

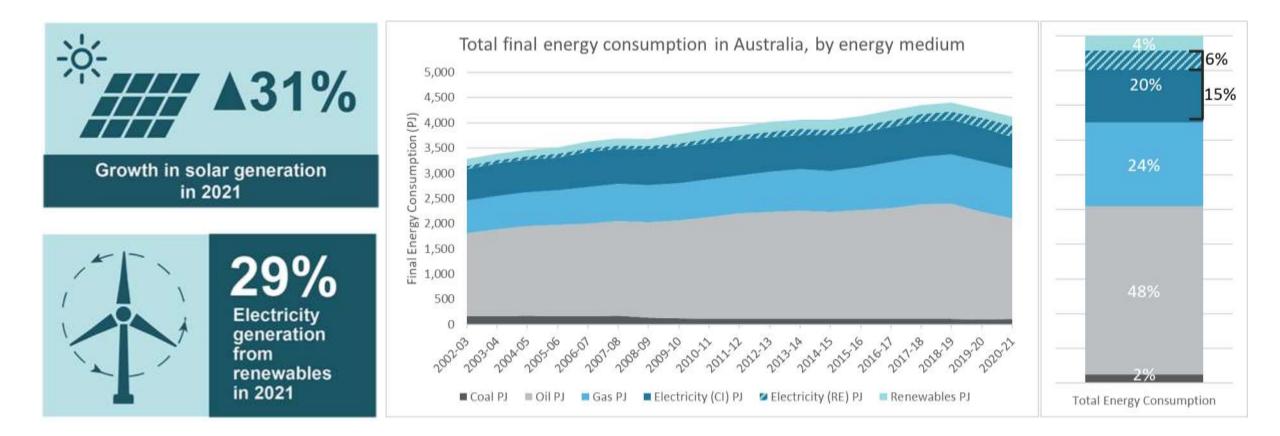
Renewable gas economic analysis 2024 update

Australian Pipelines and Gas Association February 2024

Why are renewable gases important?



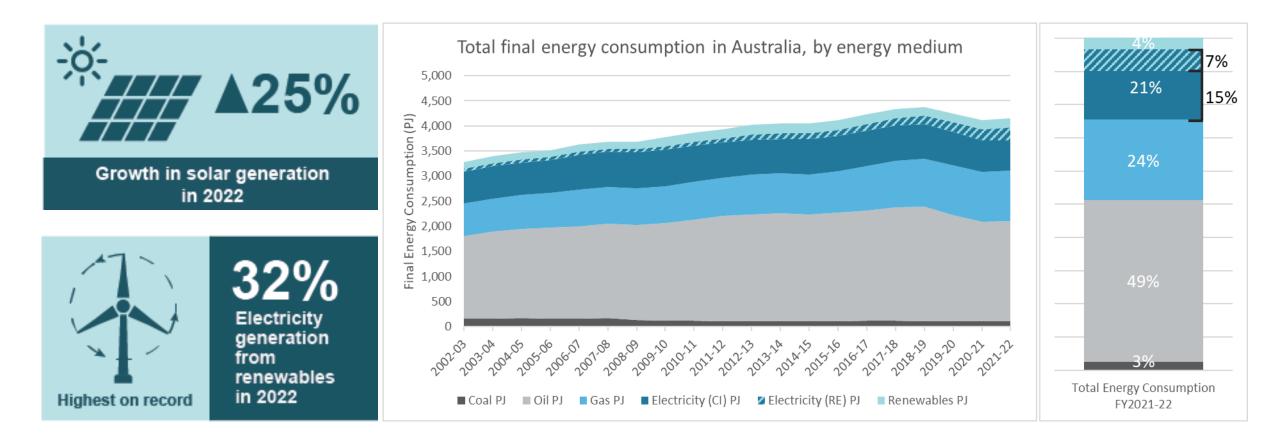
Australian Energy Statistics 2022 Update (FY2020-21)



Why are renewable gases important?



