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2.3 Gasification for power, CHP and polygeneration

Biomass Gasification for Combined Heat Power (CHP) Applications: the GAMECO Project

O. Authier¹, A.E. Khalfi¹, L. Sanchez², Y. Aleman², A. Delebarre³, G. Mauviel⁴, A. Dufour⁴, P.A. Glaude⁴, Y. Rogaume⁵, J. Poirier⁶, J. Kerhoas⁷, J.C. Valle-Marcos¹

¹EDF R&D, 6 quai Watier, BP49, 78401 Chatou cedex, France

²EQTEC, C/ Princesa, 2 08401 Granollers, Spain

³FJV-LEMETA, 2 avenue de la Forêt de Haye, BP160, 54504 Vandoeuvre lès Nancy, France

⁴FJV-LRGP, 1 rue Grandville, BP451, 54001 Nancy cedex, France

⁵FJV-LERMAB, 27 rue du Merle Blanc, BP 1041, 88051 Épinal cedex 9, France

⁶CEMHTI-Orléans, avenue de la Recherche Scientifique, 45071 Orléans cedex, France

⁷NOVABIOM, Ferme de Vauventriers, 28300 Champhol, France

Air-blown fluidised bed biomass gasification is a well adapted technology for Combined Heat Power (CHP) applications with syngas valorisation in a gas engine. However, it is not mature yet. Despite promising prototypes, CHP gasification needs further improvements to become the reference technology in the medium-size CHP market.

This is the purpose of the GAMECO project, which aims at improving an existing technology by optimising its operation, increasing its feedstock flexibility and optimising its upscaling, based on a better understanding of the key points of biomass Bubbling Fluidized Bed (BFB) gasification (i.e. bed agglomeration risks with agricultural biomasses, tar kinetics and biomass particles hydrodynamics).

The identified bottlenecks will be assessed through modelling, lab tests (< 1kg/h), and pilot tests (50 kg/h). Several feedstocks will be tested for this purpose in the frame of GAMECO project.

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