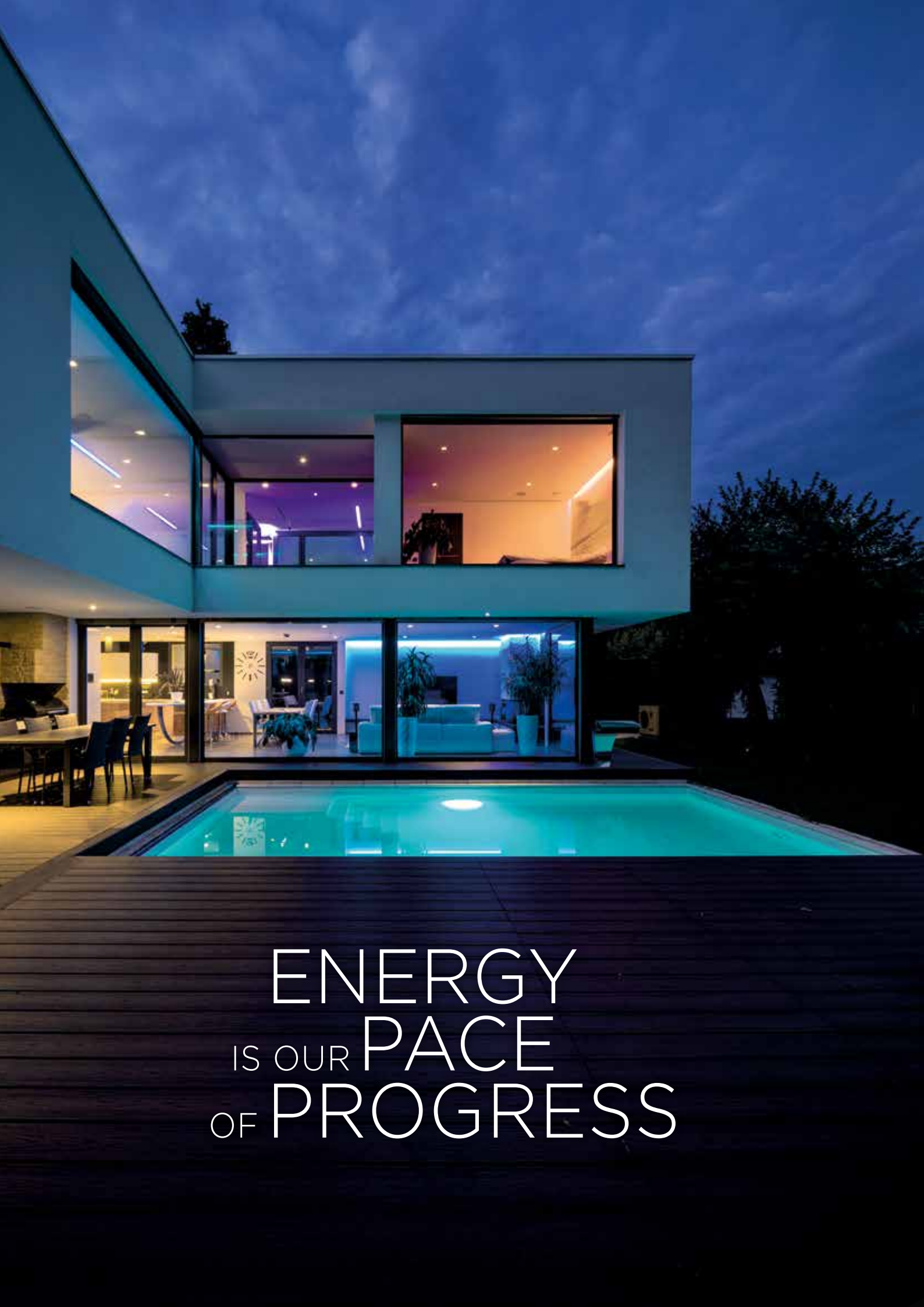


BlueGEN
BG15

NEXT GENERATION

OF AUTONOMOUS ELECTRICITY PRODUCTION





ENERGY
IS OUR PACE
OF PROGRESS

CHEAP. CLEAN. INDEPENDENT.

Whether it's electric cars, digitalisation or smart homes – the increasing electrification affecting many areas of life and work is in full swing. The demand for electric power is rising continuously. But raising energy costs is rapidly becoming a risk factor for many consumers. One significant advantage of consumer production is that it ensures independence from the grid and mitigates these risk factors.