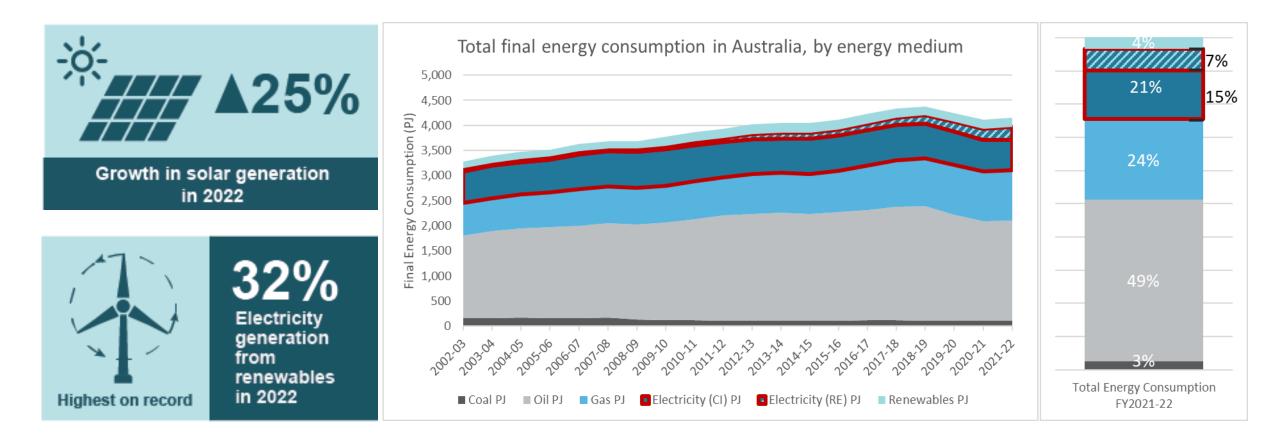
Australian Energy Statistics 2022 Update (FY2021-22)



Why are renewable gases important?



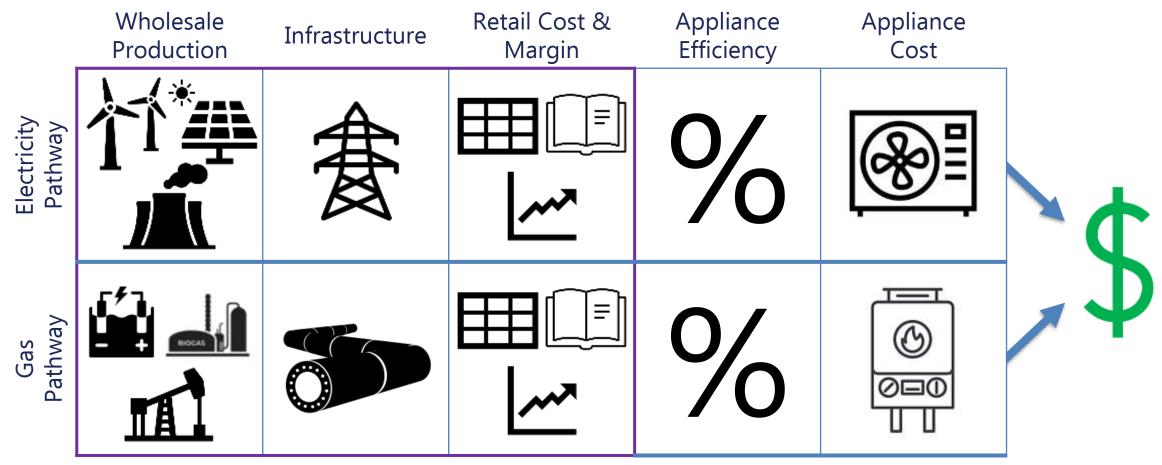
Australian Energy Statistics 2022 Update (FY2021-22)





