FlexEnergy

CLEAN ENERGY FOR THE PLANET

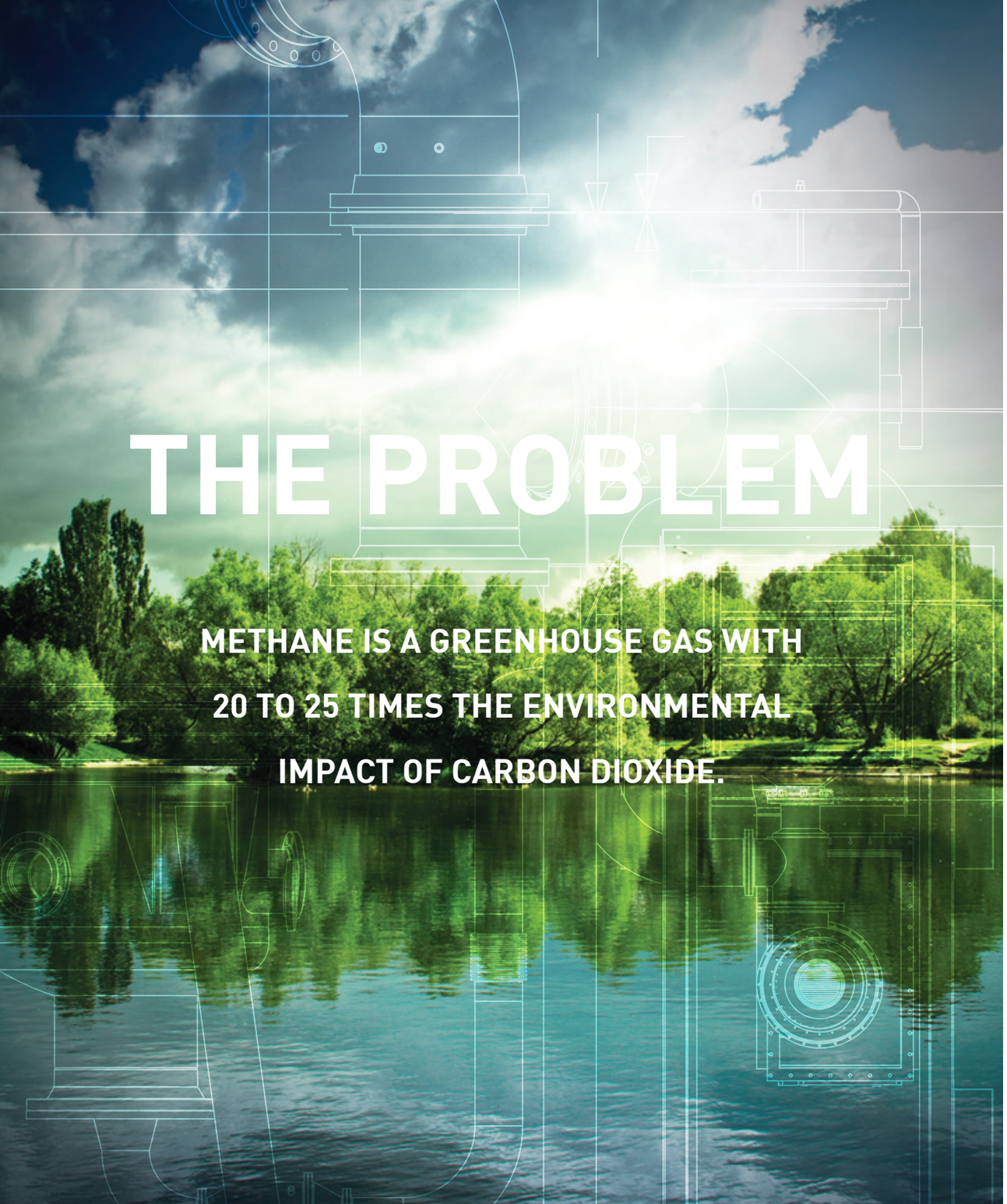
THE CLEANEST POWER PLATFORM IN THE WORLD

An innovative clean tech company

FlexEnergy is dedicated to transforming one of the world's most potent greenhouse gases into an energy source for the clean generation of electricity. Flex technology provides energy generation, often where previously impossible, through a complete system solution that converts methane into near zero emission sustainable energy.

