KACHAN
& Co.

> **"Its positioning could be dead-center of the energy world's sweet spot: a fungible, renewable fuel that moves and burns like natural gas."**
>
> -From the report

May, 2011

53 pages

25 tables, charts & figures

The Bio Natural Gas Opportunity

How a new bio-based natural gas could help utilities develop baseload renewable power

At the intersection of renewable energy mandates, carbon regulation, economic growth and legacy infrastructure lies a potential boom for producers of bio natural gas (BNG).

It's known by names like bioSNG, renewable natural gas and biomethane, but as a biologically-created renewable compound chemically similar to commercial fossil-based natural gas, BNG is poised to make an impact on the energy market.

As a drop-in replacement for natural gas, the biggest impact of BNG could be on its green energy brethren—traditional intermittent renewables like wind and solar. For if renewable energy can be bought and piped from the gas company, why build expensive solar and wind farms?

This report examines BNG's addressable market, applications, advantages and drawbacks and identifies emerging BNG companies worldwide.

It also makes specific recommendations for utilities and large corporations, investors, entrepreneurs, natural gas companies, feedstock suppliers and others.

REPORT INCLUDES

- The important distinction between bio natural gas and gas from anaerobic digestion and landfill gas
- Market opportunity sizing
- Advantages
- Challenges
- Competition
- Profiles of leading players
- Recommendations

ALSO FEATURES

- Economic analysis of bio natural gas vs. other energy sources
- Identification of 16 leading companies
- Analysis of feedstocks, including agricultural waste, municipal wastewater, municipal solid waste and forestry biomass

ESSENTIAL FOR

- Utilities and large corporations pursuing renewable baseload power
- Investors
- Anaerobic digester and landfill gas equipment vendors
- Entrepreneurs
- Service providers
- Industry associations

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TABLE OF CONTENTS

"BNG, as used throughout this document, must be of a high enough quality to be combusted in any system that would use fossil fuel natural gas (including utility-scale power plants), injected into natural gas pipelines for transportation, and compressed in LNG/CNG forms for transportation fuels."

- From the report

ABOUT THE AUTHOR »

Trevor Curwin is a frequent cleantech contributor for CNBC.com and other NBC Universal outlets, and environmental reporter for tech blog DVICE.com. He also writes for other media outlets, including The Examiner newspapers, Earth2Tech.com, Environmental Finance, and Sustainable Industries. As a consultant, Trevor has helped several cleantech startups with market research and positioning, focused especially on utility-scale renewables. Prior, he worked on strategic marketing and capital formation in alternative assets for Bank of America.

INTERVIEWS & SOURCES

- 16 emerging BNG technology vendors
- 12 utilities, incl. PG&E, Sempra, Emera Energy Services, National Grid, all within RPS compliant regions
- Regulators CAISO, California Public Utilities Commission, Nova Scotia Department of Energy, other federal, state, provincial and sub-state regional regulators and program managers
- 6 financial services firms & portfolio managers, incl. Deutsche Bank's Climate Change Advisors group
- Research entities EPRI, the Gas Technology Institute, plus 5 universities/centers of excellence
- 62 interviews total

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FortisBC provides natural gas, electricity, propane and alternative energy solutions.