




SIG



# SIG gives you the power **to control** **energy**

SIG is bringing 'Smart Grid' Internet of Things (IOT) energy management and control technologies to the energy market, whilst many others are still talking about it. Our real time GSM/GPRS 3G and 4G energy monitoring and control technologies give our customers the power to consume and control the import and export of energy in ways they have never been able to before.

In providing real time access to utility, energy and carbon data, our customers can understand the energy behaviours and performance of their plant and equipment right down to individual asset level. Equipped with these unique energy insights, customers can improve operations, stretch return on investment and enable better future investment decisions. However, SIG provides much more than real time asset monitoring, reporting and control of energy, as we provide 'future ready' energy technologies, today.

With our 'Smart Grid' IOT compatible technologies we create digitised energy assets, reducing costs, saving carbon and ensuring our customers are ready to take full advantage of digitised, decentralised and decarbonised future energy systems.



# Futureproofing **your business**

The UK is moving towards a more flexible, environmentally-friendly and cost-effective energy system, known as the smart grid – an integrated digital communications platform that allows electricity distribution network operators and energy suppliers to detect and react to local changes in energy demand and usage.

Achieving smarter energy networks requires smarter methods of monitoring and controlling power usage. The traditional process of recording supplier-to-end user energy flow is no longer effective in a network with bi-directional power flow, where consumers can sell renewable energy back to the grid as part of a smart, two-way exchange.

SIG technology is ahead of the game – it is smart, grid-ready and compatible with the energy network of tomorrow. We can digitise assets within your business, providing you with the ability to remotely control functions and utilise energy only when it is needed, saving you money and reducing your businesses' carbon footprint.

With our IoT compatible devices fit for the digitalised infrastructure of tomorrow's world, installing our technology will not only ensure your business is futureproofed, it will also enable you to stay one step ahead of your competitors when the smart-grid platform is widely available. A pretty smart move, wouldn't you think?



# Our technologies



## SIG Insight

SIG Insight provides real time access to utilities, energy and carbon data, allowing customers to understand their energy use and make informed decisions regarding reducing costs and saving carbon.



## SIG Control

SIG Control provides all the functionality of SIG Insight with the added capability to control energy assets with battery back-up providing increased operational flexibility and ability to respond to events.



## SIG Remote

SIG Remote provides all the functionality of SIG Insight for real time critical asset monitoring and reporting capabilities in remote locations where there is no local power supply.



## SIG SES

SIG SES is Distribution Network Operator approved Smart Energy Share technology, enabling housing associations and local authorities to share a single source of rooftop solar energy between multiple properties with the ability to integrate battery storage.



## SIG DBO

SIG DBO technology significantly reduces gas consumed by industrial and commercial boilers through the optimisation and controlled reduction of burner cycle times without affecting operational performance.

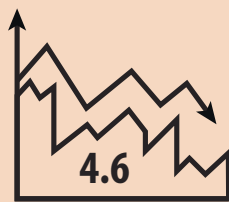


## SIG Grid-i

SIG Grid-i is a smart grid accelerator designed for installation in low and high voltage networks, providing real time power flow, power quality insight and grid performance intelligence.



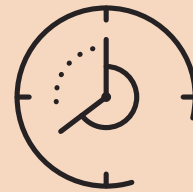
# The benefits



Our customers have identified an average saving of 4.6 tonnes of carbon per year



Smart Grid Ready – ensuring your business is ‘futureproofed’



Real time data reporting via Cloud platform



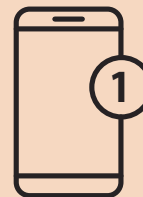
Discreet hand-sized device that sits within standard electrical enclosures



Allows customers to remotely control assets



Automated exception reporting



Provides text and email alerts

“Our clients achieve an immediate carbon reduction and utility savings through accurate monitoring and reporting provided by SIG Insight.”

*David Collett, CEO, SESCO UK*

“The SIG system enables us to claim our FIT payments and to bill the schools accurately for the electricity used.”

*Richard Pearce, Director,  
Lymm Community Energy.*

# Our projects

## Denso Marston - automotive industry parts manufacturer

**SIG Insight** was installed at strategic locations across Denso Marston Shipley plant, monitoring manufacturing processes which consume over **100MWh** each day. It also provided energy performance insights into the operation of the company's critical assets across its seven discrete sectors, each consuming **14.28MWh**.

**SIG Insight** asset monitoring and reporting was used to identify numerous production inefficiencies and provided opportunities to streamline manufacturing processes to deliver significant energy savings of **596kwh** per day. With this operational insight and secured long-term energy saving, Denso Marston created its eighth manufacturing sector at Shipley without the need for planned capital investment to increase its Authorised Supply Capacity (ASC) by an additional **600KVA**.



## Golden Gates Housing Trust

**SIG SES** (Smart Energy Share) was installed for Golden Gates Housing Trust to provide the opportunity for more of its tenants to share the benefit of free energy generated from solar arrays installed on rooftops.

**SIG SES** is the only Distribution Network Operator approved switching and control system available in the market and provided GGHT with the ability to share free solar generated renewable energy with vulnerable families and individuals facing and experiencing fuel poverty.

GGHT, through **SIG SES**, controls the energy generation performance of its **700** rooftop solar systems and is sharing free renewable energy across **1,400** adjoining properties.

## Ramada Hotel – Coventry

The installation of **SIG Insight** and **SIG DBO** at the Ramada Hotel in Coventry has provided the ability to evaluate energy consumption and power quality by monitoring of the mains incoming electrical and gas supply to the hotel. This has identified an opportunity to adjust tap settings on the low voltage side of the hotel's transformer to reduce the voltage from **250v** to **237v**.

There are two significant areas of energy demand at the hotel which consume **700kWh** per day for the air conditioning units and **1,400kWh** per day for the gas-fired **250kW** boilers. **SIG Insight** is being used to provide loading data to sensitivity test the settings of the air conditioning units by reducing the available heat delivery by **4°C** and the available cooling delivery by **3°C**. This has delivered a saving of **15kWh** per day without having any noticeable adverse impact on the comfort of its customers.

**SIG DBO** (Dynamic Boiler Optimizer) is providing real time operational performance data under different boiler demand conditions and is delivering an average **16%** reduction in gas consumption and an ROI in less than 18 months.



## Electricity Distribution Network Operator (DNO)

**SIG Grid-i** is installed in one of the UK's leading Regional Electricity Distribution Network Operators (DNO) Delivery Centre, providing real time access to power quality, cost and carbon data across their private 3 phase low voltage network. The supply to the Deliver Centre is provide via a high voltage transformer metered at **11,000v** and is providing invaluable insights into their specific on-site energy behaviours and the operational performance of key plant and equipment at critical locations.

**SIG Grid-i** has been used to identify prolonged and significant load imbalance at 2 locations and high evening/night time loading equal to **39%** of normal daytime consumption. These power quality insights are demonstrating the importance of having access to real time and historic network intelligence at the lower voltage ranges.

Equipped with these insights the Delivery Centre Manager is targeting improvements which will save energy, reduce carbon, and most importantly providing operational visibility into the performance of their electricity network feeding the site; something that can be easily replicated in all low voltage electricity distribution networks.



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