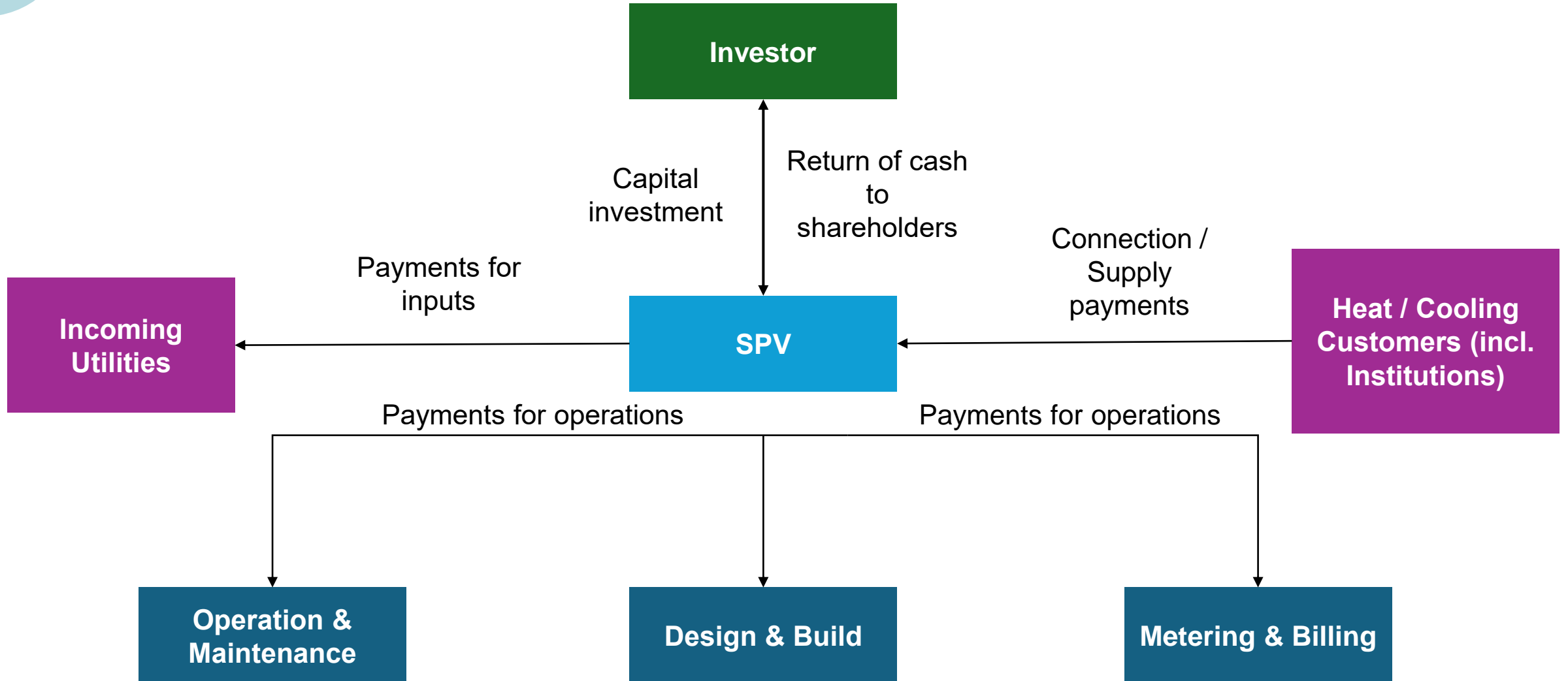


# Roles



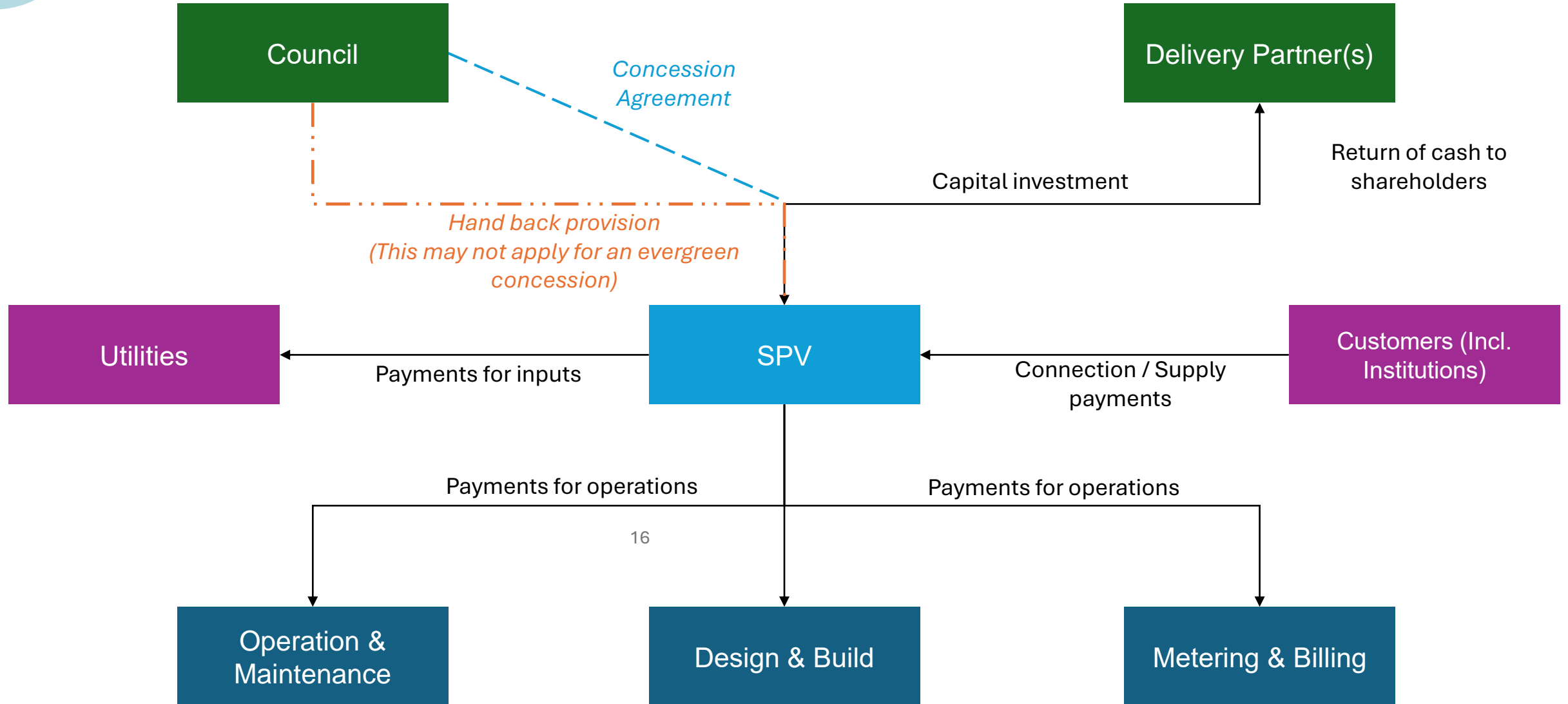


# Private SPV

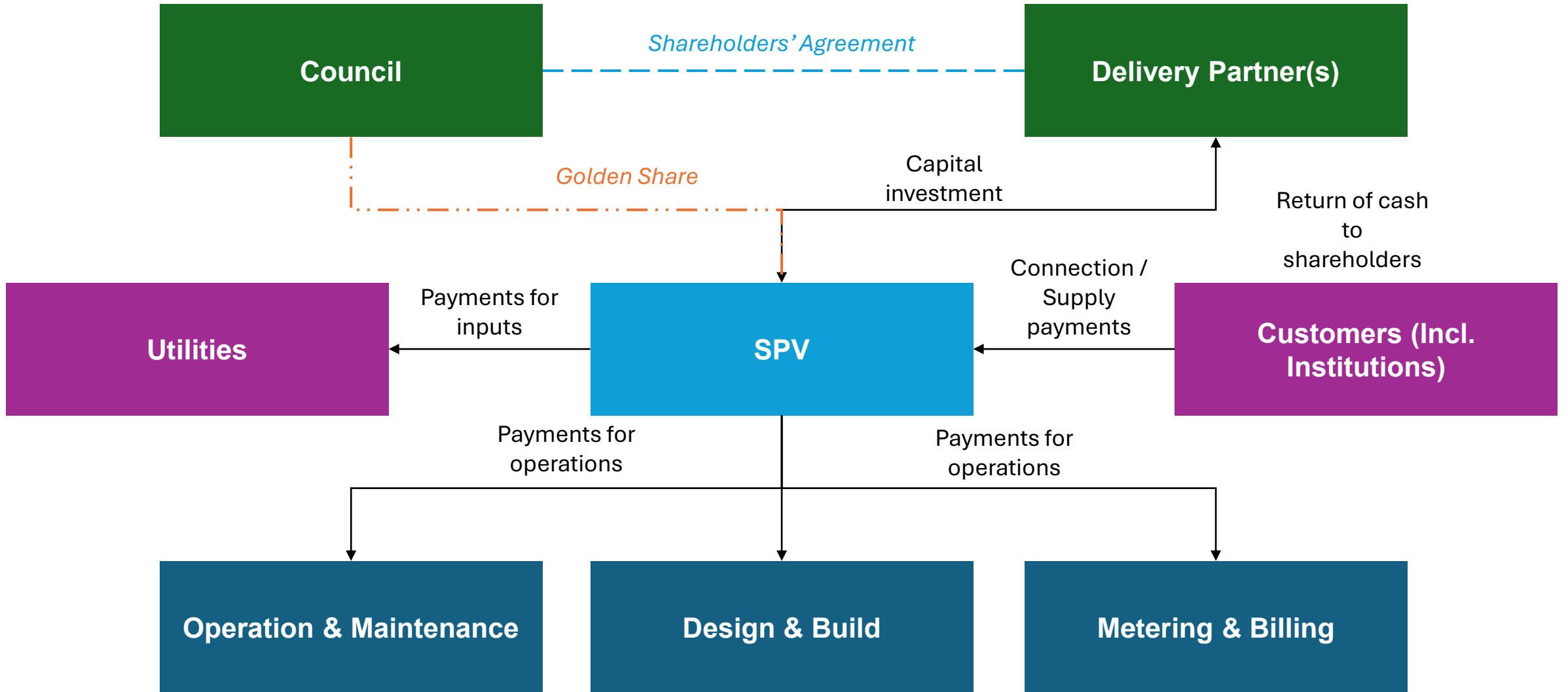




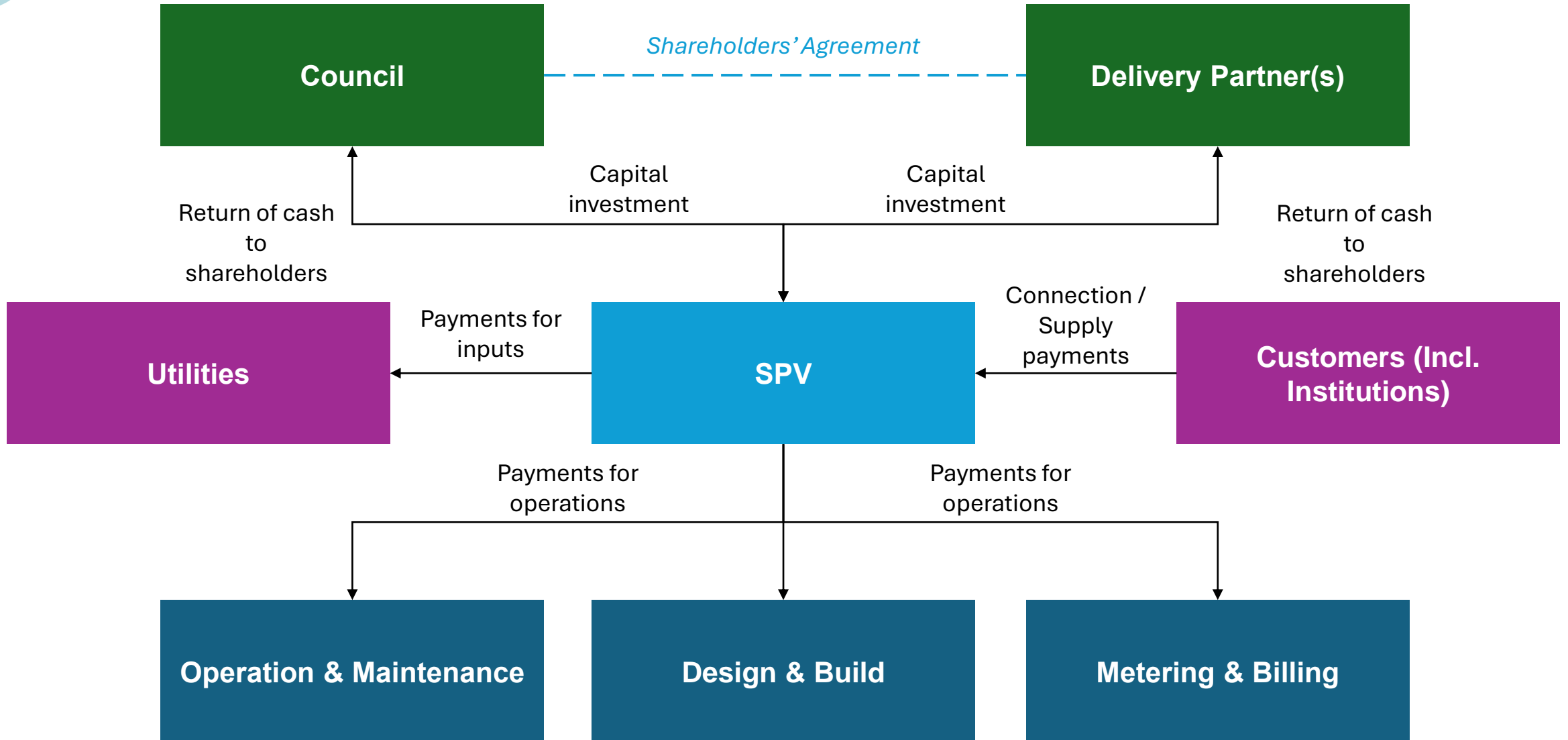
# Concession



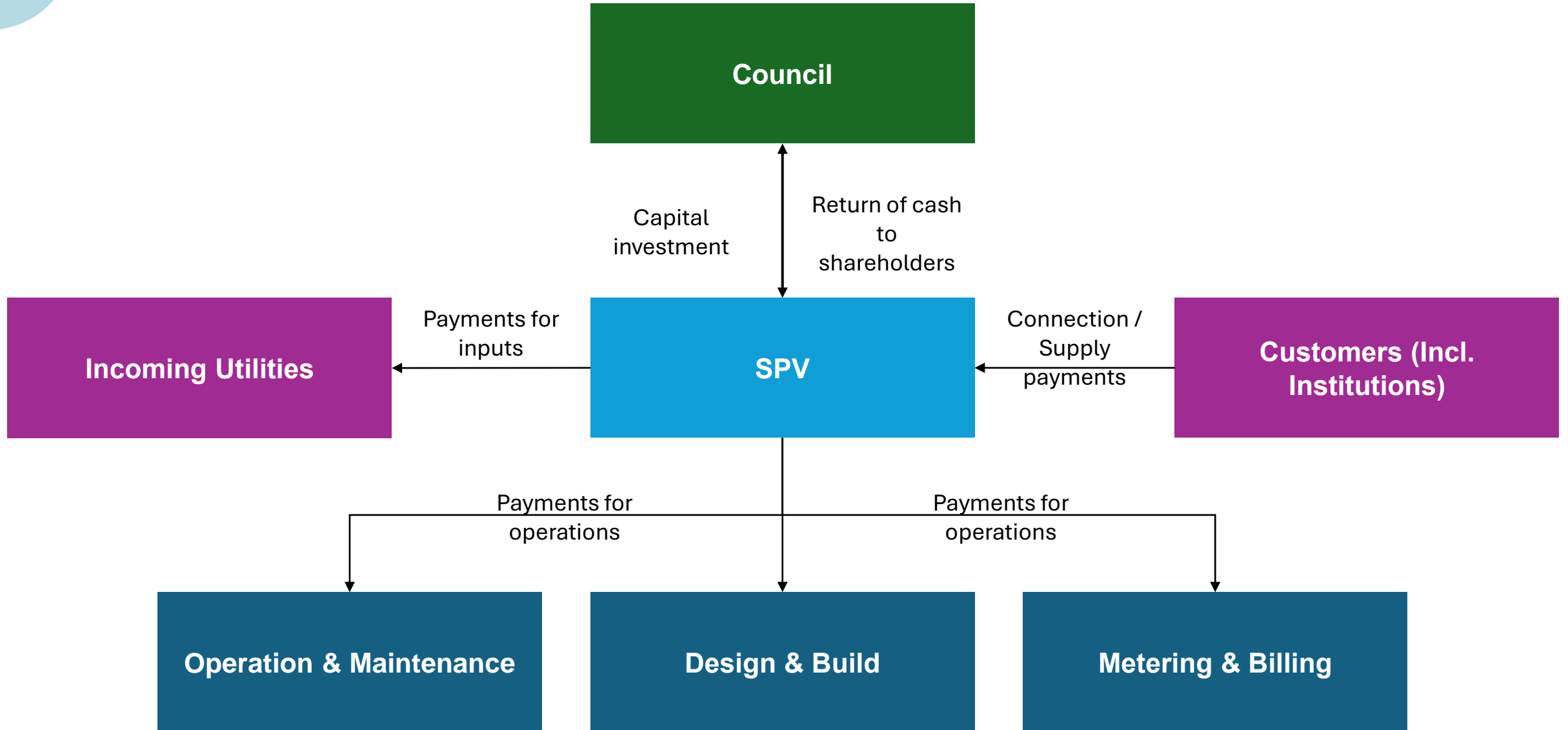
# JV and Golden Share



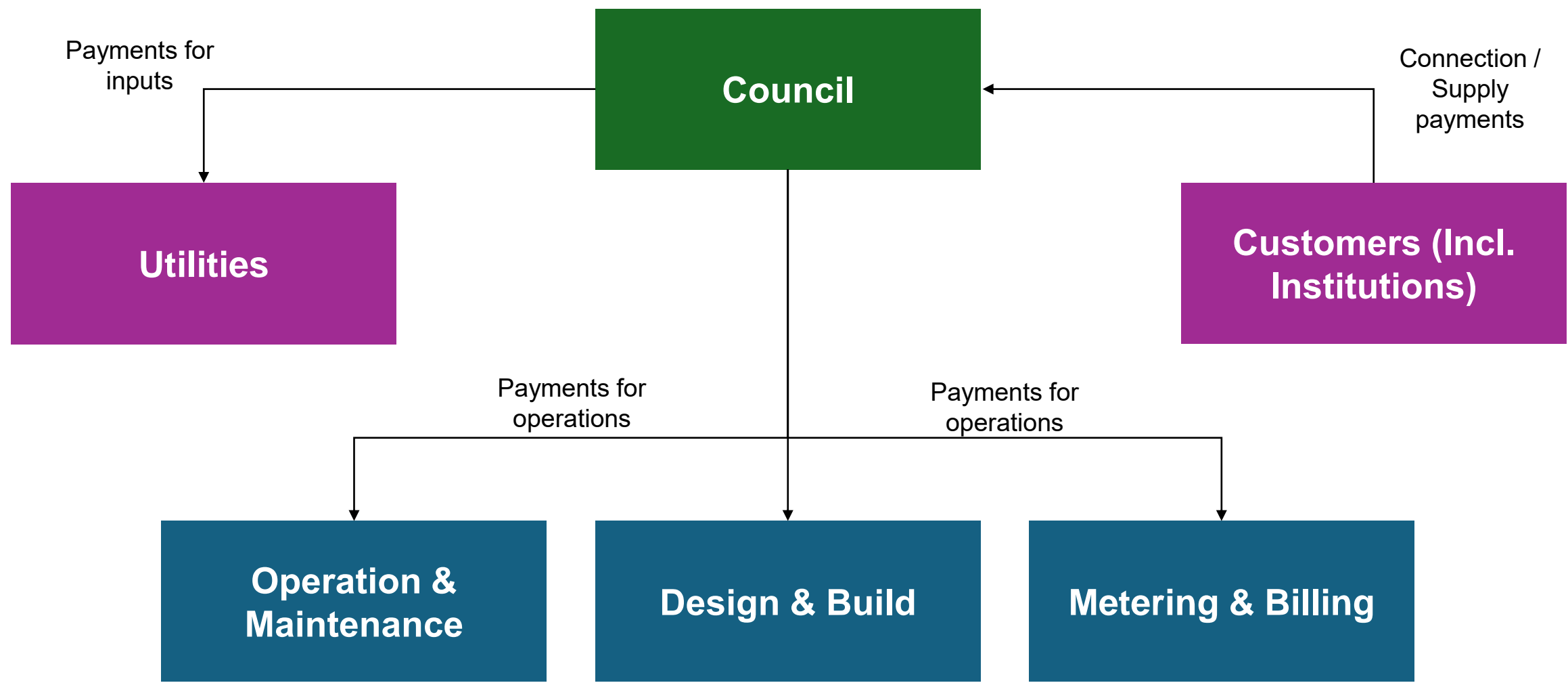
# JV and Co-Investment



# Public SPV



# Public





**PART 4**

**I've already got one – It's a CHP!