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Designing a future-proof gas and hydrogen infrastructure for Europe – A modelling-based approach

Energy Policy

Abstract:

Hydrogen has been at the centre of attention since the EU kicked-off its decarbonization agenda at full speed. Many consider it a silver bullet for the deep decarbonization of technically challenging sectors and industries, but it is also an attractive option for the gas industry to retain and future-proof its well-developed infrastructure networks. The modelling methodology presented in this report systematically tests the feasibility and cost of different pipeline transportation methods – blending, repurposing, and dedicated hydrogen pipelines - under different decarbonization pathways and concludes that blending is not a viable solution and pipeline repurposing can lead to excessive investment outlays in the range of EUR 19–25 bn over the modelled period (2020–2050) for the EU-27.

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Full text

