

## Syngas upgrading to SNG: Demonstration units in Europe

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SNG (Synthetic Natural Gas) from biomass role in future European energy grid is gaining momentum due to its renewable character and inter-seasonal storage capacity. Increasing interest is put on this energy carrier. However, technology is still on development and costs should be decreased to allow this biomass and waste to SNG technology to be competitive. Few demonstration projects have arisen in Europe to demonstrate the feasibility and improve technology to move from actual TRL7 to TRL9. The best-known demonstration project in Europe is Gobigas, a 20MW SNG production unit from woody biomass, joining REPOTEC fast circulation fluidized bed technology, OLGA(ECN) cleaning technology and Haldor Topsoe fixed bed methanation process. Other projects have started or on commissioning like GAYA, Gogreengas, Ambigo and Biocat project projects. The last is an extremely interesting Power to Gas demonstration unit that combines electrolysis and bio-methanation. It is the sole demonstration project in Europe using biomethanation to convert  $H_2/CO_2$  blend into  $CH_4$ . This contribution will address an overview of the latest technology developed for syngas production and upgrading to SNG.

### Biography

F Javier Escudero Sanz has completed his PhD from Politecnica de Madrid University in 2004 and postdoctoral studies in CNRS (LGC-Toulouse). He joined IMT Mines-Albi in 2008 where he is an assistant professor in RAPSODEE Research Center (Albi-France) and head of Valthera technological platform on thermochemical processes for the valorization of biomass and waste. He has published more than 20 papers in peer-reviewed journals.

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