**



# Big Issues for CHPS

- ⚡ Grid electricity carbon factor has fallen: SAP 10.2 and Green Book show electricity is now much lower carbon than gas, reversing CHP's earlier advantage.
- 📊 CHP no longer helps compliance: Under SAP 10.2 and Part L 2021, gas CHP may struggle or fail to meet CO<sub>2</sub> and primary energy targets without major design changes.
- 🏠 Planning approval harder: Planners (especially in London) now prefer electric heat or low-carbon district heating; CHP proposals face greater scrutiny.
- 📄 Future Homes Standard will lock out gas CHP: From 2025, standards will make gas-fired CHP effectively non-compliant for new homes and commercial projects.
- 🔄 Legacy CHP networks risk becoming liabilities: Older networks may need retrofitting with low-carbon sources like large heat pumps to stay viable.
- 🚫 Shift in policy and funding: Incentives now favour low-carbon heat; grants for heat pumps and renewable networks replace old CHP-friendly policies.



**PART 5**  
**I stopped listening in Part 2 – What did you say?**



# Takeaways

⚡ The future regulatory regime remains uncertain. Not just authorisation conditions but zoning, step-in and carbon. **THIS MAY NOT LAST MUCH LONGER**

⚡ If you want to build a new network now... Consider AZP this is the way to let the opportunity in line with Zoning. Consider new regulatory regime. but also consider **REVENUE CASE**. Even with zoning heat network revenues are not a given. Particularly gas comparator. You can reach out via GHNF.

⚡ If you have developers in your area you can support applications to GHNF, you can provide supply, you can provide demand. **SUPPLY IS GETTING MORE COMPLEX WITH DATA CENTRES AND EFWS – IS IT SECURE.**

⚡ If you have a CHP are you still low carbon. Consider sleeving. What does this mean for growth.

⚡ Consider future regulation – maybe disaggregation to contain risks.