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Ceramic Fuel Cells

World Leader in Fuel Cell Technology

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Investment Highlights

- Leading manufacturer and marketer of small scale fuel cells
- Converts natural gas into electricity and heat for homes and small buildings
- BlueGEN units achieve 60% electrical to 85% total efficiency
- First commercialised in 2010, circa 500 units sold to date
- 43% sales increase in 2014 with 210 units sold
- Major technical improvement - expected stack life increased to 5 years
- Manufacturing costs reduced by 29% per unit since 2012
 - Selected components manufactured in China
 - Core IP retained in Melbourne
 - Final assembly in Germany
- Sales strategy re-positioned to lower sales cost per unit
 - Focus on multi-unit sales - housing developments, council estates etc.
 - Sales forces in UK, Germany and the Netherlands

Leading Producer of Fuel Cells Globally

Solid Oxide Fuel cell technology for base load power generation

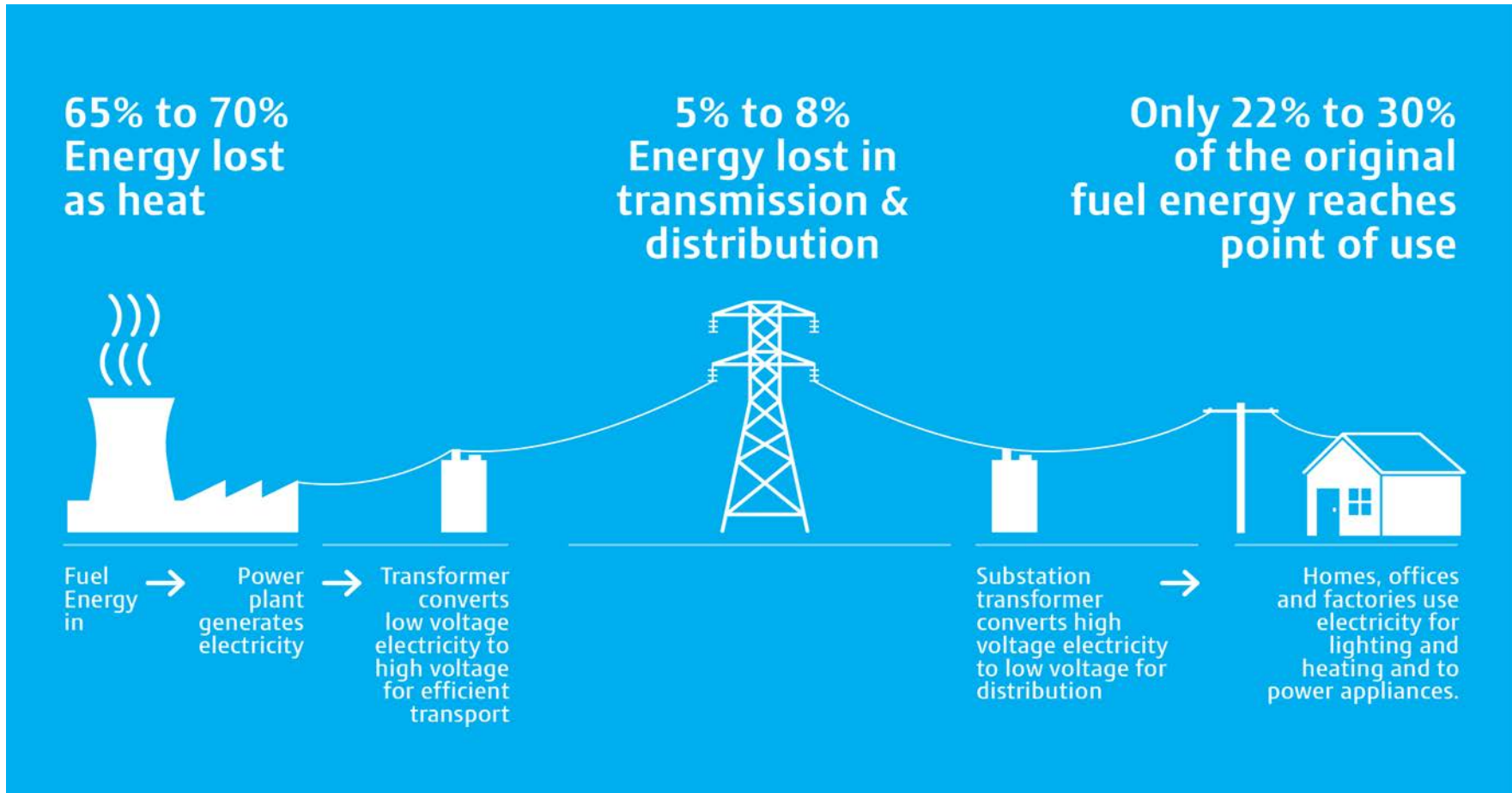
- Our technology converts natural gas into electricity and heat
- BlueGEN delivers clean, controllable electricity on-site 24/7
- All Intellectual Property is wholly owned

