

# Stakes high for low carbon

Smaller companies of all types are reinventing themselves in order to win low-carbon work



### LOW CARBON

NICK EDWARDS

Cutting carbon can mean more regulation for smaller building companies to comply with – but it also means a lot more opportunity for them. SMEs that start preparing now can reap the benefits over the next few years – or at least that's the basis of the Cut the Carbon campaign run by ConstructionSkills, in association with the FMB and NSCC.

There are plenty of aspects to the initiative but the main driver is the Green Deal that is due to come into force next year and which aims to create up to 250,000 jobs by improving insulation and air-tightness across the UK's existing housing stock.

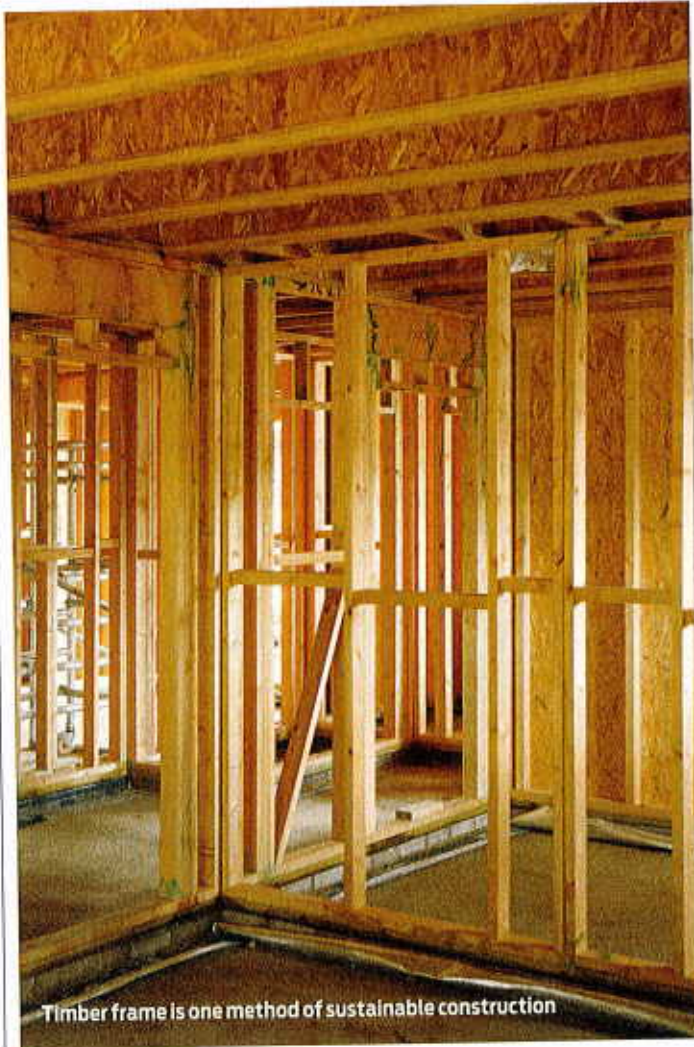
Energy companies will loan money to homeowners and businesses so they can make improvements to cut energy. These loans will be repaid back through savings in energy bills. That new approach to financing has the potential to unlock millions of pounds' worth of work every year.

This isn't about cutting your own energy consumption – although that saves money too – but getting your company prepared to offer new services to customers.

Whether it is installing renewable energy products, retrofitting houses using innovative materials or helping clients comply with their own low-carbon regulation, getting the skills and proving you meet the new carbon standards can make you stand out from the pack for many clients.

### Steep rises

Some clients – commercial and individual householders – care about this stuff. Many don't. But a lot are going to start to when the



Timber frame is one method of sustainable construction

price of energy rises steeply in the near future.

A ConstructionSkills survey of 1,500 homeowners found that 59 per cent were either already planning or considering spending money on making their houses more efficient.

The same survey showed that people are worried about what they should be buying, and whether they should buy it from smaller construction companies.