THE FLEX POWERSTATION: THE CLEANEST POWER PLATFORM IN THE WORLD

FlexEnergy has developed the environmental system solution - the Flex Powerstation™ which consumes all methane sources even low concentration sources. The Flex cleanly utilizes methane to generate clean energy while meeting the strictest California air regulations. Flex enables all sources of methane to be transformed into valuable energy with near zero emissions.



Over 300 million tons of man-related methane seeps into the atmosphere each year from locations around the world.

These hazardous, global warming emissions are generated from diverse sources such as landfills, digesters, coalmines, oil fields and industrial processes. Destroying much of this methane is problematic. Generating clean energy from many of these greenhouse gas sources is beyond the capability of existing energy technologies. The Flex now fills this gap with its ability to utilize all sources of methane.

LOW BTU GAS

Low Btu gas is weak methane gas that is unusable in traditional technologies - internal combustion engines and conventional gas turbines. Even flares struggle on this gas. The physical characteristics of Low Btu gases - low energy density, high inert contaminants, high water content – hamper operations and performance. Traditional technologies require expensive and unreliable fuel conditioning to bring the fuel quality into specification.

Low Btu gas is prevalent at globally diverse sources of methane: perimeter gas at landfills, associated gas at oil fields, abandoned coal mine methane, coal bed methane, and tail gas from gas cleanup.

Low Btu gas continues to be an environmental issue. Landfills generate large quantities of Low Btu gas for decades, even after closure. Closed coal mines can have gas seams which continue to seep for years. Oil fields must find ways to destroy methane gas associated with their oil recovery operations. Until now, Low Btu gas has been considered unusable in traditional energy technologies and flares.

HIGH BTU GAS

High Btu gas is methane gas that can be addressed by traditional technologies - internal combustion engines and conventional gas turbines. However, the Flex eliminates the complexity and expense of fuel conditioning required by traditional technologies.

In addition, the Flex's near zero emissions provides environmental compliance now and into the future. The Flex addresses all methane sources - generating clean energy with near zero emissions.

THE SOLUTION

- THE FLEX POWERSTATION -

FlexEnergy has developed the Flex Powerstation (the “Flex”) to generate electricity from all types of methane gases, including low Btu gases.

The system architecture and proprietary technology allows the Flex to utilize all sources of methane gas, even low Btu gas. The Flex cleans up the methane gas problem while generating near zero emission electricity without the need for fuel cleanup. The Flex is the only complete clean energy solution that runs directly on low Btu gas.

WHERE IT WORKS

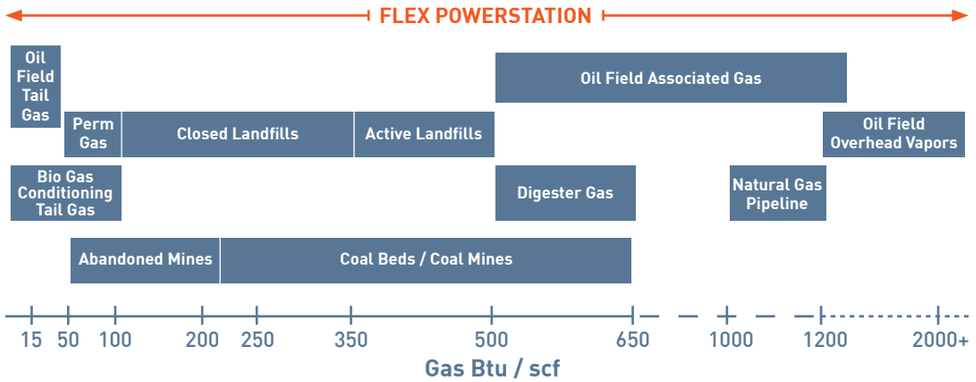
The Flex dilutes all fuel to 15 Btu/scf for internal operation thus allowing use of a wide range of gases to generate electricity.