World's highest electrical efficiency - up to 85% efficiency

- BlueGEN generates electricity at up to 60% electrical efficiency
- Total efficiency increases to 85% with heat capture - hot water or central heating
- Closest competitor ~ 45% electrical efficiency
- More power from less fuel = energy cost savings + CO2 savings

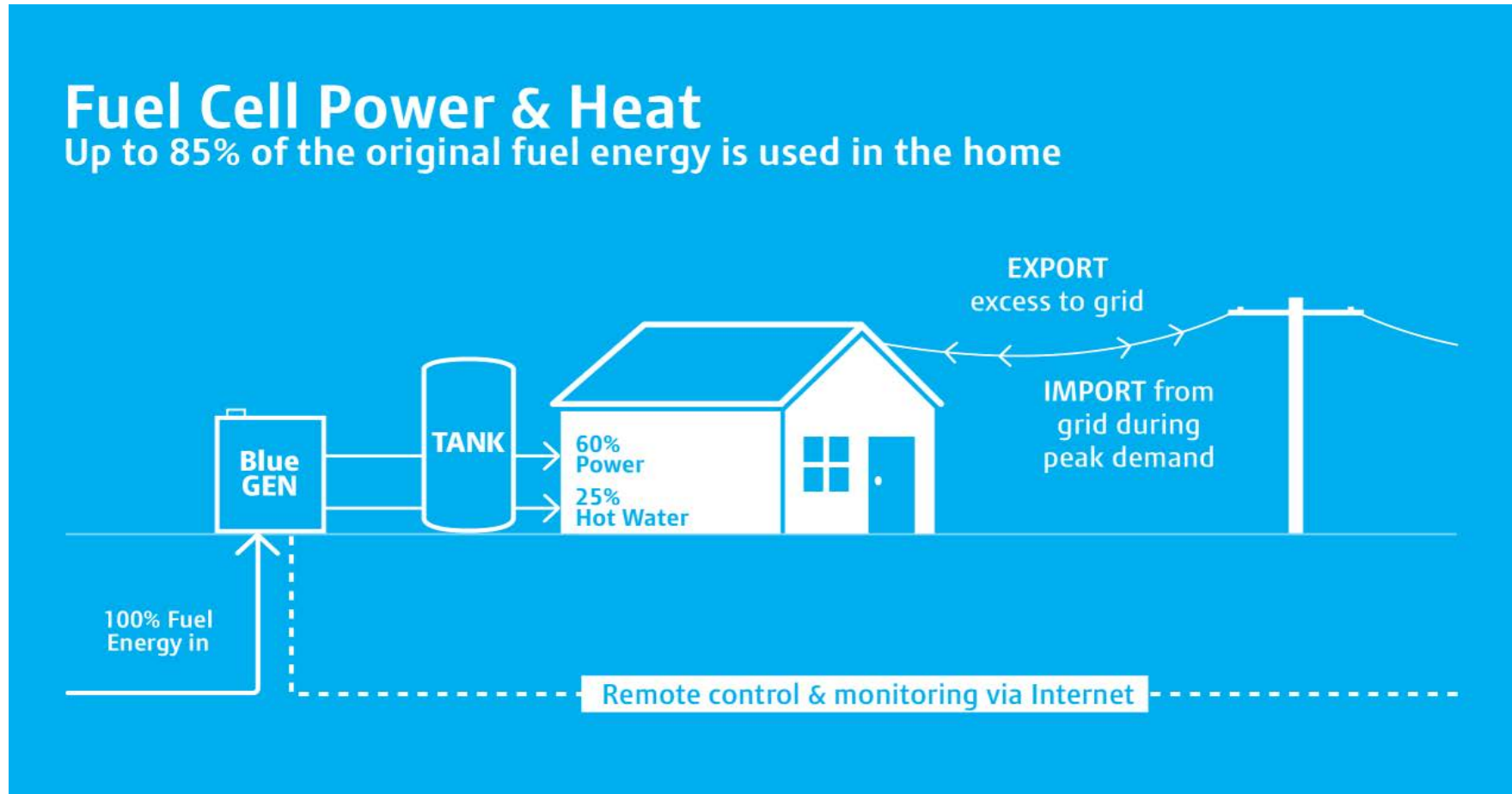
Centralised Generation...

