

Biogas Transport Grids, Case Study "Province of West-Flanders"

Short introductory summary:

Biogas collection from digesters to a hub supports the efficient use of energy. At a hub there is a scale advantage for the end user, e.g. a CHP. A large improvement of overall efficiency can be achieved when heat generation and heat demand are matched. In a Belgian province 38 digesters were identified. The biogas is used to produce electricity and heat at or close to the digester site. Often the heat is used to dry the digestate before it is transported abroad. However, studies are looking at other potential usages of the digestate which might decrease the demand for heat in the future. Biogas hubs can be an interesting alternative to valorise the biogas. The potential advantages of using a hub have not been fully examined up till now. In this case study the costs (€ct m⁻³) of biogas transport to a hub were estimated. It is an important first step to evaluate the viability of a business case including a biogas grid in the region. The hub could be situated at one of the digester sites or at a site proposed by experts to be promising for the business case. In the preliminary results biogas transport costs to the hub are in the range from 2.0-6.6 €ctm⁻³, (digester scale 1000 m³/h).

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Presenter's biography:

Evert Jan Hengeveld, MSc in Physics, holds a position as researcher and lecturer at the Hanze UAS in Groningen (NL). The focus of the research is on modeling of a Biogas Infrastructure with a biogas grid.

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