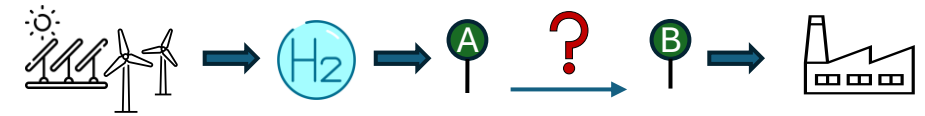


Decarbonising Gas with H₂: Building Models for Gas Networks Transition

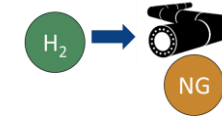
 **Context**

Clean **energy** needs efficient **transportation**!



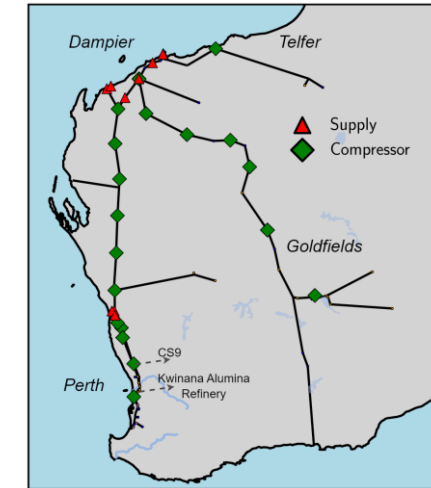
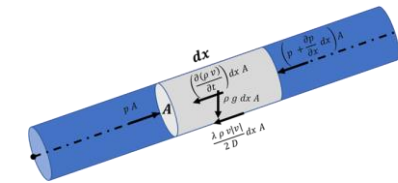
 **Question**

How will **gas networks** evolve in the **low-carbon fuels** era?



 **Claim**

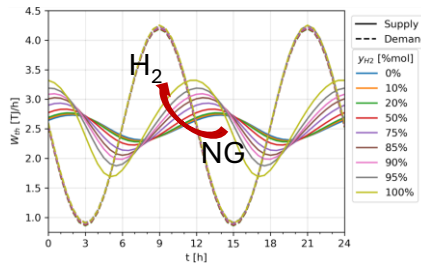
Advanced **gas network models** are essential!



 **Evidence**

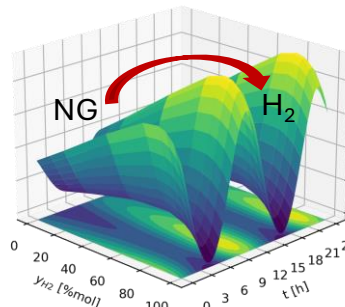
 **Reasoning**

Pipeline Dynamics



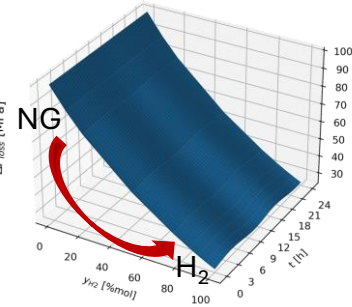
Risks

Pressure Losses



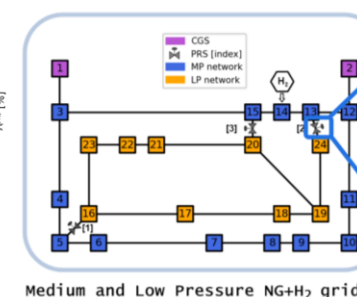
Adequacy

Linepack

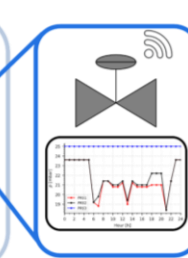


Flexibility

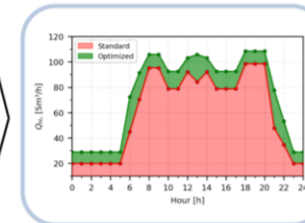
Optimizing H₂ injections



Medium and Low Pressure NG+H₂ grid



Smart Regulation



Maximizing H₂ injection

Potentialities

Steady state
models

2022



Transient models
2023



Optimal gas flow
models
2024

Control algorithms for
H₂ tracking
2025

Distribution Networks

Gas Pipelines

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