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Distributed Generation...

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BlueGEN - The Highly Efficient Electricity Generator



- Distributed power production @ 60% efficiency
- Waste heat for hot water production 200 ltr/day
- Total efficiency up to 85%

What is BlueGEN?

Converts natural gas into electricity and heat via an electrochemical process

The world's most efficient small-scale electricity generator

- Generates power 24/7, all year round
- Makes 13,000 kWh per year
 - 2 x the demand of the average Australian home
- Power used on-site & exported back to grid
- In Victoria saves up to 14.5 tonnes of CO₂ / year

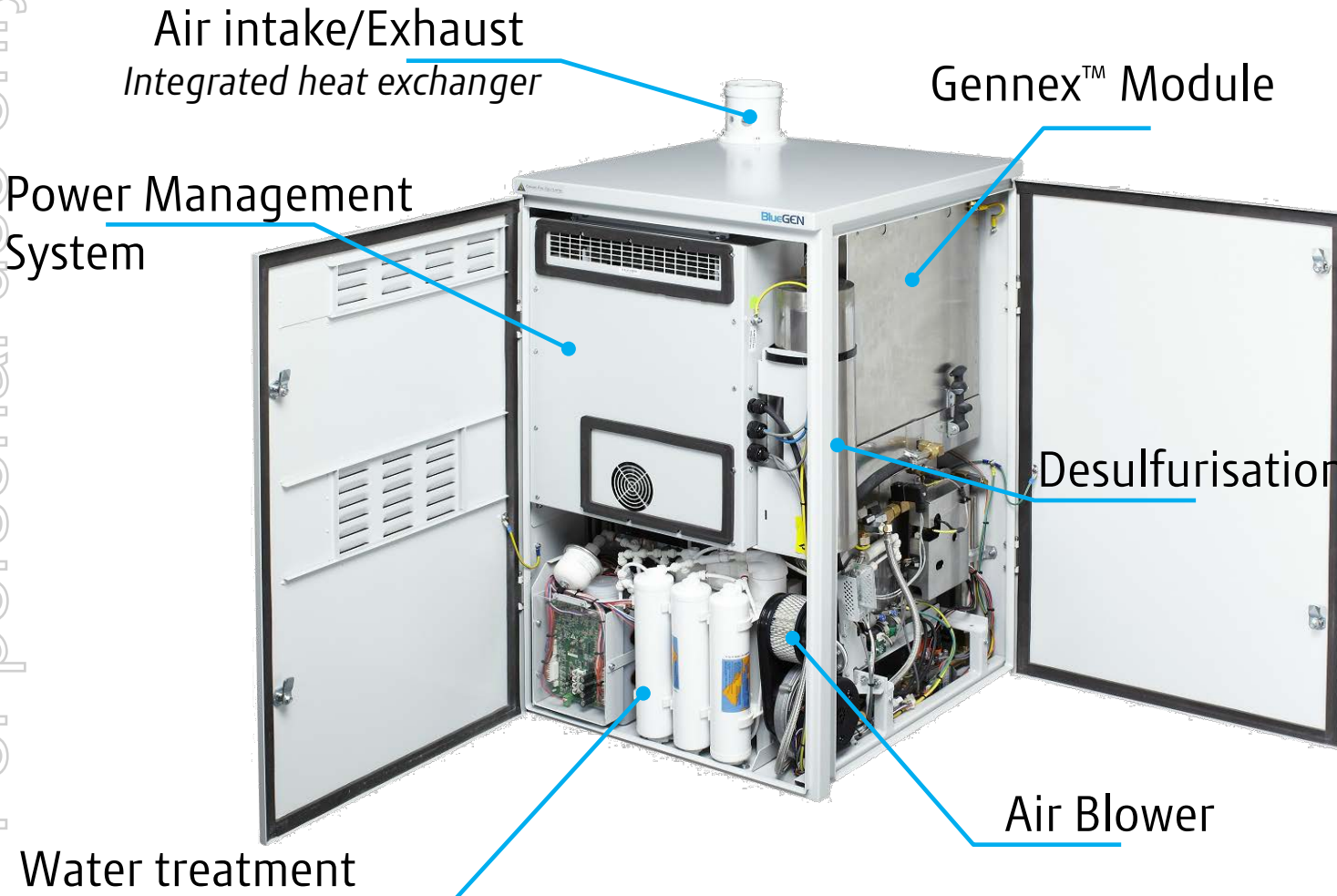
Easy to install & virtually silent

- Uses existing gas, power and water connections
- Remotely monitored and controlled over the internet



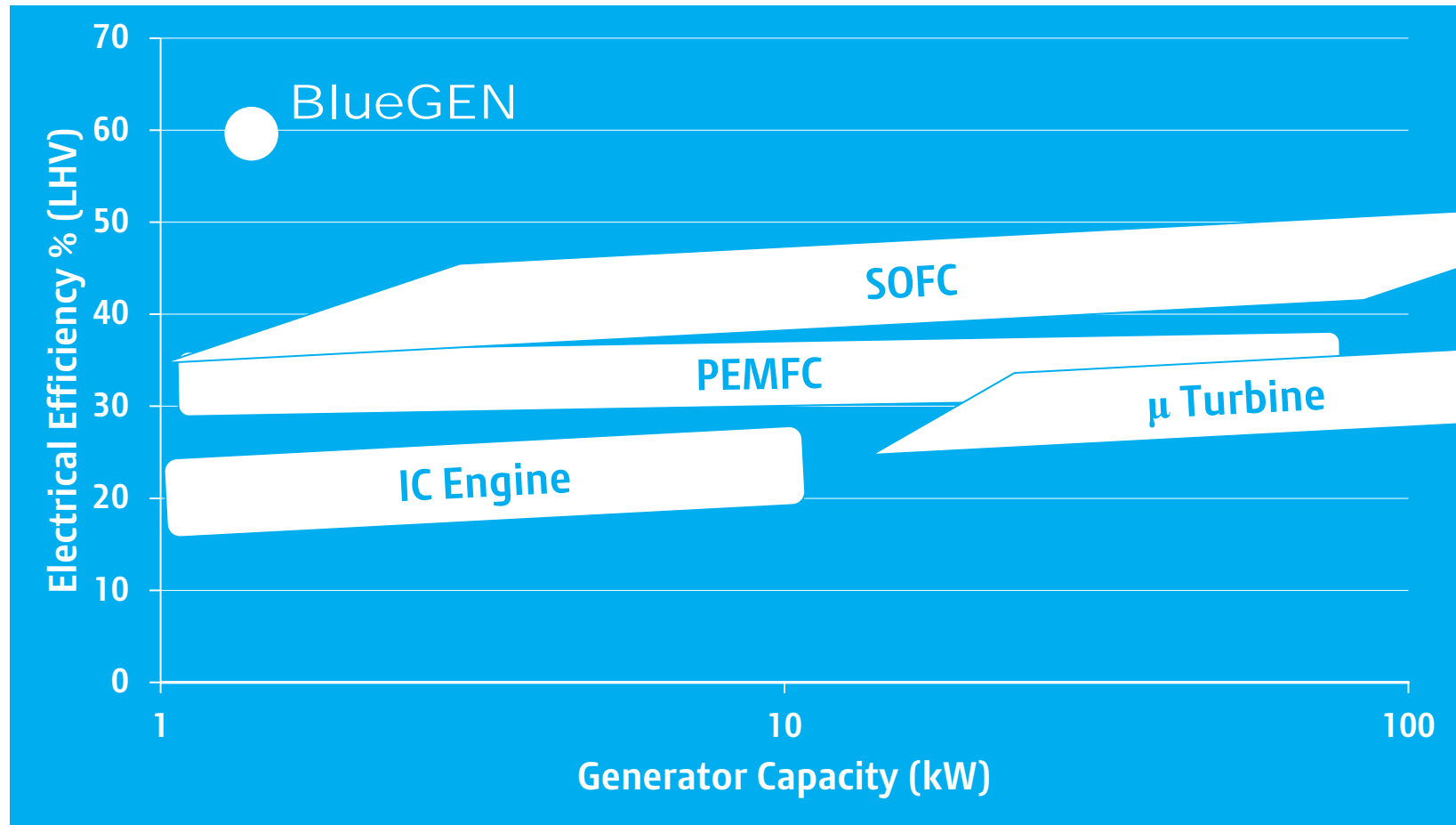
How it works

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Highest Efficiency small scale generator