Total Customer Cost

Constituent components of Total Customer Cost

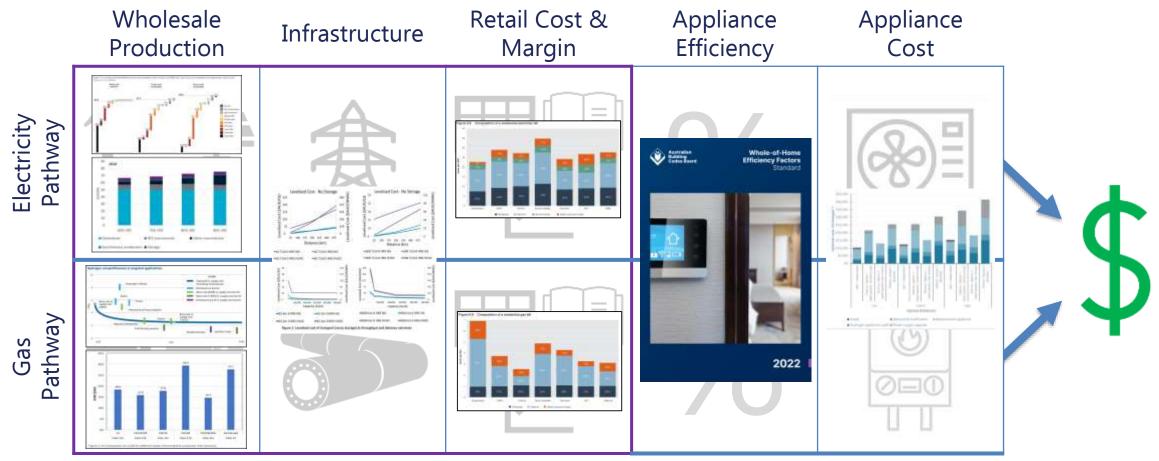


Retail Energy Cost





Constituent components of Total Customer Cost

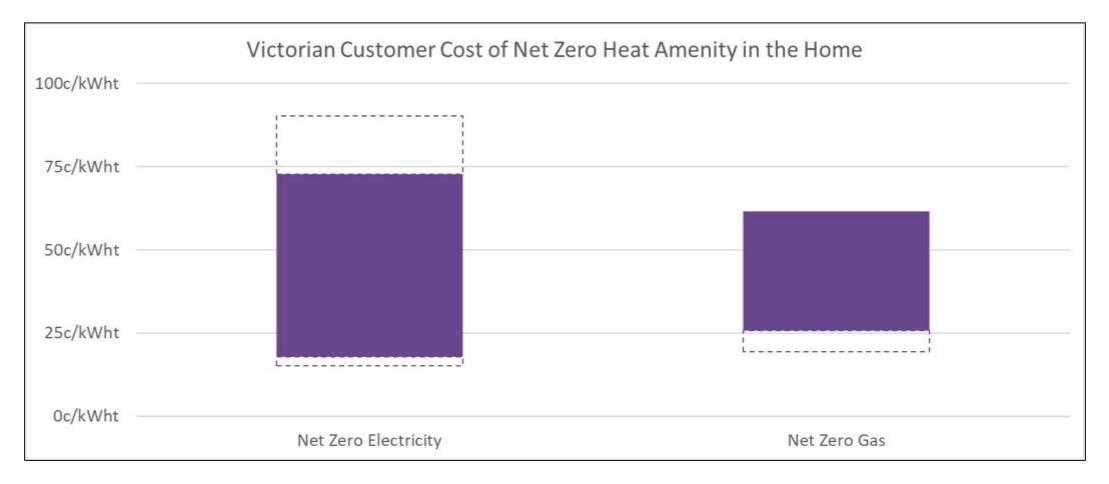


Retail Energy Cost

Macroeconomic analysis of Total Customer Cost

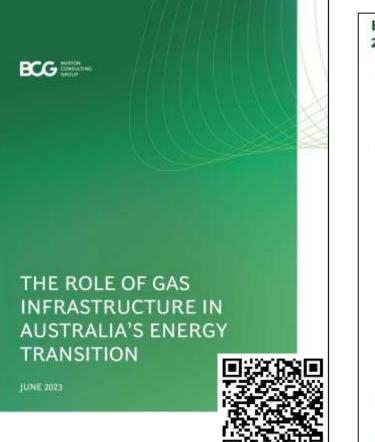


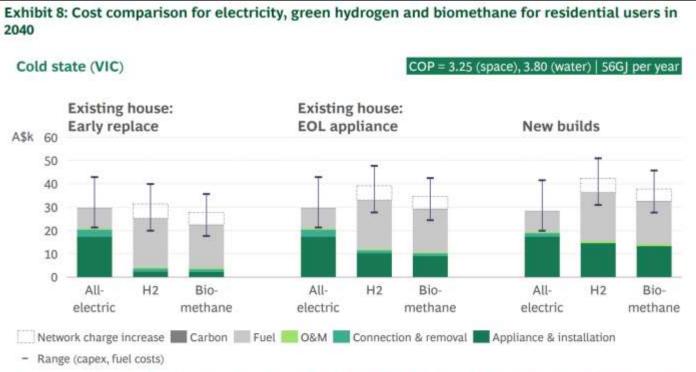
Net zero heat in the home





Cost comparison for electricity, green hydrogen and biomethane in the home



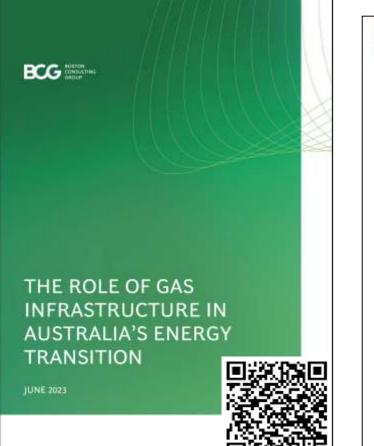


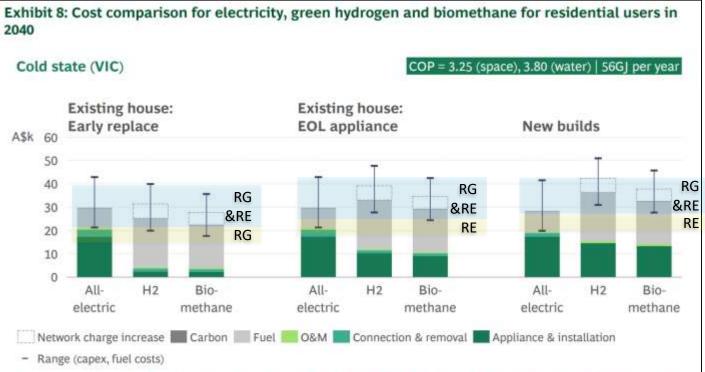
Note: Inclusive of space heating, water heating and cooking. Costs reflect NPV over 10Y period using real discount rate of 3%. All-electric homes are grid-connected and no subsidies are considered. Network charge increase (dotted box) reflects 50% distribution-connected customers, per GSOO OSC scenario in 2040 for biomethane and hydrogen.