What's more, coal is still used to generate a considerable portion of the electricity needed to meet this increasing demand and to ensure a stable supply of base load, despite the continued spread of renewable energies. Alternative production technologies are needed to create an alternative to coal-fired power plants. They must be affordable, clean and independent, while at the same time delivering a continuous and reliable supply of electricity and heat.

This is where the fuel cell systems by SOLIDpower step in. Designed for the highly efficient production of electricity directly at the point of consumption, they also guarantee predictable costs. The affordable and low-emission electricity is used either by the operators themselves or sold to the power grid operators. This form of consumer production is substantially cheaper and cleaner than power taken straight from the mains: The BG-15 is a technically advanced fuel cell unit. It's innovative, reliable and gives you the edge.

The next generation of BlueGEN

We created furore in the energy sector with our BlueGEN, one of the first fuel cell systems for residential and commercial buildings. With more than a thousand installed devices and several millions of operating hours under our belts, it is now time to take the next step. We have pooled our collected experience and expertise to elevate the innovative technology, outstanding reliability and user benefits to a higher level.

Experience the new BlueGEN BG-15.



THE NEW BLUEGEN BG-15: CLEAN ENERGY, 24/7

The BlueGEN BG-15 delivers ideal base load supply for your residential or commercial building. Connected to your gas supply, the device produces electricity 24/7, all year round and regardless of the weather or your heating requirements. You can use this affordable and low-emission electricity directly at the point of consumption or sell it to the power grid operators. The decentralised system can produce up to 13,000 kWh of electricity per year, which you can use for the cheap and green charging of your electric car or for other purposes.

In addition, the BG-15 supplies you with useable heat, e.g. for hot water or to support your heating system.



1.5 KW ELECTRIC POWER

UP TO 13,000 KWH OF ELECTRICITY PER YEAR

ADDITIONAL HEAT

E.G. FOR YOUR WARM WATER

CONTINUOUS OPERATION

RELIABLE ENERGY 24/7

EFFICIENT & AFFORDABLE

PROTECTS THE ENVIRONMENT AND YOUR WALLET

EASY INSTALLATION

COMPATIBLE WITH ALL HEATING SYSTEMS

APP CONTROL

BY SMARTPHONE, TABLET OR DESKTOP PC

IMPROVES THE ENERGY PERFORMANCE OF YOUR BUILDING

AVOIDS EXPENSIVE ALTERNATE MEASURES

QUIET, COMPACT, EFFICIENT AND COMPATIBLE WITH ANY HEATING SYSTEM

Whether it's a detached home or a commercial business: the BlueGEN BG-15 can be easily installed in your boiler or utility room thanks to its compact dimensions. It only requires gas, water, electricity and Internet connections to be fully operational.