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Historical Challenge Energy Industry

Large, centralized,
isolated



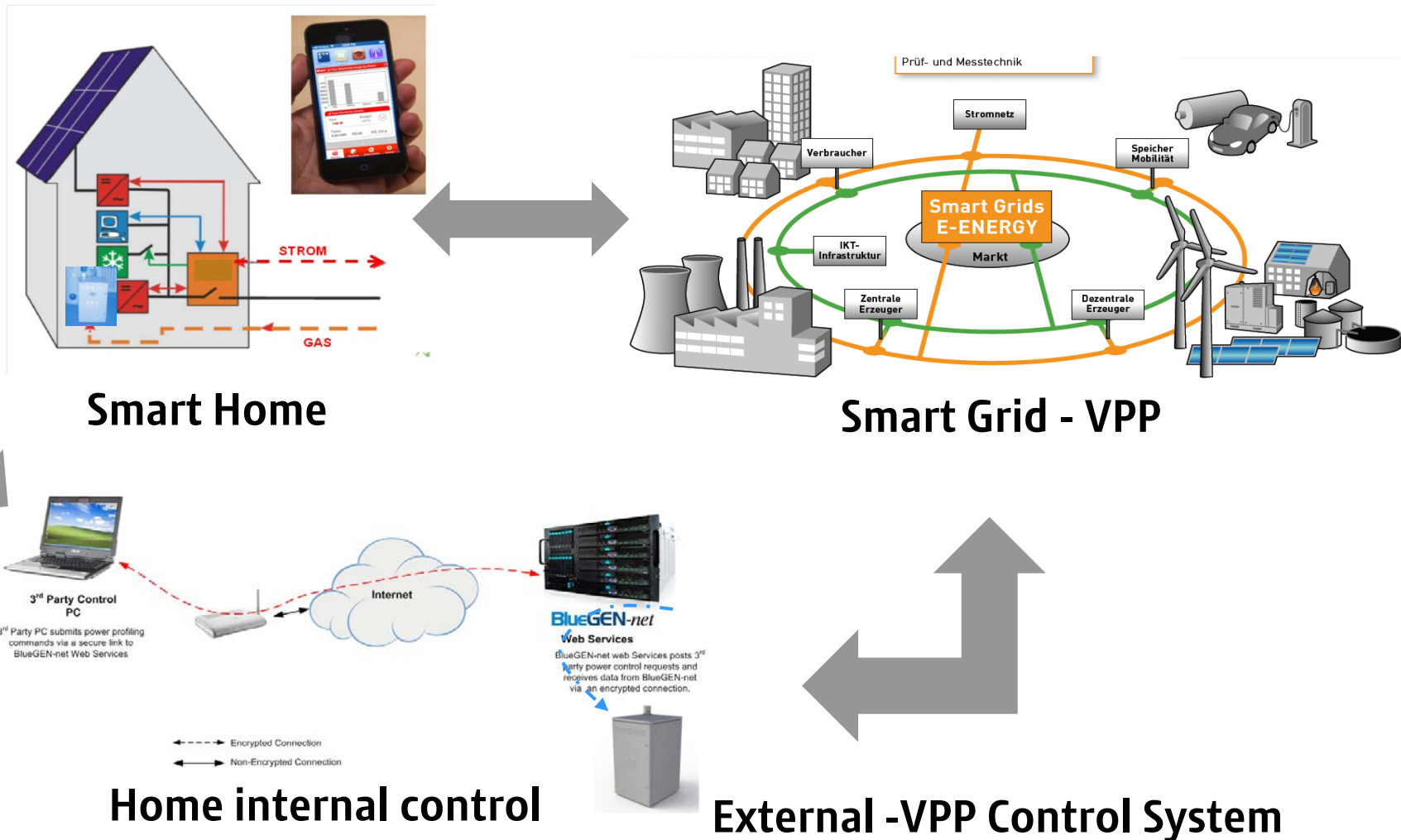
Small, decentralized,
connected



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Smart Grids and Virtual Power Stations - The Future