Source: Frontier Economics (2022); ATA and Reneweconomy (2018); Advisian, CEFC (2021), IEA and Deloitte; BCG Analysis



Cost comparison for electricity, green hydrogen and biomethane in the home



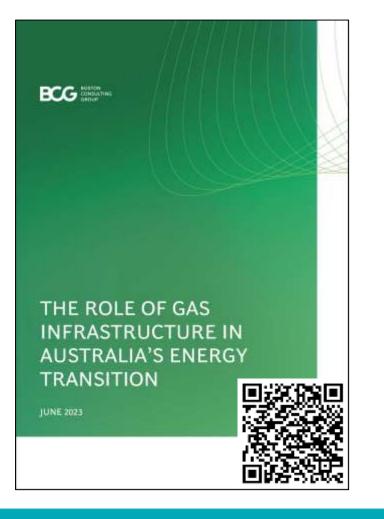


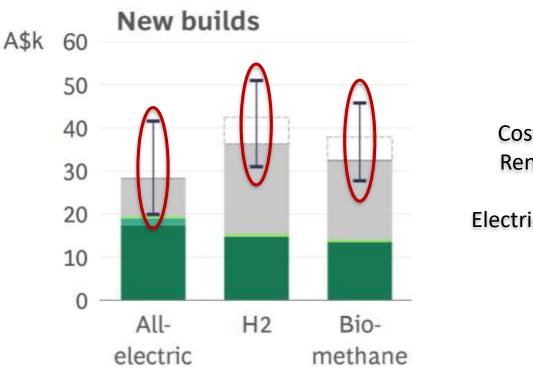
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Learning: Where electrification and renewable gas advocates miss each other

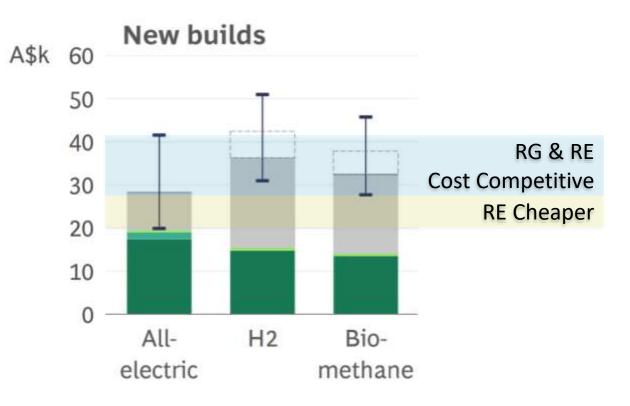




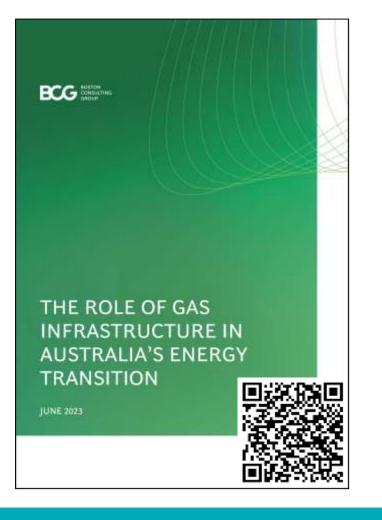
Cost Ranges for Renewable Gas and Electricity Options

