

A large, dark grey, container-like industrial unit with a blue roof and various pipes and valves on top. The unit is situated on a concrete pad in a green field under a blue sky with clouds. The Xebec logo is visible on the side of the unit.

xebec

BGX Biostream™

MONETIZE
YOUR BIOGAS!

Introducing Xebec's New
Biogas Upgrading Solution

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BGX Biostream™

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Biogas projects have been taking off all over the world.

Despite the growing number of projects, small-scale plants still have limited options. Most available systems are simply not viable for farms, small biogas plants, wastewater treatment plants, etc.



Xebec engineers have been working for years to develop a system that could meet the needs of small-scale biogas upgrading plants while still incorporating all of Xebec's PSA advantages.

Reducing the size of the biogas upgrading system to fit into a 40' mobile container was part of the challenge.

Incorporating technology that could automate most of the biogas upgrading and maintenance processes,

making it expandable

ensuring that it delivered reliable, high-performance results & had the lowest life-cycle cost in the industry was even harder, but...

We did it!

Process up to
280
SCFM per unit

*Up to 450 NCMH per unit





BGX Biostream™

The 3 Development Principles

Reliable
& Robust

Maximize
Revenues

Simple, Flexible
& Scalable

Reliable & Robust

Over 15 million hours of commercial operation
of our PSA in full-scale applications in more
than 15 countries worldwide

Single-stage PSA upgrading plant suitable
for flows between 55 and 280 SCFM*.

* 90 and 450 NCMH.



2 Xebec's Core Technologies

Xebec's rotary valve and highly efficient adsorbent technology set this system apart from other biogas upgrading solutions.



Continue producing upgraded biogas even when impurity levels change.

Our fast-cycle rotary valve automatically adjusts to keep your **BGX** Biostream™ always running to maximize profitability.



Change in feed
impurity level

Automatic valve
adjustment

Continuous
operation

Simple, Flexible & Scalable

Modularized, skidded and fully containerized units that are quick and easy to install

"Press start and go" mindset
Fully automated processes
Small footprint

Minimal maintenance



Got more biogas?

Easily expand your production facilities.

The **BGX** Biostream™ adapts to your production levels.
You can even add on a second PSA system without
breaking the bank.

2x



No wait time

We can deliver and "install" a **second PSA** in your existing **BGX Biostream™** on demand!

PSA2

PSA1

CSN Cleantech Service Network

Our Fast-Growing Service Network Across North America

BGX Biostream™ installation, monitoring and maintenance services from a fast-growing service network

More than **20 acquisitions** planned over the next 36 months

Physical presence on both the **East & West Coast**

Engineers stationed near each plant for fast and reliable service



Ready-Made Solution:

3 ways to take advantage of our service network

Service Level 1

Basic Support

Remote monitoring
and surveillance of
your equipment
Off-site activity supervision
24/7 online & phone support

Service Level 2

On-Site Supervision

Remote monitoring
and surveillance of
your equipment
Off-Site activity supervision
24/7 online and phone support

+
On-site supervision
by our field engineers
Process optimization

Service Level 3

Fully Managed Service

Remote monitoring
and surveillance of
your equipment
Off-Site Activity supervision
24/7 online and phone support

+
On-site supervision
by our field engineers
Process optimization
+
Annual managed/preventive
services
+
Unscheduled service trips
+
Spare parts inventory management

Maximize Revenues

Producing upgraded biogas can be challenging.

That's why our focus has been on:

Finding the right components

Lowering the life-cycle cost/determining the best CAPEX/OPEX ratio

Reducing power consumption

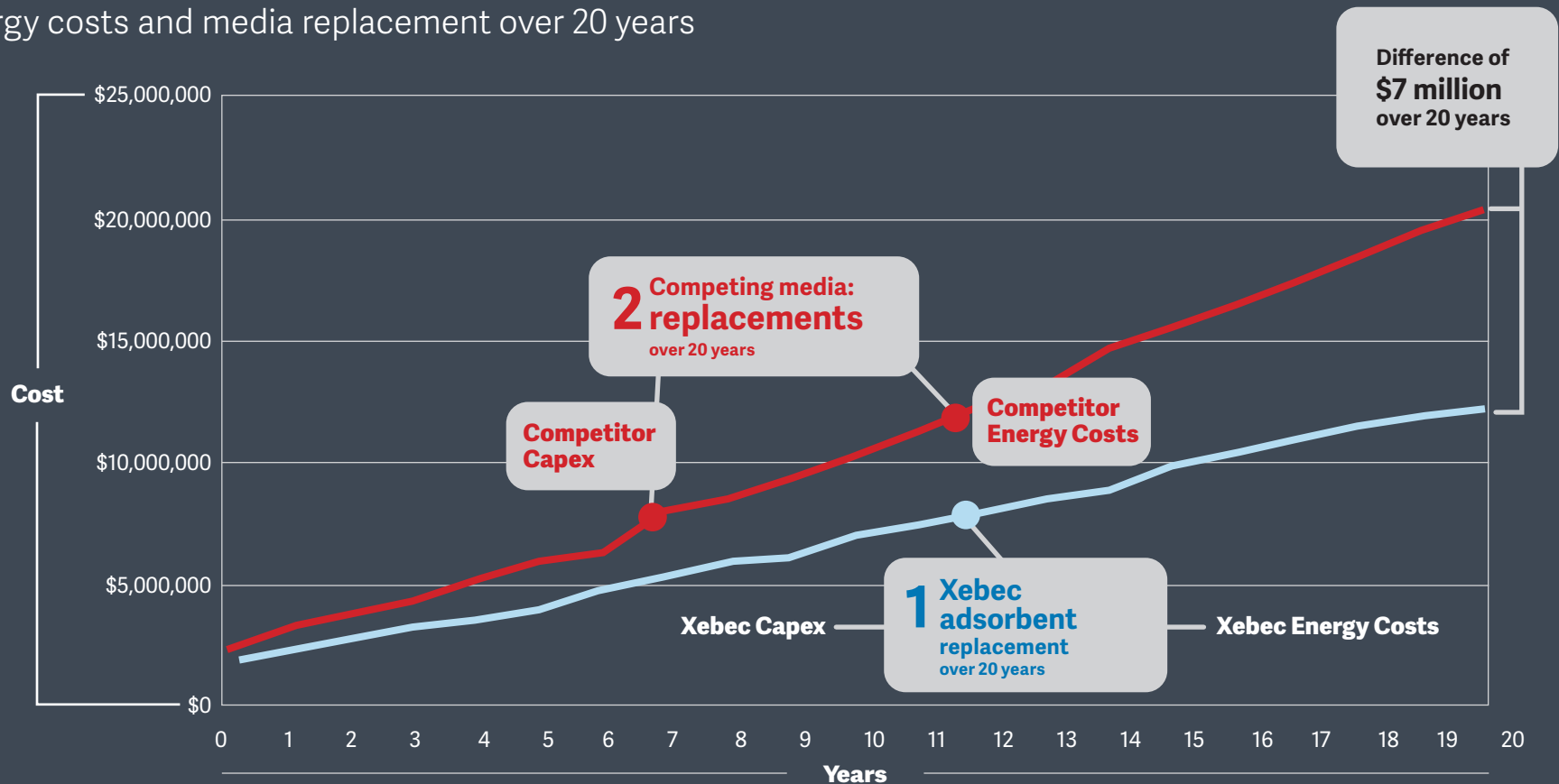


Maintain
**the lowest
life-cycle cost**



Demonstrating the Low Life-Cycle Cost of Xebec's PSA System

Cost-comparison analysis of competing non-PSA technologies - Capex, energy costs and media replacement over 20 years



BGX Biostream™

Technical Specifications

Profitability Equation



Your biogas upgrading strategy
just got a lot more profitable.

	BGX Biostream™	BGX Biostream™ +*
Capacity (NCHM & SCFM)	90-225 NCMH / 55-140 SCFM	90-450 NCMH / 55-280 SCFM
Purity	97+ %	
Methane Recovery	98.5+ %	
Power Consumption (Including inlet blower and dehydration)	30-55 kW	40-110 kW
Lifetime Reliability	+20 years	
Delivery Pressure**	6+ BARG / 90+ PSIG	
Turn Down	40% - 100%	20% - 100%
Control System	FULLY AUTOMATED	
PSA Adsorbent Lifetime	+10 years	
Local Area Network (eWON-Tablet Access to control system)	Included	
Remote Access to SCADA	Included	
Fully Containerized Solution	Yes	
Noise Level	<85 dB @ 3ft	
Ambient Automatic Temperature Control Inside Container	Included	
Gas Analyzer for Process Control	CH ₄ , CO ₂ , O ₂ , H ₂ S, H ₂ O (product and inlet gas)	
Gas Flow Meters	Inlet gas, RNG and tail gas	
Instrument Air	Included	
Water Chiller Package***	Included	
H₂S Removal Unit****	Included	
VFD for All Rotary Equipment	Included	
Interconnection Piping and Electrical	Included	
Transportation, Installation, Commissioning/Startup and Testing	Included	

*BGX Biostream containers can be run in parallel for larger capacity

**RNG Booster compressor can be offered up to +4000 PSIG. Gas dryer can be provided with product compression.

***Chiller and H₂S Polish installed outside of container.

****Bulk H₂S removal can be offered as an option.

BGX Biostream™

Technical Specifications



BGX Biostream™

55-140 SCFM
per unit

**PROCESSING
CAPACITY**

*90-225 NCMH
per unit

30-55 kW

**POWER
CONSUMPTION**

40-100 %

TURN DOWN



BGX Biostream+™

55-280 SCFM
per unit

**PROCESSING
CAPACITY**

*90-450 NCMH
per unit

40-110 kW

**POWER
CONSUMPTION**

20-100 %

TURN DOWN

97+%

**BIOGAS
PURITY**

98.5+%

**METHANE
RECOVERY**

20+ years

**LIFETIME
RELIABILITY**

10+ years

**PSA
ADSORBENT
LIFETIME**

<85 db@3ft

**NOISE
LEVEL**

Thinking large-scale?

Discover our tailor-made solutions, talk to our expert.



North America
13 installations

21,180 NCMH / 13,195 SCFM

Europe
26 installations

5,618 NCMH / 3,499 SCFM

Asia
6 installations

2,504 NCMH / 1,551 SCFM



Don't let the **energy
revolution** pass you by

Get your **BGX** Biostream™ now!

Canada

Xebec Adsorption Inc.

730 Industrial Blvd.
Blainville, QC J7C 3V4

1-877-469-3232

United States

Xebec Adsorption USA, Inc.

14090 Southwest Freeway
Suite 300 Sugarland, TX 77478

1-877-469-3232

Italy

Xebec Adsorption Europe

SRL Corso Sempione 5/A – 21013
Gallarate (VA), Italy

+39-0331-021811

China

**Xebec Adsorption (Shanghai)
Co., Ltd.**

Block 5, No. 5 Jiang Tian Dong Road
Songjiang Industrial Zone
201613 Shanghai

T. +86-21-3352-8700

F. +86-21-3352-8725

xebecinc.com.cn