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Product Development

Transition from R&D to Commercial Products



CHP-2 and NetGen



2004
First residential CHP prototype

2007
Upgrade of pilot manufacturing facility in Noble Park
High-efficiency Gennex fuel cell module launched
Start of long-term partnership with EWE in Germany

2009/10
Achievement of 60% electrical efficiency
BlueGEN product concept launched
CE approval for BlueGEN product

2013
BlueGEN sales partners in Germany, Netherlands
BlueGEN manufacturing plant in Germany fully commissioned
Multiple industry awards in Germany, UK, Australia

2014
Major product improvement announced with voltage degradation reduced by 70% improving stack life to 5 years
29% standard cost reduction since June 2012 at low volumes



BlueGEN

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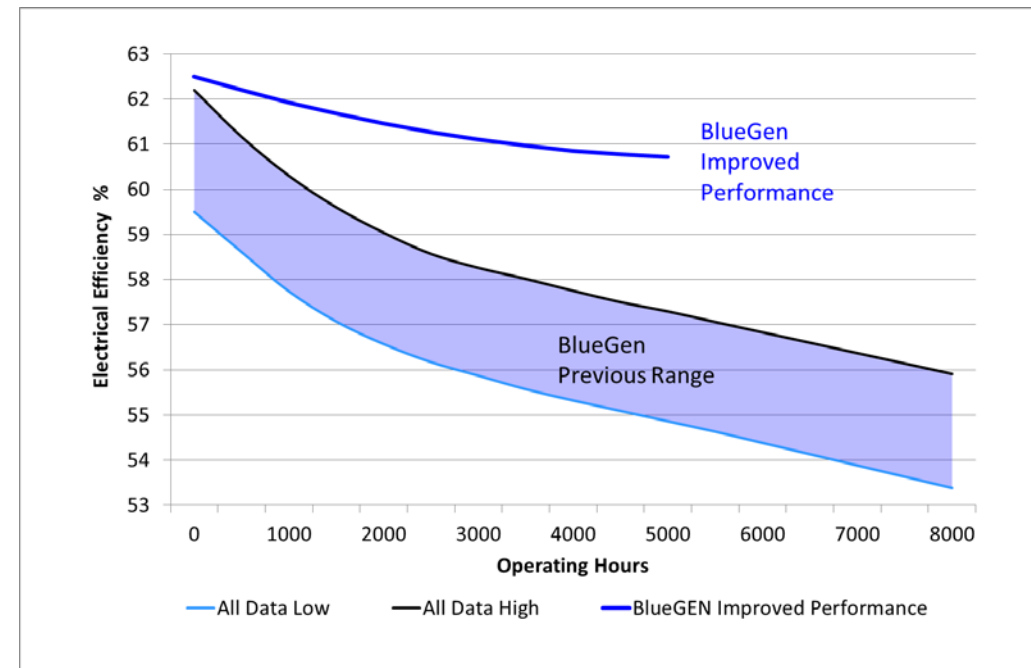
CFC Innovation Capability

- Core development with international recognition in Melbourne
- Extensive R&D and product development facilities
 - For components and complete systems
 - Prototyping capabilities (Cell to System Fabrication)
- Experienced development team
 - From “powders to systems” - Technology and product development
 - Manufacturing process development
- Intellectual property
 - 30 patent families in most major potential markets covering key technologies - from materials to system technology
 - Extensive “secret” know-how

Stack Degradation Rates Reduced by 70%

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- Patented improvement reduces degradation substantially.
- In-house and in-field testing by customer verifies results.
- Life of product substantially increased
- Envisaged reduction in future warranty provision.
- Introduction to supply chain in Q3 CY2014



Productivity Improvements: Stack Assembly

- Stack sintering productivity transformed from single to multi-stack process
- Fully validated process with production yields > 99%
- Current capacity: about 1,700 stacks per year
- Planning phase for next up-scale completed (5,000 per year)