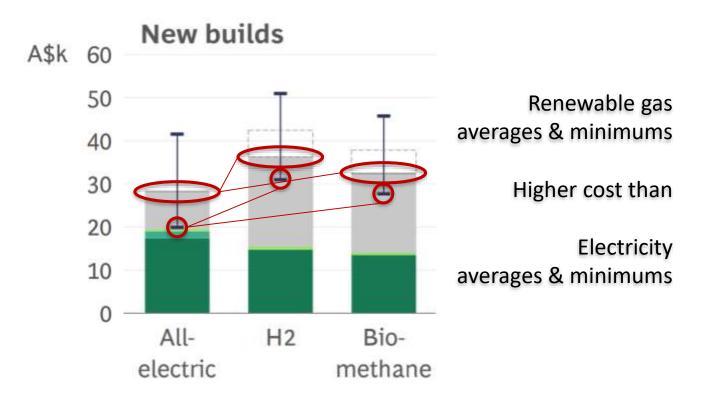




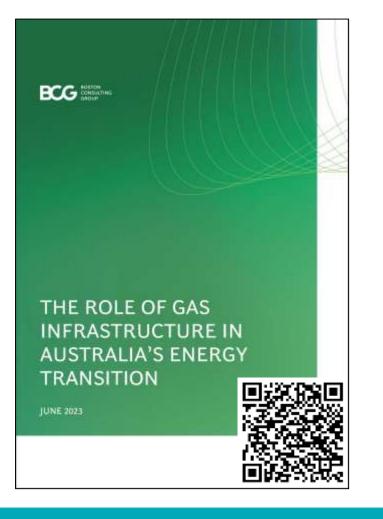


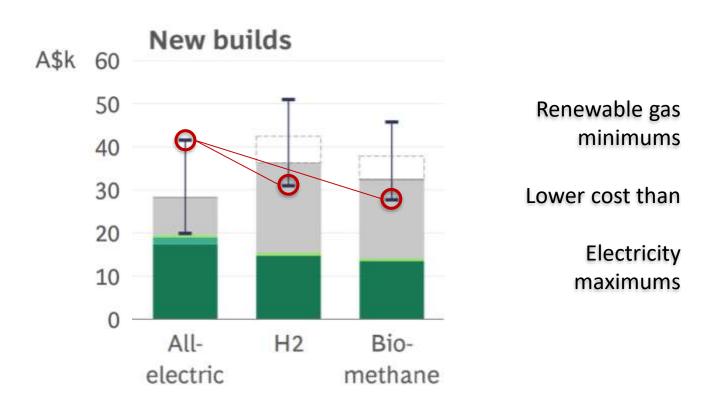




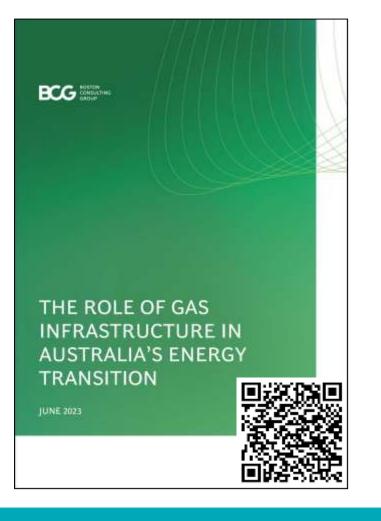


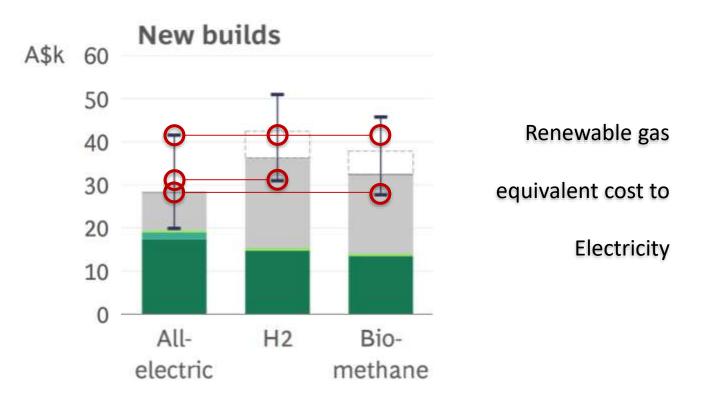




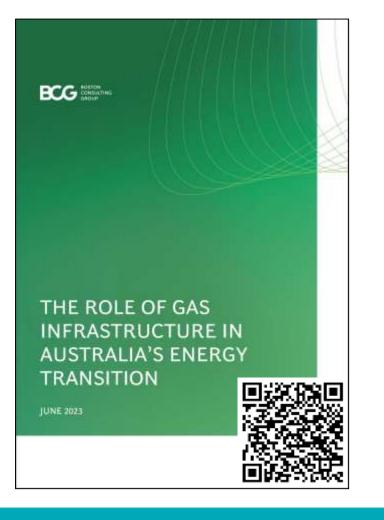


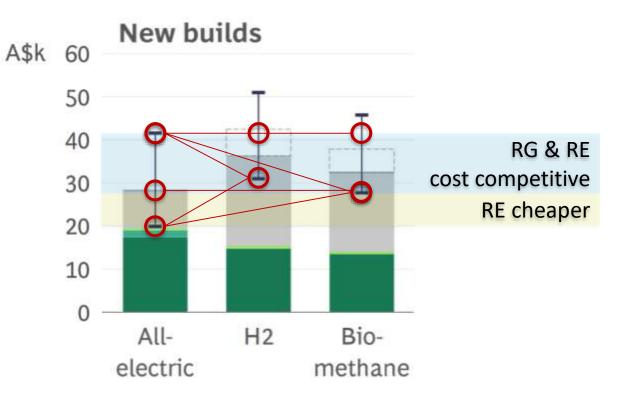






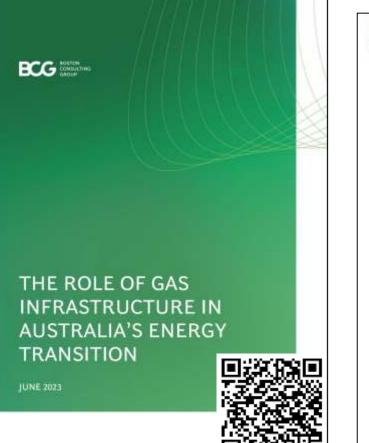


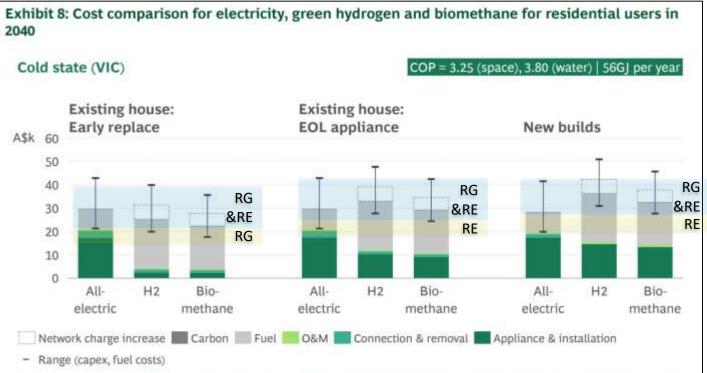






Conclusion: Renewable gas is *cost competitive* with electrification in the home





