

# smarter grid solutions

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## **Smarter Grid Solutions working to help the fight against climate change**

The foundations created for Smarter Grid Solutions in the years before company formation in 2008 were focused on solving the challenges with adding more wind power to the UK power grid. Much has changed since then with the scope of low carbon technologies enabled for grid integration now extending to solar PV, micro-hydro, electric vehicles, electric heating and hydrogen production and utilisation as well as wind power. The work we do also enables those low carbon energy sources not just to connect to the power grid but also to play a fuller role through enhanced roles on customer sites to participation in the market and new grid flexibility services.

Taking the '3D' view of Smarter Grid Solutions' activities, we develop and deploy Digitalisation grid technologies to facilitate Decentralisation of energy production, storage and consumption, with the overall aim of the Decarbonisation of energy. Our firm belief is that Decentralisation is better for people with more engagement and benefit from the power grid and energy markets. Decarbonisation is clearly better for people and the planet and we are pleased with the steady, if not accelerating, progress on deploying decentralised, decarbonised sources of energy in the energy system. We are also pleased to play our role in this energy transition and make a contribution to it – this is part of the the overall vision for Smarter Grid Solutions.

Our company mission continues to be the provision of the digital (software and systems) solutions to support the decentralisation and decarbonisation of energy. We address this through multiple applications for DER integration and management in the smarter, more flexible energy system in both advanced economies and emerging economies and power grids. Daily, we proceed with the task of enabling the low carbon energy transition through development and implementation of our products and services whilst working with customers and other stakeholders in UK/Europe and US/Canada, as well as in India, Australia and other emerging markets for our Distributed Energy Resource Management Systems (DERMS).

With growing national and corporate interests in climate change, we recently assessed our own contributions to climate change in two ways.

The first is an assessment of the impact of the low carbon power generation enabled by our products on reducing carbon dioxide emissions in line with our company vision. Carbon emissions are avoided through the operation of more than 400MW of renewable generation enabled and managed by our DERMS – for the mix of generation enabled this is enough to power 300,000 [\[1\]](#) average UK homes. The avoided carbon emissions currently stands at a rate of just over 300,000 tonnes CO<sub>2</sub>e per year from on the basis of average grid carbon intensity in the relevant electricity markets this is the equivalent of about 350,000 return flights between the UK and New York [\[2\]](#). The lion's share of the kudos rests with the renewable operators themselves of course, but we are proud to play our part in this significant contribution to climate change.

The second area is an evaluation of our organisation's carbon footprint where

we have just completed a second iteration of an ongoing assessment. We have no scope 1 emissions (i.e. we don't burn, process or leak any relevant material) and the total of our scope 2 (purchased energy) and scope 3 business travel emissions is estimated at 270 tCO<sub>2</sub>e per year (the equivalent of about 300 return flights between the UK and New York). The majority of these corporate emissions are from travel and the majority of that from air travel. We plan to encourage the use of video conferencing for meetings and anticipate more discussion with customers, partners and other stakeholders on this. We also plan to integrate staff commuting into our scope 3 emission estimates next time (even as most staff use public transport or cycle), enhance the quality of the data we capture to produce better estimates, engage staff and management on carbon emission reduction measures and promote our existing cycle to work scheme.

We believe very much in putting the best products and services in to the market place to address the climate challenge but also in modelling the best corporate behaviours to make our means match the ends to which we work.

*[1] Average UK household electricity consumption is around 4,000 kWh in 2018/19 with variations across different reporting sources.*

*[2] Equivalent carbon emissions are 0.89 tCO<sub>2</sub>e for economy class return flight from Glasgow to New York according to Carbon Footprint (<https://calculator.carbonfootprint.com/calculator.aspx>)*

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## **About SGS**

Smarter Grid Solutions (SGS) is a leading provider of distributed energy resource management system (DERMS) software with the company about to exceed 1.3GW of renewable generation, energy storage and flexible load under control through 2019. With offices in New York, Glasgow, and California, SGS is a global solutions provider to distribution utilities and distributed energy resource operators.

## **About ANM Strata**

ANM Strata is Smarter Grid Solutions' world-leading enterprise solution for utilities and renewable generation operators. With its unique real-time

control platform it delivers sub-second, precise control of renewable and other energy assets across a wide area from a centralized location.

### **About ANM Element**

ANM Element is Smarter Grid Solutions' local control solution managing a smaller number of low carbon technologies in a local area in both local grid connection management and behind-the-meter operating modes. ANM Element can also integrate seamlessly into an ANM Strata system for wider asset control.

### **Contacts**



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