Three quarters said that a SME's knowledge of low-carbon issues – and ability to prove it through being officially accredited – would

be a major factor in deciding whether to use them for work.

So now's a great time to get ahead of the competition – and compete better with larger companies who would otherwise corner the market. Meanwhile, changes to the Building Regulations means that complying with a minimum standard will soon be compulsory.

As Robert Ryan Homes managing director Billy Kirkwood says: "As we eventually get out of this recession, those who have embraced future skills and technology will be best placed to

satisfy the swell in demand for energy efficiency in construction."

### Get your staff trained

You will need to be an accredited supplier to take advantage of the Green Deal and although the details of what that will involve won't become clear until next year, you can still get prepared by getting staff trained up in the techniques and technologies involved.

In terms of qualifications there are five different Level 2 NVQs in working with insulation and building treatments. In Scotland these take the form of a variety of Scottish Vocational Qualifications.

Research by ConstructionSkills showed that contractors, corporate clients and individual homeowners all agreed that training was a major issue for companies that want to do low-carbon work. You can find out more about courses available at [www.cskills.org/sectorskills/qualsstandards/nos/nos-insulation-and-building-treatments.aspx](http://www.cskills.org/sectorskills/qualsstandards/nos/nos-insulation-and-building-treatments.aspx).

Cut the Carbon workshops can help you understand how to secure work by offering clients what they want – [www.cutcarbon.info/what-can-i-do/cut-carbon-workshops](http://www.cutcarbon.info/what-can-i-do/cut-carbon-workshops).

Business Improvement Workshops will help you do a business health check and take the first steps in improving performance – [cskills.org/supportbusiness/courses](http://cskills.org/supportbusiness/courses).

### Take advantage of government initiatives

The UK government has developed the Green Deal, launched the Carbon Reduction Commitment and is due to put the Energy Security and Green Economy Bill through parliament next year.

In Wales, a series of regulations and legislation is dictating how carbon reduction is going to be achieved in the built environment,

## 'WE ARE TRYING TO GET PEOPLE TO LOOK AT FABRIC FIRST'

Changing client demands for green technology on building projects led Bicester-based Sporn Construction to establish a Building Green arm to the business, writes Tom Fitzpatrick.

Director Robin Sporn says the company has adapted to meet the demands of green construction that have changed utterly in the past few years. He says it is the latest example of the firm evolving and implementing new techniques since its establishment 50 years ago.

The firm's average contract is valued from £300,000 to £1.3 million and while it carries out work in new build, a lot of the work comes in renovation of listed buildings.

An advocate of PassivHaus principles, Mr Sporn said that while clients approach the company looking for renewable technologies such as heat pumps, his firm try to advocate a fabric-first solution.

"We promote ourselves primarily as a quality builder but if clients have green aspirations we can provide them with the right solutions. People are a lot more aware of green issues now and we are getting enquiries that we certainly weren't getting three or four years ago," he says.

"Everything we seem to be getting enquiries about involves the likes of heat pumps, but we are trying to drive and advise people to look at a fabric-first approach."

Sporn Construction employees are trained in best low-carbon construction practices and the firm's new Building Green division is already



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ROBIN SPORN

delivering innovative projects like timber-frame housing insulated with hempcrete.

Mr Sporn says: "We are not directly targeting green work, we don't do our own developments but we are being driven by the developments that are coming to us and try to work with the clients for the right solution."

or that they export to the grid.

Support for commercial, industry and public sector (non-residential) installations will begin about July 2011. SMEs who prepare by getting the skills and qualifications to install technologies to generate biomass heat, geothermal and ground-source heat and biogas and solar thermal below 200 kW will be able to secure work.

Feed-in tariffs give project owners a fixed income if they generate electricity and use it in their property, generate electricity and sell it back to the grid.