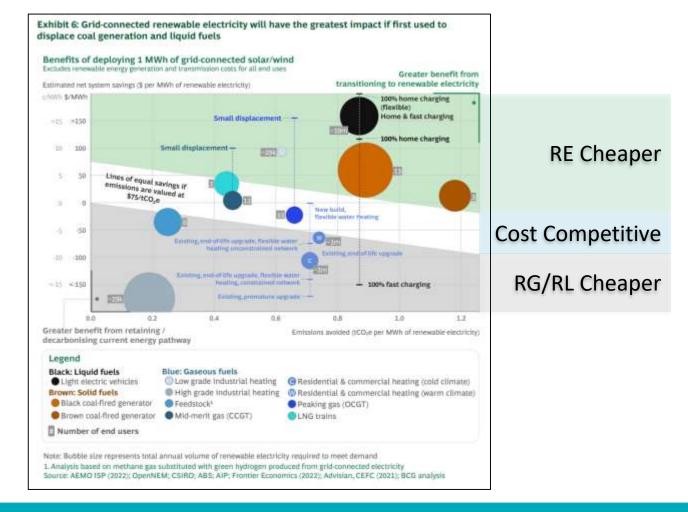
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Cost competitiveness of renewable electricity and renewable fuels in industry

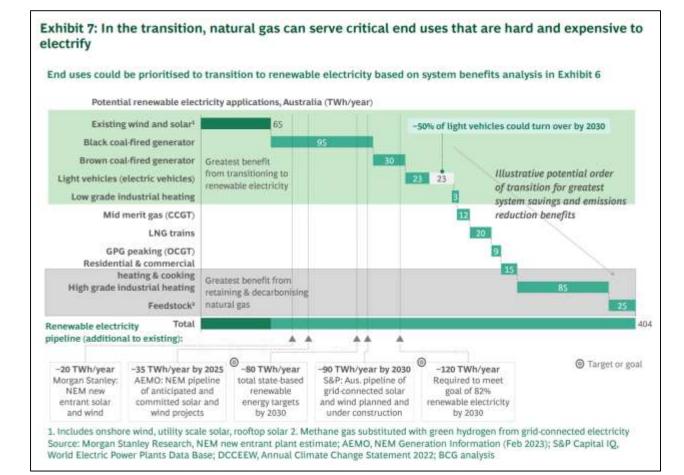
ECG Aderes THE ROLE OF GAS INFRASTRUCTURE IN **AUSTRALIA'S ENERGY** TRANSITION **JUNE 2023**





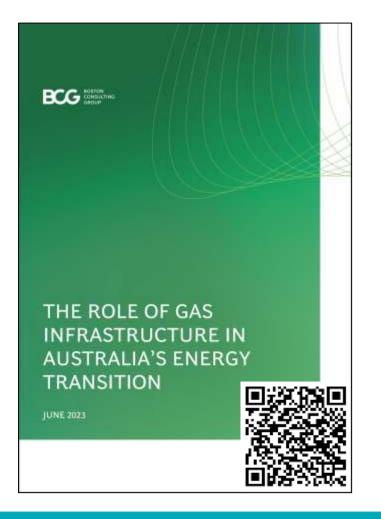
Prioritisation of each next terawatt hour of renewable electricity generation

