LIFE CYCLE COST (LCC)

Life Cycle Cost takes into account both the investment cost and the operating costs in the entire life of the project: it is therefore the most important paragraph in the selection between the different technologies.

GM plants have the lowest LCC; main reasons are:
A) They allow the highest revenues as they recover more than 99.9% of the methane present into biogas.
B) They have the lowest energy costs.
C) They have the lowest, and above all certain, operation and maintenance costs.

The lower LCC of GM plants compared to competing technologies must be determined case by case; Compared to membranes technology saving, in most cases, exceed one million Euro, already starting from plants treating 500Nmc/h of Biogas.

GM TECHNOLOGY

It is an evolution of the water technology (acqua 2.0) as a potassium carbonate saline water solution is used that in a first column captures the CO₂ becoming bicarbonate and in a second column releases it returning carbonate, without therefore consumption or loss of salt.

METHANE SLIP

Biomethane to benefit of incentives must be sustainable; as the methane has a greenhouse effect equal to 28 times compared to CO₂, it is necessary that the methane losses in the atmosphere are very low.

GM plants are “Advanced Upgrading” as they have methane losses less than 0.1%, without the use of post-treatment plant.

In Germany since May 2012 is in effect the limit of 0.2%.

TURN KEY PLANTS AND AFTER SALE SERVICES

GM supply pretreatment and upgrading plants on “turn key” basis. GM plants receive raw biogas from digesters and return biomethane in compliance with Snam network code. In addition GM assist Customers on operation and maintenance with a first class After Sale Service.

GM exploit two Partners experiences and structures: Marchi Industriale, who has been working in Italian industrial chemistry for over 100 years, and Giammarco Vetrotone, who has been licensee for more than 60 years of the potassium carbonate process (+360 applications worldwide).