aggreko

# Transforming waste into energy

**CUSTOMER**
A company that manages, treats and transforms urban waste to generate power

**LOCATION**
Buenos Aires, Argentina

**SECTOR**
Renewable energy

**KEY FACTS**

**10 Million**
Inhabitants of Buenos Aires

**4.5 MW**
Of electrical power generated from portion of landfill gas

**1,200 Tons**
Of urban waste generated in total per month

**THE CHALLENGE**

## Design a new solution to use biogas derived from landfill into power within a strict time limit

The largest domestic waste collection company in Argentina, CEAMSE, serves around 10 million inhabitants in the province of Buenos Aires.

These citizens generate between 1,000 to 1,200 tons of waste per month and part of this waste is processed by our customer, who transports and transforms the waste to generate biogas-derived energy, which provides power for 100,000 people.

This company contacted us to design a solution to generate an additional 4.5 MW of power to meet their growing demand, using the gas derived from household waste that they capture and treat.

Because the biogas is obtained from the transformation of waste, which is produced through a long-term, uncontrolled biomass, the biogas properties can vary widely. This represented an engineering challenge for our generators to be able to handle this type of uncontrolled gas – and we had to find a solution within a tight deadline of barely one month.


THE SOLUTION

## 4.5 MW of power with the latest generation of highly efficient NGG gas generators

The modular and efficient solution we came up with for our customer employs our new technology of Next Generation Gas (NGG) equipment, which can be engineered to adjust to different varieties of gas fuel types. As well as meeting the increasing demand, they were also able to implement a leading efficiency technology.

Additionally, to overcome the challenge represented by the type of the gas produced from landfill waste, we designed a kit for our generators, rendering them even more efficient and achieving power rates of 1500 kW per unit. We did all this within the specified deadline, so our customer could meet their targets.

Also, due to the locality's climate, moisture had to be extracted from the landfill gas. We also had to account for the customer's existing pipework, which was different from ours and was causing a change in gas temperature.

To overcome these obstacles, our engineers designed a solution to remove moisture, and working hand in hand with the customer, devised filters and electrically-operated valves to implement the project successfully. Every day we are working with our customer to enhance every facet of this solution to optimise the benefits for them.

THE IMPACT

## Reducing the footprint, supplying clean and efficient energy

Our adapted, clean and efficient power solution was put into place and we delivered the critical energy that the customer needed, within the desired timeframe.

Adapting our NGG generators to produce biogas derived from urban waste is a huge step toward an even cleaner world. This solution made a significant contribution to improving the environment in Argentina by reducing the environmental footprint through the recycling of a portion of urban waste and transforming it into a clean and efficient energy source.