

# Thoughts on a **Non-gas Pipeline Alternative (NPA) Framework**

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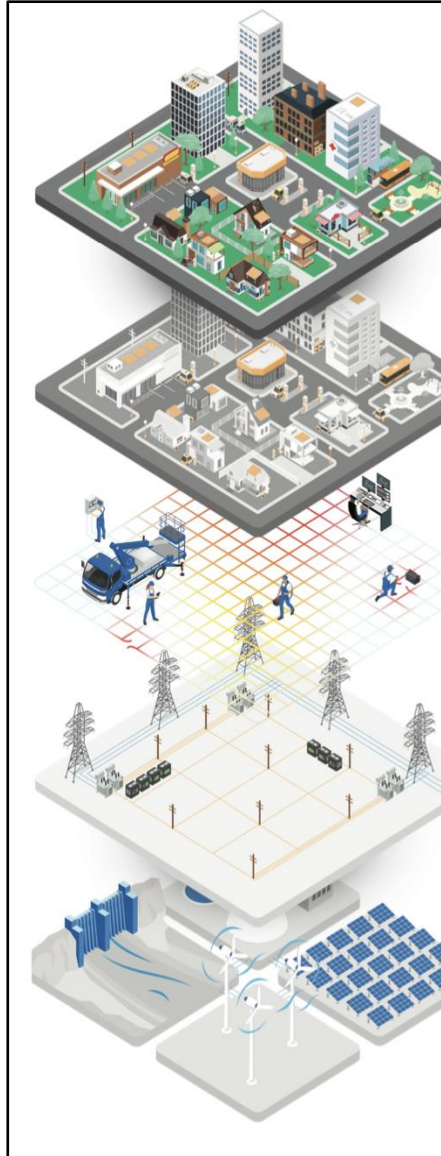


## 'Blinkering the Horse'

An 1800s analogy...

Calms the horse on roads  
but less good for  
navigating unknown  
spaces...



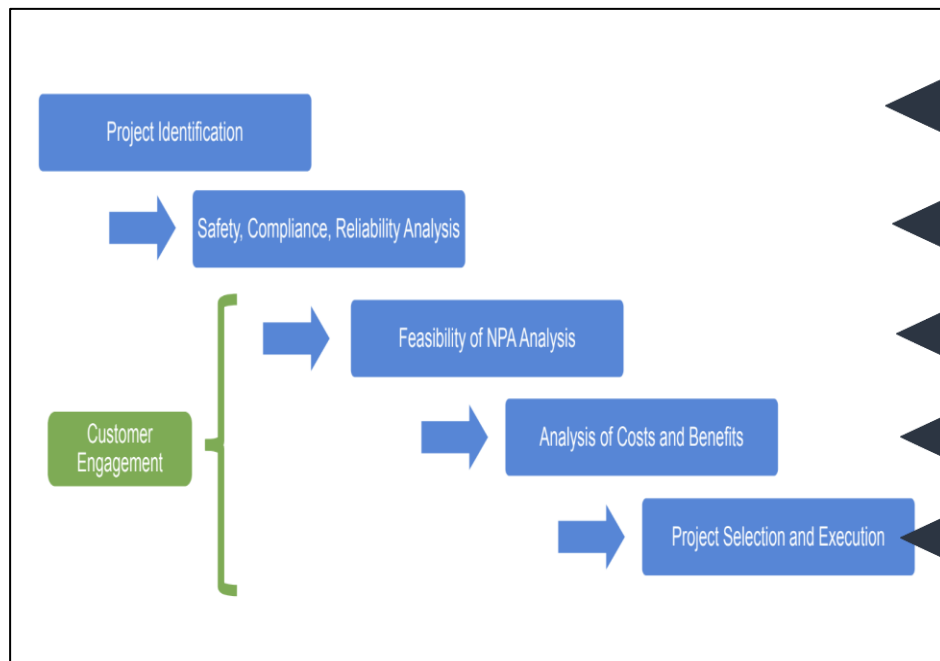


Tactical Thermal Transition planning requires:

- 1. Transparent Values:**  
Cost Distribution  
Benefit Distribution  
Equity of Access  
Environmental Justice  
Generational Justice
- 2. Data Layers:**  
Gas data  
Electric data  
Thermal Data  
Building Data  
Social Data
- 3. System Interactions**
- 4. Integrated Interface to explore values & data driven evolution paths**

System-scale planning process needed:

Tactical Thermal Transition Tool Needed



We know today what street segments will need to be replaced between now and 2050.

This planning process must be done for the whole system well in advance.

The annual planning process must have a basis of prior analysis with projects ready for execution permissioned to move forward

INTERIM SOLUTIONS:

Move the gas planning process to a multi-year window with annual adjustments/approvals.

Allow repair/risk reduction to open time window

Add weighting for energy burden reduction for monthly energy costs now and in multi-decade window.