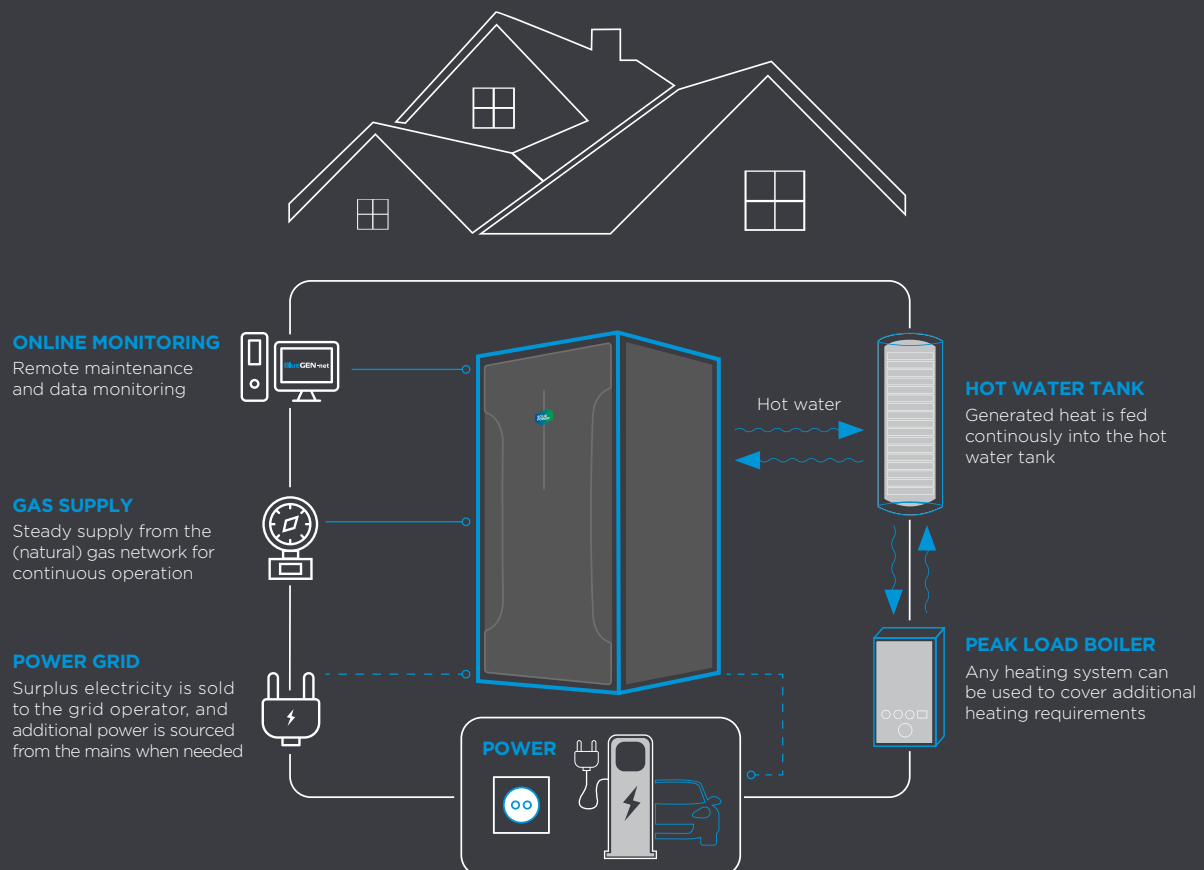
The BG-15 is designed as a power solution to complement the conventional heating system. This transforms any heating system into a "powerhouse" that can be used to produce heat and power. Installing a BG-15 improves the building's overall efficiency and can ensure compliance with national requirements.

The system runs very quietly and without vibrations, which makes the BG-15 perfect for companies, offices and as well as residential properties. Moreover, it can usually be connected easily to renewable heat and electricity sources such as solar thermal, photovoltaic systems and heat pumps.

INSTALLATION REQUIREMENTS:

- Gas connection
- Permanent connection to the power supply
- Water and Internet connection

HOW BLUEGEN WORKS:



THE BLUEGEN BG-15 TECHNOLOGY

The BlueGEN BG-15 is engineered using the latest generation of modular fuel cell technology by SOLIDpower. It delivers an unprecedented blend of efficiency, performance and reliability. Fuel cells do not combust the gas and instead use an electrochemical reaction that converts it into electricity and heat. They are among the most efficient energy conversion systems available. The new BG-15 lets you harness the benefits of this innovative technology.

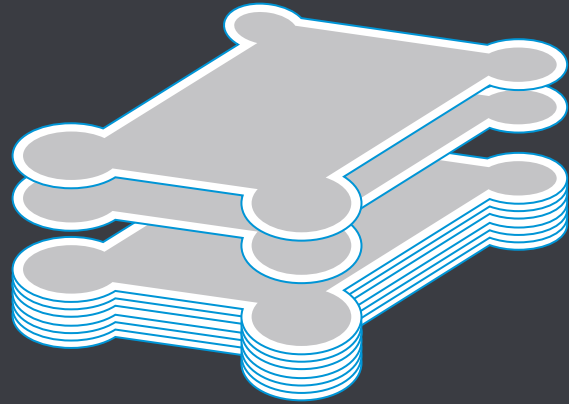


Fig. Building a stack

HOW DOES A FUEL CELL WORK?

Individual fuel cells consist of a membrane that is charged with oxygen on the one side and with hydrogen on the other. The oxygen is extracted from the ambient air, while an innovative process is applied to obtain the hydrogen from conventional and widely available natural gas. The cell's special properties compel the oxygen to cross the membrane and bond with the hydrogen. This process generates useable electrical energy.