RENEWABLE GAS SOURCES

- Landfills
- Waste Water Treatment Digesters
- Agriculture Digesters
- Manure Digesters
- Biogas Processing
- Biogas Tail Gas

ADDITIONAL GAS SOURCES

- Oil Fields
- Gas Fields
- Gas Pipeline Conditioning (Tail Gas)
- Associated Gas (Overhead Vapor and Tail Gas)
- Pipeline Natural Gas



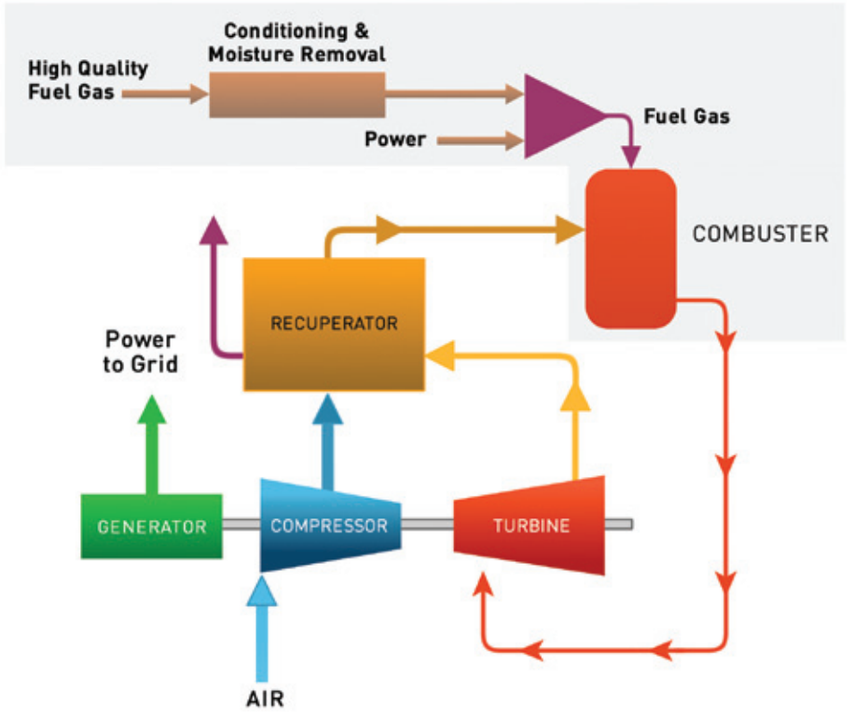
HOW IT WORKS

The Flex is the integration of a proprietary thermal oxidizer ("Flexidizer"), Flex customized gas turbine combined with unique system architecture and software control algorithms. The Flexidizer completely oxidizes air with dilute methane mixtures (1.5% methane). It tolerates both moisture and siloxanes in the landfill gas.