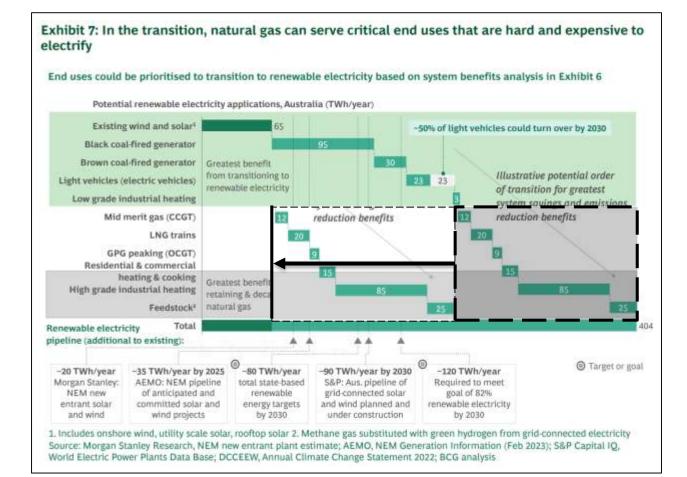
ECG MARTIN THE ROLE OF GAS INFRASTRUCTURE IN AUSTRALIA'S ENERGY TRANSITION **JUNE 2023**





Decarbonisation can happen faster and cheaper looking beyond renewable electricity

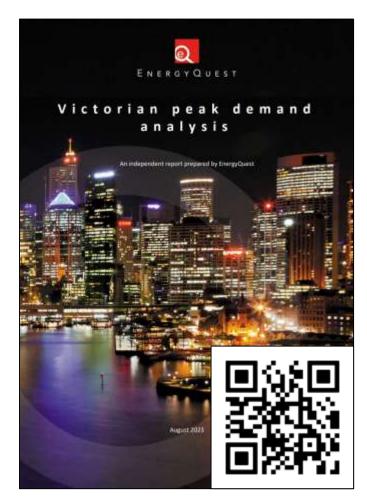


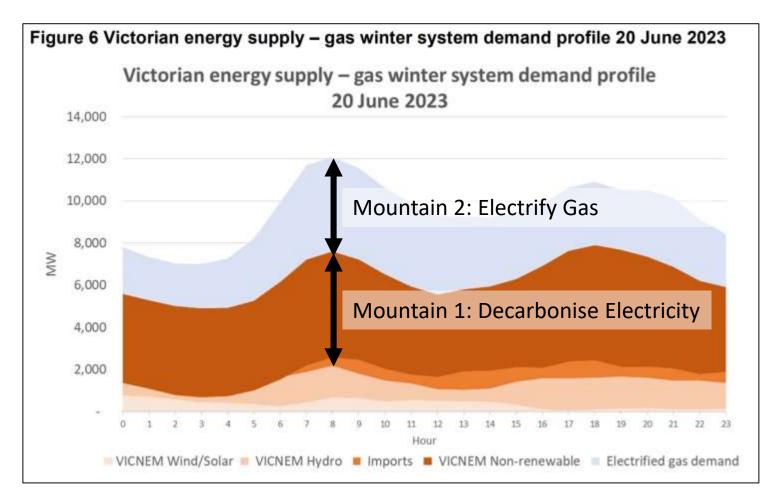


Analysis of Peak Demand in Victoria



Electrifying all Victorian gas demand creates an electric mountain

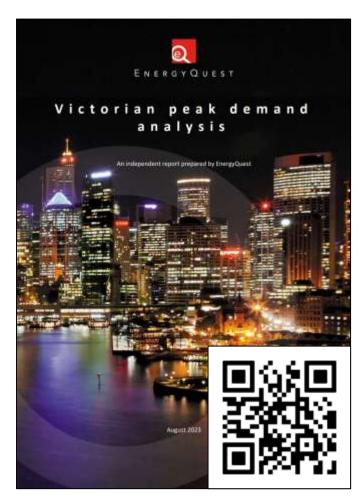


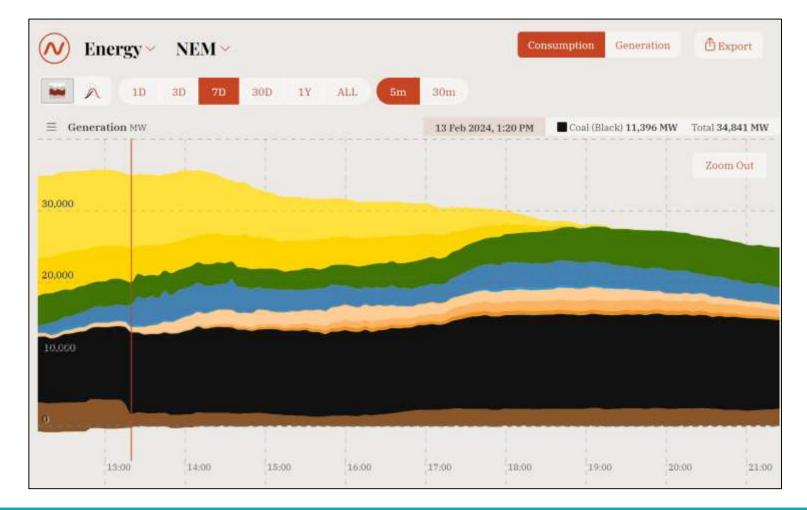


Analysis of Peak Demand in Victoria



Electrifying all Victorian gas demand creates an electric mountain





Economic analysis of a Renewable Gas Target



Delivering lower cost decarbonisation for gas customers and the economy



HE FREMARY 2001 Report to APIGA and ENA

Renewable Gas Target

Delivering lower cost decarbonisation for gas customers and the Australian economy