Visit our website to learn more about how fuel cells work: www.solidpower.com

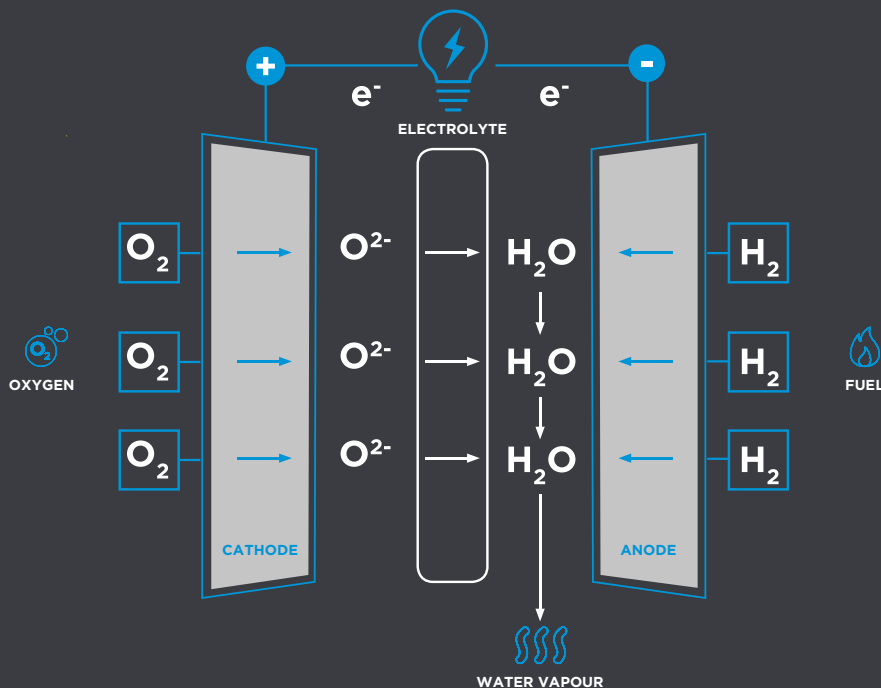


Fig. Principle of a fuel cell

CUT YOUR ENERGY COSTS ...

The BlueGEN BG-15 lets you produce your own electricity precisely where it is needed. You can therefore offset your consumption of mains power and reduce your energy costs. After all, the electricity generated with the BG-15 only costs around half as much due to the system's outstanding efficiency.

You may become eligible for attractive grants and subsidies that make installation of the BG-15 extremely profitable for commercial customers and homeowners with elevated electricity requirements.

... AND PROTECT THE ENVIRONMENT.

Power generation with BlueGEN BG-15 reduces your carbon footprint up to 50% compared to conventional electricity from the grid. Moreover, the cell does not actually burn fuel in the classical sense, so there are no harmful emissions of nitrogen or sulphur oxide. This way you can make a meaningful contribution to a cleaner environment and the sustainable energy transition.

COMPARISON OF ELECTRICAL ENERGY:

BlueGEN
BG15

55 %

**GAS-FIRED
POWER PLANT**

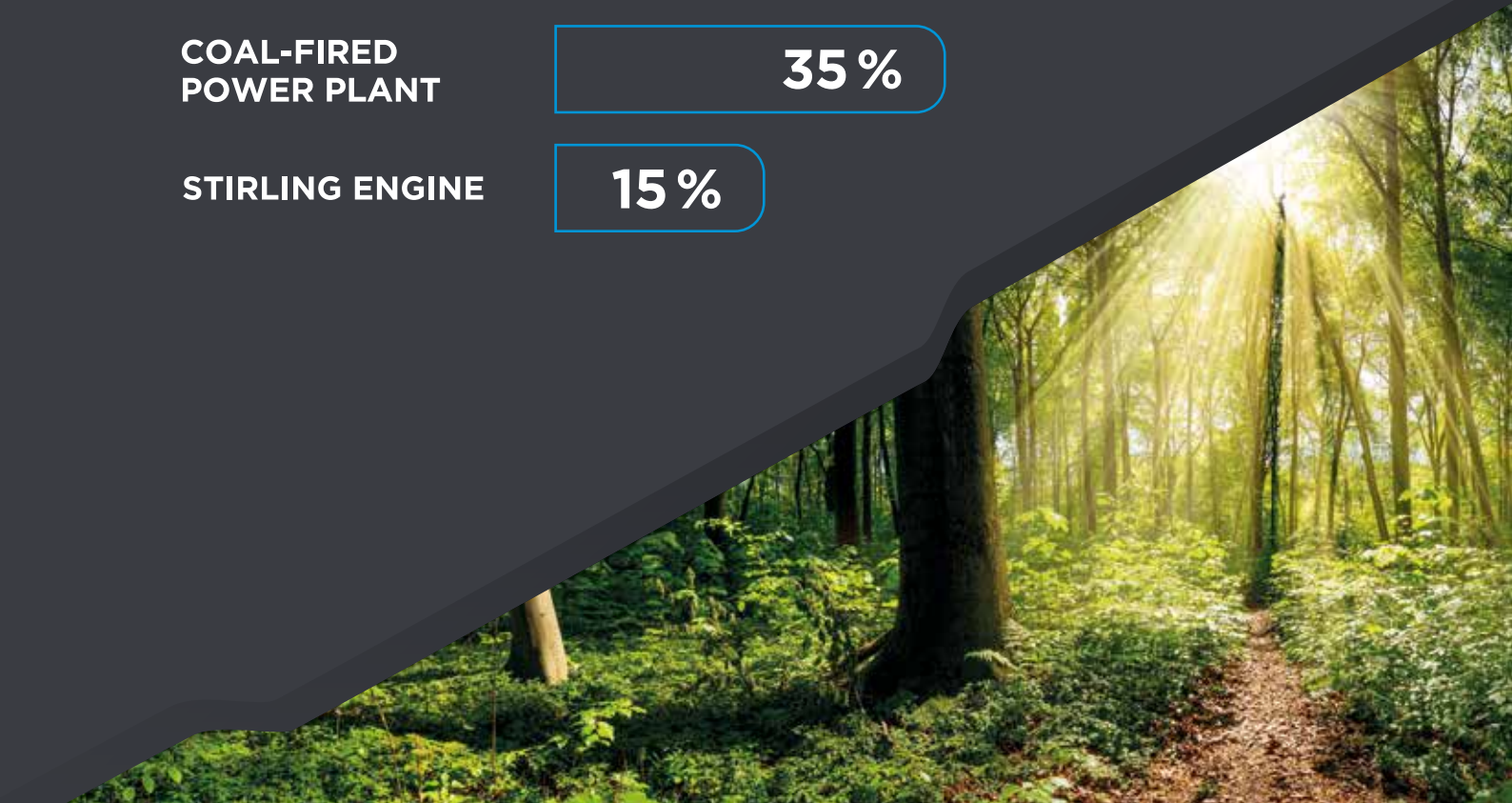
50 %

**COAL-FIRED
POWER PLANT**

35 %

STIRLING ENGINE

15 %



CUSTOMER TESTIMONIALS

E-MOBILITY IN A RENOVATED OLD BUILD

The Düchting family decided to renovate an old house that was originally built in 1955. They were determined that all the building systems should be green and energy-efficient while also reducing costs. The BlueGEN was easily integrated within the heating concept as an auxiliary device. It was precisely what Caroline Düchting had wanted all along: “We run an electric car, so we were keen to produce the electricity needed to charge the battery ourselves.” Unlike solar power, the BlueGEN produces electricity all the time, so even overnight. The family uses the electricity during the day and charges the car at night. “The investment really paid off for us, and we are also contributing to the energy transition.”



CAR DEALERSHIP TRUSTS IN FUEL CELL TECHNOLOGY

Even the electricity production is innovative: at Autoport Cologne, it's not just the cars presented in the chic showroom that catch the eye with state-of-the-art features. Managing director Yakup Ak trusts in trendsetting technology to generate electricity as well. “I have massively reduced my electricity costs thanks to BlueGEN.” Yakup Ak is certain: installing BlueGEN means investing in the future. “There is no better solution in my view. My work in the automotive industry means that I know a thing or two about innovative energy sources. I am convinced that more efficient technologies like electro-mobility and fuel cells will overtake conventional, established forms of combustion.”