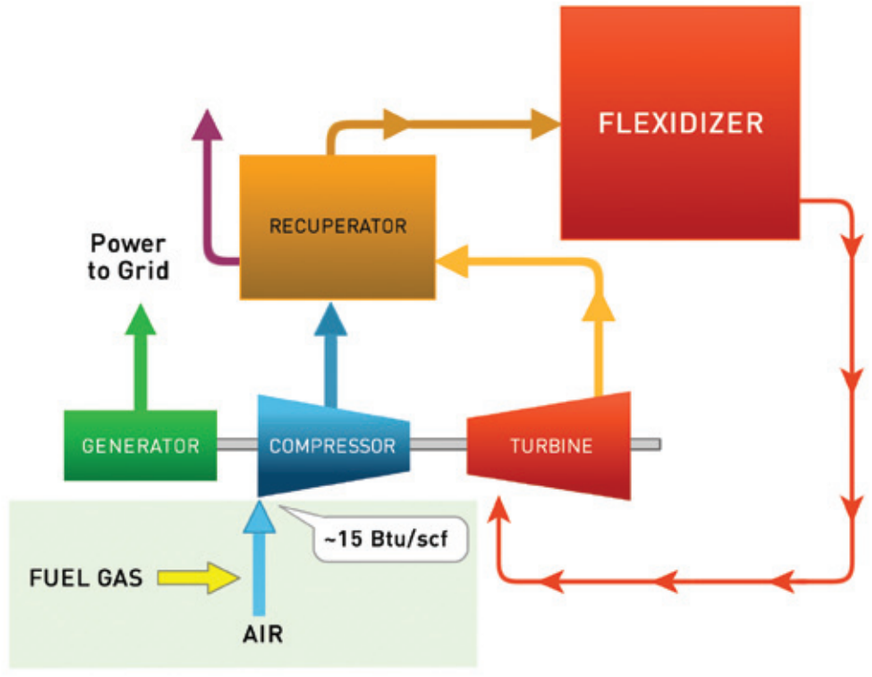
The Flex is the only complete clean energy solution that runs directly on low Btu fuel gas. The diagram below shows a traditional gas turbine power plant: Compressed fuel is injected into compressed air and combusted, with the energy released by combustion used to generate electricity. Each fuel is different, and therefore requires its own compressor, clean up and unique combustor. The siloxane removal and fuel conditioning system is the weakest link in traditional landfill gas power plants. The fuel conditioning consumes about 20% of power generated. Those components not needed for the Flex are shown in the cloud at the top of the diagram.

The diagram below shows the Flex with its unique components shown clouded: Fuel is aspirated with air forming a 15 Btu/cubic foot mixture that is compressed and oxidized in the Flexidizer; the energy released is used to generate electricity. The Flex does not require a fuel compressor or fuel conditioning system. No matter what the initial fuel Btu content, it is diluted with air down to 15 Btu/cubic foot (1.5% methane, or 1.5% the strength of natural gas)

The Flex does not require siloxane removal, a moisture removal system or gas compression. Thus through the elimination of problem prone system components, the Flex is inherently more reliable than conventional technology. By controlling temperatures through proprietary Flex technology, the Flexidizer prevents NOx formation while fully destroying both CO and VOCs.



TRADITIONAL POWER PLANT DIAGRAM



FLEX POWERSTATION DIAGRAM

FUEL FLEXIBILITY AND NEAR ZERO EMISSIONS

The Flex is the most fuel flexible energy solution with NOx emissions well below 1 ppm. Fuel flexibility and low emissions enable the beneficial utilization of gases that no other gas to energy system, or flare, can use.

FlexEnergy's breakthrough near zero emission technology targets the elimination of NOx – a precursor to harmful particulate matter (PM10 & PM 2.5) and a precursor to ground level ozone (a contributor to smog).

The NOx emissions are below the stringent California Air Resources Board 2013 regulations for "waste gas." Even on waste gas, NOx emissions are over 30 times lower than the U.S. average for existing power plants.

With the Flex, up to 30 billion kWh of renewable electricity each year can be produced domestically from previously problematic gas. This amount of energy is the equivalent of saving 60 million barrels of oil annually.

Almost any gaseous fuel available can be utilized by a Flex. NOx emissions are less than 1 ppm - well below present and proposed governmental limits – allowing for simplified licensing and installation.

Operations most responsible for harmful methane gas such as landfills, coal mines, waste water treatment, enhanced oil recovery and industrial processing, biofuels and biogas refining can now turn their burdensome gas emissions into a valuable clean electricity source. This energy can be sold or utilized internally to support operations.

With Flex, communities remove a burden from the environment, gain from localized renewable electricity, cleaner air and new green jobs - all from an existing problematic gas - making a cleaner environment a world reality.

The energy generated with near zero emissions from previously untapped sources of methane in the US will eliminate $4 Billion of oil imports annually.

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