Single stack furnaces



16-stack furnace

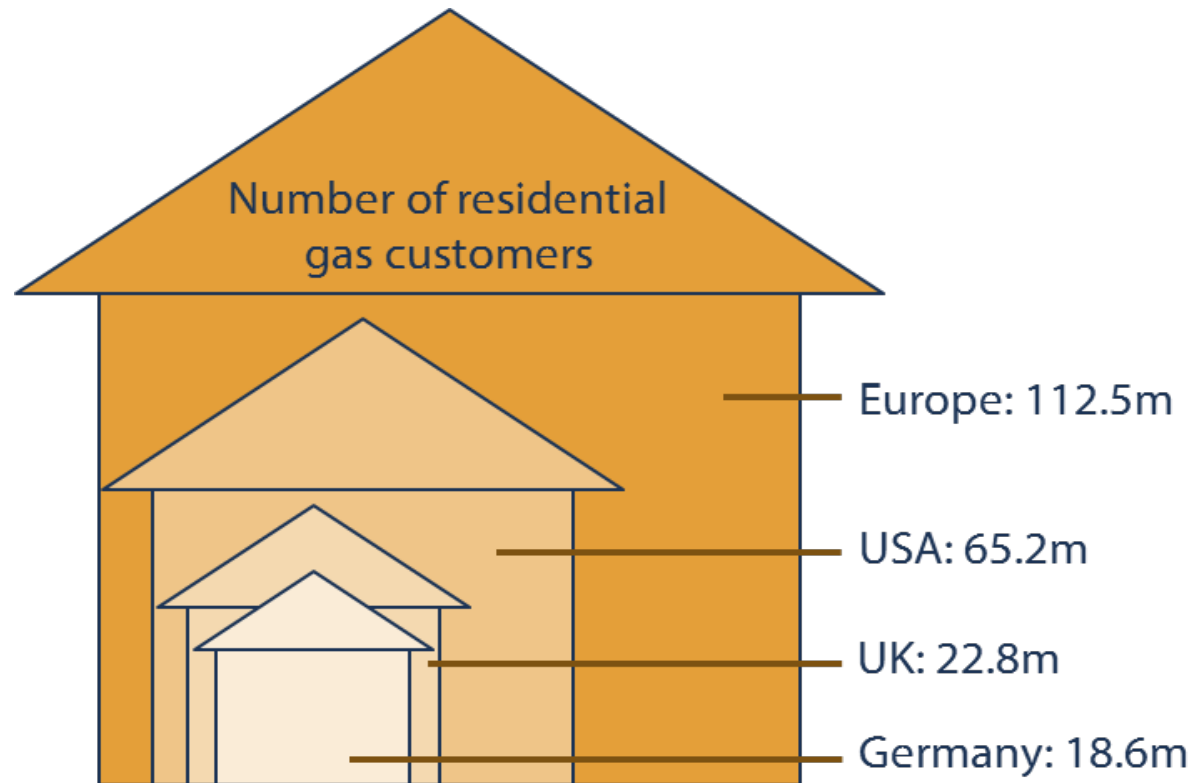
Cost Reduction Strategy

Clear cost reduction plan to levels that eliminate reliance on subsidies:

- Cost down roadmap to reduce costs by >50% over time
- Reduction of 29% since June 2012
- Volume orders
- Cost effective / high quality component sourcing
- Value-engineering
- Process improvements
- Outsourcing program
- Becomes attractive in other markets (e.g. Asia)
- Second sourcing

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Market potential: Overview Europe & USA