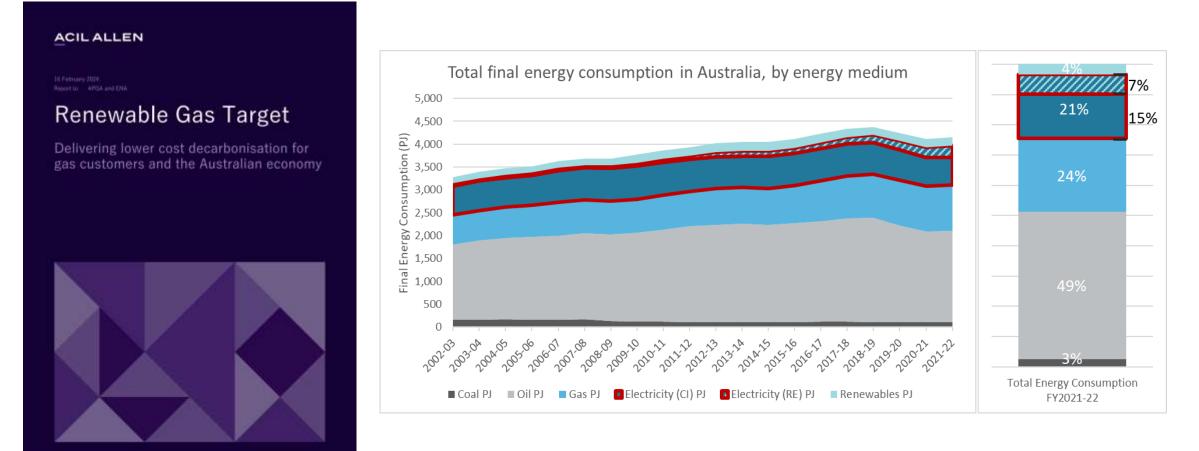


- First-of-its-kind micro- into macro- economic analysis of gas use decarbonisation
- Considers all gas customers: industrial, commercial and residential
- Seeks the least cost pathway to net zero emissions from domestic gas consumption
- Considers what it would cost to secure this pathway and bring renewable gas production forward via an RGT
- Compares this to the economic impact of constraining customer choice to electrification where electric options exist.
- Results to be released April 2024.

Economic analysis of a Renewable Gas Target



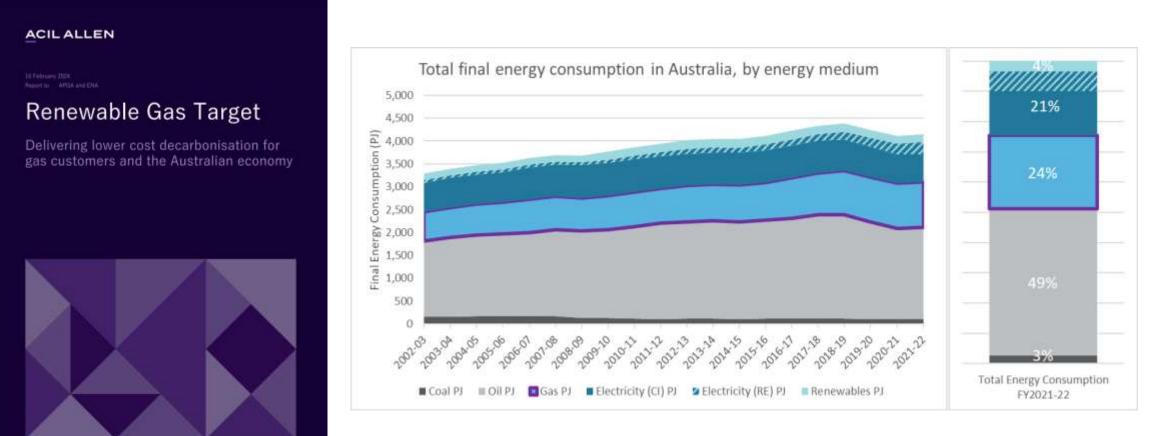
Australia can have a pathway not only to decarbonise electricity...



Economic analysis of a Renewable Gas Target



...but can also have a pathway to decarbonise gas use as well.





Thank You