Warm Front is a government-

funded scheme which provides a package of insulation and heating improvements up to the value of £6,000. The scheme will start accepting applications again at a given date after 1 April 2011.

The Arbed programme, established in 2009, is designed to bring environmental, social and economic benefits to Wales. It will co-ordinate investment into the energy performance of Welsh homes and is the largest programme of its type under way in the UK.

Companies working in Scotland can find out more about grants at [www.scotland.gov.uk/Topics/Environment/SustainableDevelopment/funding](http://www.scotland.gov.uk/Topics/Environment/SustainableDevelopment/funding).

### Find out what clients want

How interested are clients in getting low-carbon products and services from suppliers? Research by ConstructionSkills suggests its importance is growing.

Concerns about the cost of energy is driving it. The research found that three-quarters of public sector clients have a carbon reduction strategy in action and about half think it will be business-critical within the next five years (compared with less than a fifth who think so now). Policies about supporting local economies will mean many will be assessing SMEs for their ability to deliver.

Construction companies aren't the only ones who have to comply with onerous regulation; your clients do as well. The research found that although cost was the most important reason for taking action on carbon reduction, the need to meet legislative targets is also a big issue.

Across the public sector, main contractors and corporate clients, 36 per cent regard low-carbon capabilities as essential in procurement decisions, while only 5 per cent say it doesn't influence it at all.

### Use new techniques and new materials

Caledonian Building Systems business development director Ian Kemp says: "For contractors such as ourselves that recognise growing client pressure to deliver,

## ACCIDENTAL AGENDA



When GML Sustainability opened its doors in 1991, being a green business might not have been its intention, but today the company focuses on sustainable technologies, writes Kara Segeidin.

Specialising in renewable energy solutions, managing director Alan Proto (above) says GML began providing second-hand modular buildings because they were cheap, but soon discovered they were also environmentally friendly.

"From day one the business, almost accidentally, had a green agenda," says Mr Proto.

In 2003, the Mr Proto says the company was looking to branch out into other areas of environmental building and decided to focus on timber-frame construction.

He says at the time timber frame was largely out of fashion in the UK. "If you buy timber from sustainable sources the carbon footprint of your building is much lower than if you use traditional materials," he says.

GML then started to think more about the kinds of products it was offering its customers and felt it could go further. "We were very early into grass-roof approach and using timber-framed windows," says Mr Proto. He says the final part of the puzzle came 18 months ago when the company set up its solar PV business.

Now the fastest growing solar PV business in Kent, Mr Proto says using them to reduce energy bills is about as green as you can get. GML now offers to install solar panels free of charge for all of its customers.

"We give them the electricity that those panels produce, but we keep the feed-in tariff," he says.

The company is working towards becoming completely carbon-neutral and believes it will meet this target sometime this year.

including the Welsh Assembly's Green Jobs Strategy and the Arbed retrofitting programme.

This year management of Building Regulations passes to the Assembly and next year all social housing stock is due to meet the Welsh Housing Quality Standard. Meanwhile, Scotland introduced a raft of plans two years ago, dominated by the Climate Change (Scotland) Act.

The Renewable Heat Incentive is a government initiative to incentivise people to install equipment that means they can earn money for every kilowatt hour of heat they produce and use,

# SMEs: small companies

## 'I WANTED TO BE THE STRONGEST BRAND IN SOLAR POWER'

"If we had not moved into solar we would probably have gone bankrupt by now."

That is how Ploughcroft Group managing director Chris Hopkins (right) reflects on the decision he made to expand his company from a traditional roofing contractor to break into the renewable energy market through becoming an expert in solar panel training and installation, writes Tom Fitzpatrick.

The Ploughcroft Group started back in 1996 from Chris's home in Ploughcroft, Halifax, and has expanded from its traditional roots to



establish training courses and centres for roofing contractors across the UK.

The company is now based in Brighouse, West Yorkshire. Turnover has gone from £1 million to £5m over the past two years with staffing

numbers increasing by the month.