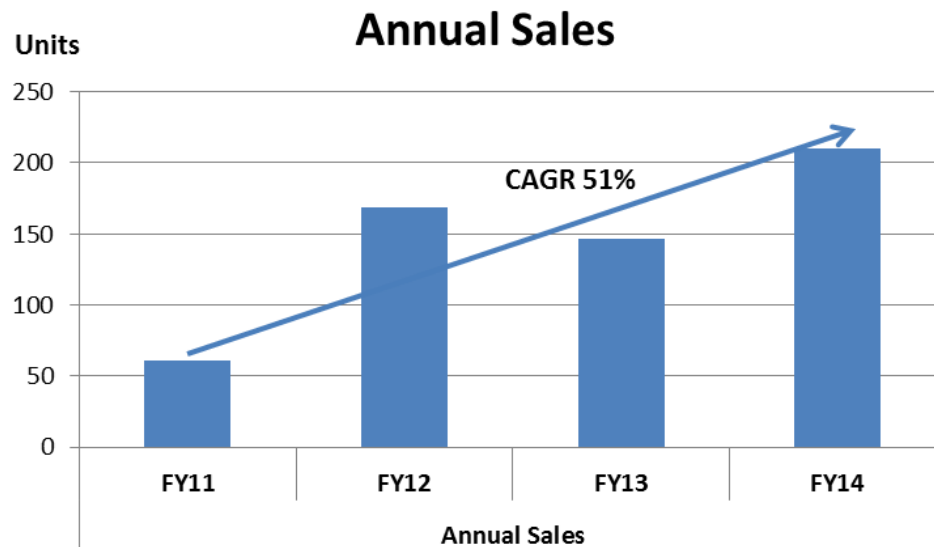


- Every household connected to gas grid is part of the market potential
- German and UK of CFC have a combined market potential of 40 million customers
- US market is large future opportunity once cost down strategy has been executed

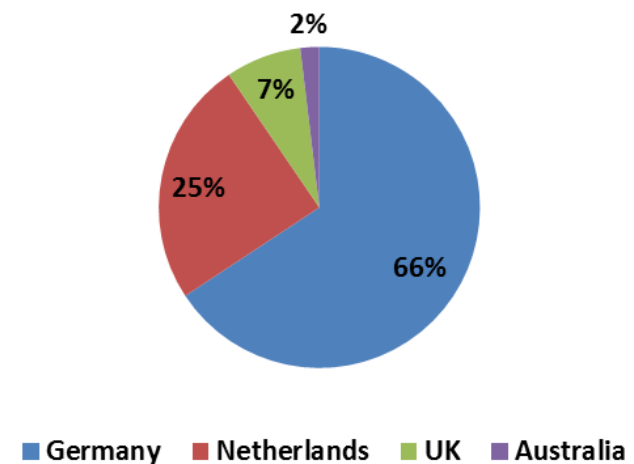
Sales and Marketing

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- Deployed > 475 units in 11 countries with over 4.8 million operating hours
- Potential demonstrated in Germany, the Netherlands and UK markets
- Incentives available in 5 German states
- Feed-in tariff available in the UK
- Concentrating resources on selling through distribution partners and installers
 - 84 partners established in Germany
- Focussing on large scale project sales



Sales by Geographic Region



Financial Summary

	2013/14	2012/13
Units Sold	210	147
Sales Revenue	\$6.1m	\$4.3m
Cost of Sales, service & warranty	\$8.4m	\$7.9m
Operating Costs	\$22.6m	\$21.3m
Finance costs and impairments	\$1.1m	\$0.9m
Loss before tax	\$24.5m	\$25.0m
Loss after tax	\$21.4m	\$19.8m

- Unit sales and revenue increased by 43%.
- Cost of Sales per Unit decreased by 29% since 2012
- Operating costs increase due to ramp up of sales and marketing resources in early FY13.
These costs have been reduced since March 2014.

Global demand for CFC Technology

Industry Sources predict Significant Residential Volume Growth in Asia and Europe:

- Residential fuel cells installed in Japan are forecast to increase from 40,000 in 2012 to 1.4 million units by 2020 (ENE-FARM Partners).
- Industry surveys estimate market growth for fuel cells in Germany alone of >90% p.a. from 1,700 units in 2013 to 210,000 units in 2020 (VDMA 2013).

Discussions Underway

- With North American and Asian companies re larger and smaller units.
- For different applications.
- For potential distribution partnerships in North America, Europe & Asia.
- For potential manufacturing alliances in Europe and Asia.
- Stack supply for Asia.
- For potential manufacturing for third party mCHP unit in Heinsberg facility.

BlueGEN Sales Pipeline

UK

- Large scale multi-unit projects primarily in social housing sector

Germany

- Concentrating on indirect sales - installers and distributors.
- Potential sales: Avilos - 98 units.
Approval for 100 unit sale pending

Austria

- Concentrating on distributors
- Potential 50+ units

Benelux

- Major project under negotiation

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Highlights

- Proven Fuel cell performance, global technology leader
- Leading manufacturer, 4.8 million hours performance validation
- Industry leading efficiency: 60% electrical to 85% overall
- Major recent technical improvement - expected stack life increased to 5 years
- Manufacturing costs reduced by 29% per unit since 2012
- Sales strategy re-positioned to lower sales cost per unit
- 43% sales increase in 2014 with 210 units sold
- European Industry growth estimates exceed 90% p.a. (Germany)
- Strong potential sales pipeline