

# EcoPROTECH

Equipment for purifying, upgrading  
and utilization of biogas

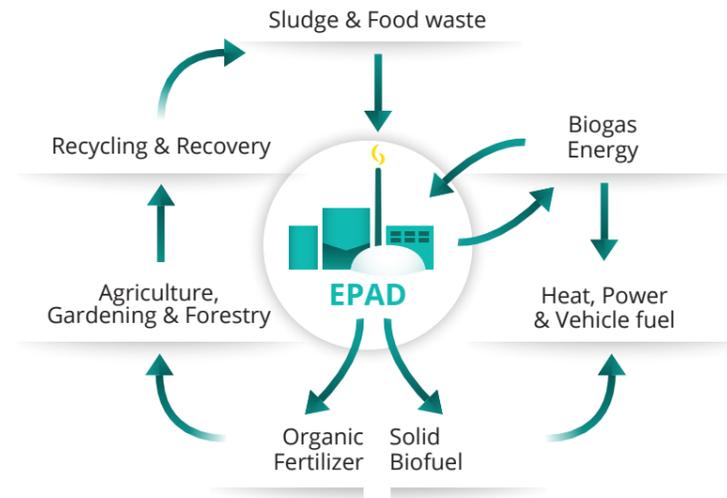


# Go green with biogas

EcoProtech Ltd is proud to offer an overall solution for biogas production and utilization. The product portfolio of EcoProtech Ltd covers all the steps from the anaerobic digestion process to the biogas upgrading, the distribution of biomethane, fueling stations and retrofit vehicle conversions.

**High yield EPAD digestion process provides great basis for the utilization of biogas as biomethane.** As a market leader, EcoProtech is now able to provide complete biogas plants and the equipment needed for

purification, upgrading and utilization of biogas all in the same delivery. Overall solution like this can be fully customized according to the customer needs.



## 1 Biogas purification

Raw biogas is first stored to low-pressure storages and then lead to be purified. In the purifying process, our own in-house technology is utilized. The purifying equipment is manufactured in Finland. In the purification process hydrogen sulfide, siloxanes and other impurities are removed from the biogas by chemical gas scrubbers. In addition to this activated carbon filtering can be utilized.

## 2 Biogas upgrading

In the upgrading of biogas innovative membrane technology is utilized. The usage of membranes enables the separation of biomethane out of biogas with an efficiency rate of 99 % and even higher. The capture of carbon dioxide enables utilization of CO2 and supports the circular economy. The membrane equipment has a modular structure so it can be customized to handle flows of 40-2000 Nm<sup>3</sup>/h.

## 3 Compressing of biomethane

Compressing of biogas is required by different applications. EcoProtech Ltd represents exclusively in Finland compressing equipment by SAFE. Italian SAFE company manufactures wide range of mechanical and hydraulic compressors. Together with Safe we are able to offer compressors to fulfill different needs of upgrading units and refueling stations. Safe compressors can even produce outlet pressure of 310 bar and have a power rate of 400 kW.

## 4 Transportation of CBG

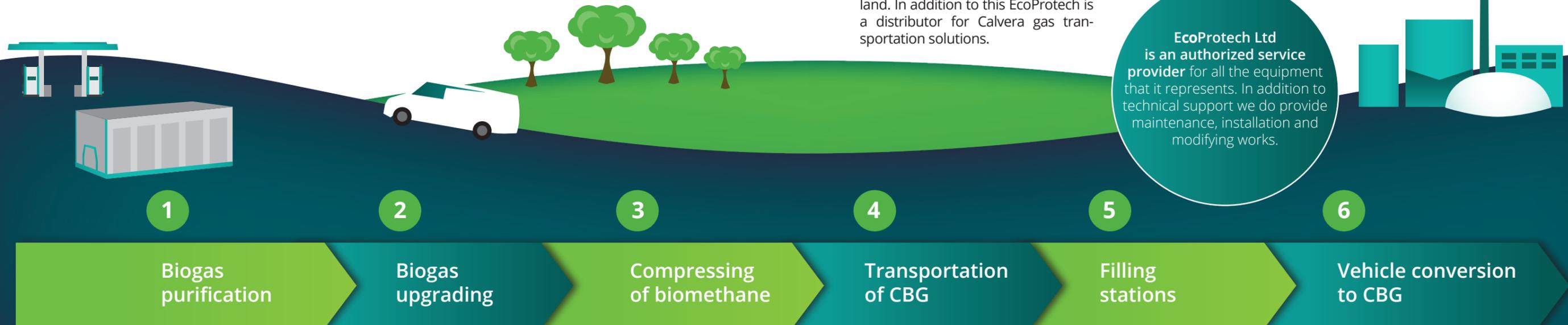
Pressurized biomethane can be delivered to the filling stations or industrial use in containers. EcoProtech has developed a modular transportation solution which makes it possible to modify the CBG capacity of each container. Modularity of the containers adds flexibility to the supply chain as you are able to adjust the amount of transported CH<sub>4</sub> depending on the usage. These containers with hook-lift bodies are TPED approved and CE marked. Bundles of gas cylinders that are utilized in these transportation units are manufactured by Calvera. Manufacturing of the frames and assembly of the transportation units is carried out in Finland. In addition to this EcoProtech is a distributor for Calvera gas transportation solutions.

## 5 Filling stations

EcoProtech is able to provide fully customized CBG/CNG filling stations as a turn-key delivery. Our product range covers equipment for both daughter and mother type stations. Dispensers can be equipped with precise mass flow metering and temperature compensated filling system and they are perfectly suitable for commercial use. Payment terminal and pylon can be included to the supply if preferred so. The operational control of the filling stations can be done through remote login.

## 6 Vehicle conversion to CBG

Conversion of light vehicles, delivery vans and trucks to CBG/CNG is offered as a complete service by EcoProtech and its partners. EcoProtech imports and represents conversion kits that fulfill the latest regulations and have globally over 5 million installations. Strong expertise in engine optimization supports the finishing of the conversion.



**EcoProtech Ltd is an authorized service provider** for all the equipment that it represents. In addition to technical support we do provide maintenance, installation and modifying works.



## Company presentation

EcoProtech Ltd is a cleantech company that is specialized in environmental technology. It is the leading Finnish company in the field of biogas with its own EPAD technology. It has over 20 years of experience and globally several successful references of industrial scale anaerobic digestion processes.

## Selected references

EcoProtech has developed globally the first full-scale biogas plant that is able to utilize forest-based slurries from pulping process as feedstock. This biogas plant is owned and operated by EcoEnergy SF Ltd in Äänekoski and it processes the wastewater slurries of the Metsä Fibre Bioproduct Mill. In addition to biogas plant that is based on EPAD technology EcoProtech Ltd has provided an overall solution for the biogas utilization. EcoProtech has supplied equipment for the biogas purifying, upgrading and compressing and also the containers for the transportation of CBG. EcoProtech Ltd has as well provided the equipment that is required for commercial distribution of CBG.

## Contact information

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