This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 691911

Technology Description (TD) for

Biogas Upgrading Technologies

Contact Information:

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Technology Description:

NAME OF TECHNOLOGY	Biogas Upgrading with Membrane Contactors
ASSIGNMENT OF TECHNOLOGY	
TECHNICAL READINESS LEVEL **TRL 1** - basic principles observed **TRL 2** - technology concept formulated **TRL 3** - experimental proof of concept **TRL 4** - technology validated in lab **TRL 5** - technology validated in relevant environment (industrially relevant environment in case of key enabling technologies) **TRL 6** - technology demonstrated in relevant environment (industrially relevant environment in case of key enabling technologies) **TRL 7** - system prototype demonstration in an operational environment **TRL 8** - system completed and qualified **TRL 9** - actual system proven in operational environment (competitive manufacturing in the case of key enabling technologies; or in space)	8

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TECHNOLOGY/EQUIPMENT AVAILABILITY		
PATENT RIGHTS		YES
METHOD OF MAKING THE TECHNOLOGY AVAILABLE	*Licence selling*	YES
	Licence granting	YES
POSSIBLE END USERS OF TECHNOLOGY	*Please name end users/ contacts that should be invited to project workshops*	

Description of the technology/equipment: (Pls. describe the technology. You may include pictures or graphics.)

Biogas upgrading in two steps

The gas purification is carried out by the compounding of two processes
Step 1: CO2 removal by degassing membrane
First water will be pumped from the circulation tank through the degassing membrane
► Removal of CO2 from the circulating water will be done by using strip gas (ambient air)
Step 2: CO2 absorption from the biogas by using a gas exchange membrane
The degassed water flows through a gas exchange membrane and the CO2 of the biogas goes through the membrane into the water.
► The CO2 components of the biogases will be absorbed by the degassed water