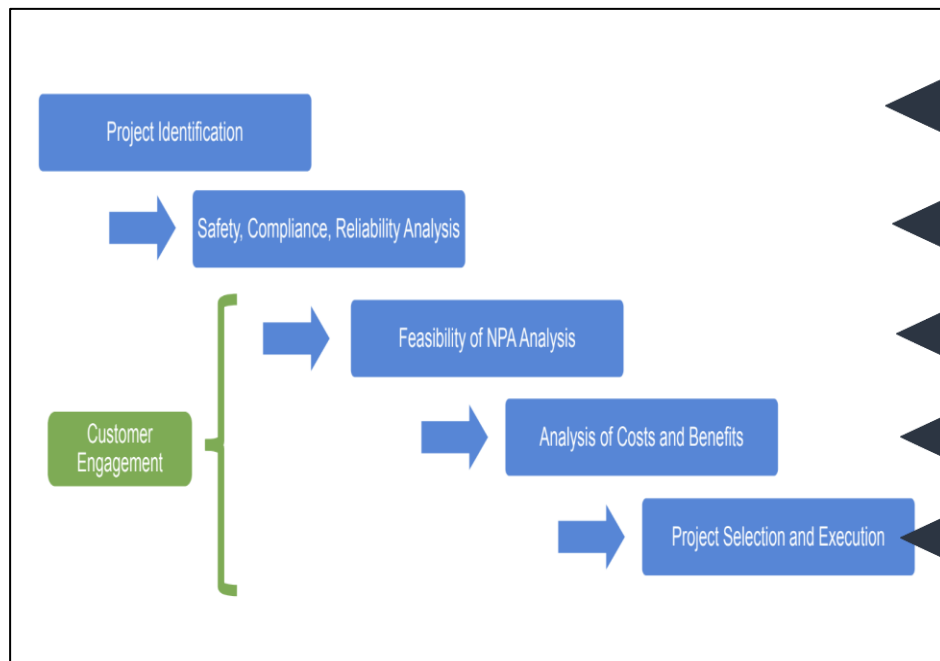
Building on the Proposed Framework:

ISSUE:

**Time Considerations**

Scale Considerations.

Risk Considerations



Scale matters at every step – looking at the system from a street-segment level hides both challenges and impacts at the system scale.

INTERIM SOLUTIONS:

Add a new ‘Dependency Ranking’ for gas pipe segments. D0, D1, D2, D3... etc...

Add weighting for system scale cost impacts (substations, regulator stations, etc)

Add social scale weighting for cost of carbon and health impacts.

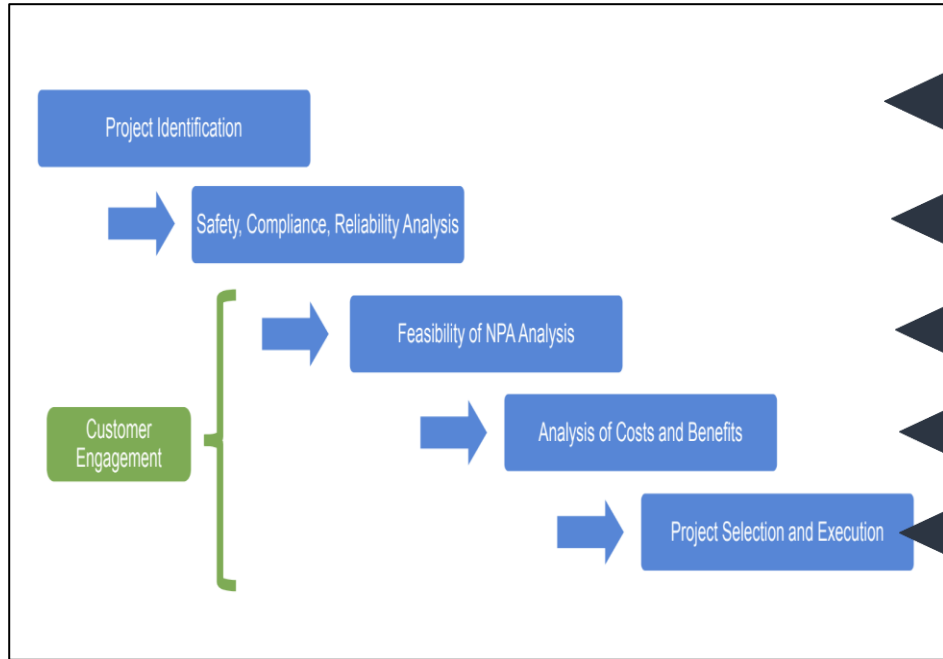
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**Scale Considerations.**

Risk Considerations



Risk to humans of not acting on climate change. Legal risk too.

Risk remains on the gas system. As pipes are removed how do we share or manage risks across decision-makers?

Risk of doing something new is outweighed by risk of not doing.

INTERIM SOLUTIONS:

Quantify time tolerance for current safety and risk ratings for gas pipe. Match this.

Address building owner costs for '100yrs of delayed maintenance'

Securitize the building transition costs to socialize the risk and reducing cost.

Building on the Proposed Framework:

ISSUE:

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Scale Considerations.

**Risk Considerations**