Mr Hopkins says: "Traditional industry has pretty much died so I am very glad that we made the move when we did. We aren't one of the biggest companies, but I think we are one of the best."

Having seen what countries like Germany were doing in terms of solar panel production, Mr Hopkins approached the National Federation of Roofing Contractors to help devise a roofing course for the installation of solar panels and in 2006 Ploughcroft teamed up with the NFRC and ConstructionSkills to train roofers to

install solar PV and thermal, working with firms including Solar Century and Worcester Bosch.

He said: "Even though we were training our competitors I knew we were establishing the Ploughcroft brand, which I wanted to be the strongest brand available when the interest in solar power kicked off."

"That was the moment we moved from being a traditional builder to a renewable energy firm. We got a lot of PR coverage which helped to get contracts. Our turnover has gone from £1m to £5m in two years. Next year I expect that to double to £10m."

some initial quick wins are essential." The company has found there are a number that can be incorporated into both offsite and onsite construction processes to provide the best carbon efficiency results for low investment:

■ **Minimising traffic movements.** Caledonian has streamlined logistics by taking bulk deliveries from suppliers and by preloading modules with additional materials that will be needed on site, so that its modular approach reduces

traffic movements by 70 per cent compared with traditional methods of construction.

Equating to a saving of 18 tonnes of CO<sub>2</sub> per 1,000 sq m building area, minimising traffic movements also reduces conges-

tion on the roads and provides substantial cost savings.

■ **Preventing waste.** Generating less waste not only lowers disposal costs; it also enables major carbon savings. Independent analysis has shown that material

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# SMEs: small companies

## GOOD TIMES FOR TIMBER

Established in 1996, Cygnum was originally an associate of Palfab, one of Ireland's leading processors and distributors of sawn softwoods, writes Kara Segeidin.

With the growth of timber-frame construction throughout the UK, Cygnum has completed thousands of projects, and as more developers embrace timber frame, driven by initiatives such as the Code for Sustainable Homes as their principal construction method, the company continues to grow.

Director of UK sales Stuart Scott says, as a timber manufacturer,

Cygnum has always been a green business with a sustainable supply chain and has achieved both FSC and PEFC approval for its practices.

To make sure its business processes remain green, Mr Scott says the firms does internal audits and works with its suppliers to make sure it has a fully accountable supply chain all the way back to when a tree is felled.

Mr Scott says the company is always working on eco-innovation, so as well as offering conventional open panel timber-frame solutions, Cygnum introduced its Precision panel, developed as part of the EU



Eco Innovation programme.

A highly insulated and airtight panel, it is described as offering a cost-effective and sustainable building solution. As part of the manufacturing process, the company

produces its own cellulose insulation from locally sourced recycled newspaper and installs it under controlled factory conditions.

Mr Scott says there is a growing demand for sustainable products as major companies commit to carbon-neutral housing and development. "With the type of product we provide, we can say it is fully sustainable," he says.

With changes in regulations and government requirements on carbon emissions, Mr Scott says in the future timber will have a much bigger say in the market place.

lifecycle accounts for 86 per cent of the total carbon emissions from Caledonian's construction process, so the company is looking to improve carbon efficiency by cutting material wastage.

For example, after identifying

that 52 per cent of all the waste it generates is plasterboard, the firm made procurement and design decisions that help avoid offcuts.

Zero UK director Gareth Jones concludes: "We set up the business due to an increased demand

for low-carbon technologies with both the domestic and commercial markets. We have seen the greatest growth in demand in the solar PV market, but rainwater harvesting is also popular at the moment."

You can find out more about using recycled products at [http://aggregain.wrap.org.uk/procurement/quick\\_wins/opportunities\\_1.html](http://aggregain.wrap.org.uk/procurement/quick_wins/opportunities_1.html) and more about energy-efficient products at sites such as [www.greenspec.co.uk](http://www.greenspec.co.uk).



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