BLUEGEN POWER AT A GARDENING FIRM

Dirk Ohlmeyer owns a gardening business with a shop and greenhouses. They use up a lot of electricity during the day and at night, in summer and in winter. Installing BlueGEN technology is an efficient choice for the company, as it ensures continuous production of my own electricity. It's a smart business choice and good for the environment as well. “We have been using the BlueGEN for a while now and it does precisely what it says on the box, delivering continuous and reliable electricity for our business and greenhouses. Protecting the environment also contributes to our positive image. It was definitely the right decision.”



ENERGY 24/7 – SAFETY 24/7

The BlueGEN BG-15 is connected to the Internet and is therefore monitored round the clock by a service team. Smooth operation and continuous safety are guaranteed at all times. Our 24-hour monitoring system allows our service technicians to respond promptly to notifications from the BG-15. When notifications appear, the causes are dealt with either by remote maintenance or on-site. Our service team contacts you to arrange an appointment when work on the device is necessary.

DEDICATED CONTACTS

No matter whether you need preliminary consulting, system installation or after-sales service, competent experts are on hand to offer nationwide support thanks to our continuously expanding network of partners. This way we can ensure rapid assistance at low cost when the need arises.



PARTNER NETWORK

Our extensive partner network is available to provide on-site assistance.



MONITORING

24Hr remote monitoring by the manufacturer.



WHO CAN I CONTACT TO LEARN MORE?

Just contact us and we will gladly refer you to one of our local partners.



COMPLETE CONTROL

The BlueGEN BG-15 is conveniently controlled using a smartphone, tablet or desktop PC. You can keep complete control and access all the extensive data anytime and anywhere using the BlueGEN-net app. For instance you can find out how much electricity you are producing or exactly how much CO₂ emissions you have saved.

ADAPT THE BG-15 TO SUIT YOUR NEEDS

Would you like to adapt the performance of the BlueGEN BG-15 to suit your individual needs? The BlueGEN-net app provides many different configuration options and allows you to create individual profiles. Vary the output at any time of the day. You can adjust the settings for any day, with separate configurations for weekdays and weekends, or even for every single day.



INCREASING POWER DEMAND ? MORE BG-15S!

Is your electricity consumption rising? Base load requirements can easily outstrip the performance of a single BG-15, especially in commercial settings. No worries though, as two or more BG-15 units can be combined easily to create a cascade. This way you will benefit several times over.



TECHNICAL DATA

Application	Electrical power generator with heat recovery for commercial businesses, public buildings and private homes
Use	All residential and commercial buildings
Operation Mode	Year-round (approx. 8,700 hours)
Fuel Type	Natural gas (biogas methane)
Fuel cell technology	Solid oxide fuel cell (SOFC)
Fuel consumption¹⁾	Approx. 2.7 kWh (Hi)
Power output	Max. 1.5kW, min. 0.5kW
Electrical efficiency²⁾	Up to 55%
Thermal output²⁾	Up to 0.85kW
Heat recovery	Exhaust gas heat exchanger
Overall efficiency²⁾	Up to 88%
Electrical energy generated/year	~ 13,000kWh
Operation	Fully automated start/stop
Control	24Hr remote monitoring by manufacturer, Internet/smartphone app control
Weight	250 kg
Height x width x length	1,200 mm x 550 mm x 800 mm
Decibels	46,8 db (A)
Service interval³⁾	12 months
Full maintenance service	Yes (120 months)
Funding	PACE financial support for EU member states. Funding depends on the individual country's support programmes.

1) Based on the lower calorific value for natural gas at the start of operation.

2) The thermal output/energy varies depending on the electrical efficiency and the return flow temperature.

3) Filters are replaced depending on the actual water, air and gas quality.



BlueGEN
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GERMANY

SOLIDpower GmbH
Borsigstr. 80
52525 Heinsberg

ITALY

SOLIDpower S.p.A.
Via Trento, 115/117 c/o BIC
38017 Mezzolombardo

SWITZERLAND

SOLIDpower SA
Avenue des Sports 26
1400 Yverdon-les-Bains

AUSTRALIA

SOLIDpower Pty Ltd
9-13 Antonella Court
Dandenong South, VIC 3175

Phone: +49 (0)2452 153 758
Fax: +49 (0)2452 153 755
bluegen@solidpower.com



ENERG

енергия · ενεργεια

SOLIDpower BlueGEN BG-15

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A⁺⁺
A⁺
A
B
C
D
E
F
G

52 dB

01 kW

2015 811/2013

