# For Fuji Electric

# Innovating Energy Technology

## Control and optimize your biogas production

Biogas renewable energy

#### Keywords

- Renewable energy
- Biogas plants and landfills
- Biomethane
- Biogas analyser system
- Biogas composition



#### Challenges

#### Context

Biogas plants and landfills are getting more and more involved in the worldwide energetic transition, as a vital renewable energy supply for our environment, our generation and the next ones. The biogas is produced by anaerobic digestion of fermentable recycled waste and raw materials from different type of industries.

It is then either used as a biogas fuel to generate heat and/or electricity, or purified as a biomethane in order to reach specifications close to natural gas purity level.

Expressed this way, the process may seem simple. But it is much more complex in terms of technologies involved. This fast changing gas market requires accurate, robust, reliable and automatic industrial process where the biogas composition needs to be monitored all along its generation and purification.



## The Fuji Electric solution

#### Improve value of your biogas and biomethane

Through this process, organic raw materials are transformed into gas mixtures mainly composed with methane (CH<sub>4</sub>), carbon dioxide (CO<sub>2</sub>), water vapor (H<sub>2</sub>O), oxygen (O<sub>2</sub>), but also toxic and corrosive molecules like ammonia (NH<sub>3</sub>) and hydrogen sulfide (H<sub>2</sub>S).

Fuji Electric developed industrial, reliable, accurate and robust 19" rack analyzer ZPAF and turnkey solution system ZPSB as a cabinet or a field shelter in order to monitor the biogas composition facing these extremely high requirements both in terms of metrology and corrosion resistance.

#### Your advantages

- Economical multistream monitoring
- High H<sub>2</sub>S permanent measurement
- Easy and fast installation
- Measurements you can trust
- Easy, friendly and connected operation
- Long lifespan and low maintenance
- Safety first



### **Biogas analyser system ZPSB**



Stand alone cabinet Biogas ZPSB



#### Precise:

The ZPSB Biogas analyser system and its compact turnkey cabinet allows the precise and simultaneous analysis of up to 6 streams of CH4, CO2, O2 and high H2S thanks to its self-regenerating sensor, avoiding the dissolution of the cell.

#### Reliable:

Equipped with the latest Fuji Electric NDIR technology and specific cross-interference treatment of biogas components, CH4 monitoring is accurate and reliable thanks to state-of-the-art microflow gas detectors.

#### Robust:

The specific protection of the optical elements ensures the resistance of the materials to H<sub>2</sub>S.

#### Specific:

Its design is flexible in order to adapt to field site conditions and to the biogas composition specifications of each project.



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