



the right
climate

Up to £30bn. That's how much tackling climate change is worth to British business over the next ten years, according to new research by Shell. Globally, this rises to a deservedly un-abbreviated \$1 trillion. Slice of pie anyone?

By **Jon Packman** and **Chris Allsop**.



Green

finally it seems the environmental snowball has found momentum. Besides the flooding of the UK and the faint inducing heatwave gripping Southern Europe, oil giant Shell has published research that quantifies the potential size of the market for businesses providing products, services and technologies that help combat climate change.

It's encouraging companies to see the issue not only as an environmental challenge, but a substantial business opportunity. Furthermore, companies are recognising that the environment is a management issue and not just a matter of adhering to legislation. A proactive stance on climate change is now a business asset, both in terms of a healthy workplace and a public relations tool. Attitudes have turned a corner and people are looking for encouragement to take up environmentally sound practices.

The challenge is that most small business owners often have difficulty imagining what role they can take in managing climate change, purely because it's hard to measure impact on such a tiny scale when faced with cataclysmic images of floods, heatwaves and melting glaciers. It's easier for individuals to understand how they can contribute if these global issues are broken down into manageable chunks and tangible benefits. In terms of the office environment, this means a drive towards energy efficiency and sustainable products.

ENERGY USE

Take carbon emissions for example, of which businesses are currently responsible for about half of the UK's total. Even one small office can emit three to five tonnes of carbon dioxide a year – most of it released at the power station which is providing the electricity from fossil fuels, hence we don't feel directly responsible for the damage caused. Every time we use energy made from oil, coal or gas, more CO₂ and other greenhouse gases are released into the atmosphere and trap the Sun's heat. The resultant increase in the planet's temperature has already caused seas to rise, and as it gets hotter it's predicted we'll see even more extreme weather. Unless they reduce their energy dependence, businesses will start paying the price of climate change through more expensive energy supplies and higher insurance premiums, they could face a drop in business with customers looking elsewhere for a more socially responsible supplier, and will need to start meeting even stricter government regulations and legislation.



WASTE

A well-known culprit of waste is paper. But although the raw material for paper making is predominantly trees (it takes on average one tree to produce 15,000 A4 sheets of standard office paper) it is a common misconception that recycling waste paper saves trees.

Trees for paper are grown and harvested as a long-term crop, with new trees planted to replace those cut down. These papers are often labelled 'environmentally friendly', but because of high demand, fast growing trees are often planted in areas where they would not grow naturally. Such plantations result in severe and sometimes unsustainable environmental pressures. In comparison, making paper from recycled waste consumes up to 50% less energy than using trees, reduces water use by up to 50% and involves fewer chemical processes. Half the energy consumption means half the demand on fossil fuels and half the carbon dioxide emissions.

Each year we use 750,000 tonnes of short life office papers in the UK. Of these 75% are imported and 90% are thrown away as if they were waste. By purchasing recycled papers we can reduce land filling, cut imports and save energy.

There are now many other sustainable alternatives to disposable and short-lived office products. While the latter may be inexpensive in the short term, purchasing better quality, durable and reusable goods will often reduce business costs – and certainly the environmental cost – in the long run. Thanks to our newfound responsibility for the planet, more businesses are forming environmental management policies and looking for complete solutions. For the office, that means green energy, green products, and green technology. All of which are now readily available. The time has never been riper for bundling the whole lot together into a one-stop environmental package. ●

➔ **Andrew Ingram, MD, Talk Paper...**

...is one of the largest distributor of office papers in the UK thanks to the huge demand for recycled papers, comments:

"Recycled papers now account for 35% of our A4 sales and growing. Paper is truly a product that directly impacts the environment in a beneficial way. Responsible paper and pulp producers are sustaining the world's harvested forests; maintaining and caring for the lungs of the earth. Trees are carbon eaters, it's their food."

➔ LOOT AND FIBRE

Recycling is a matter of fibre strength and combating degradation. We take a look at the processes involved.

With thanks to UPM Kymmene.

Creating recycled business papers that require a high brightness can be difficult when you consider that degradation takes place after every recycling process. As such, the system involved isn't as straightforward as some might think.

The paper recovering process

The original wood fibres in paper can be reused several times before they are no longer suitable for paper making. Andrew Ingram, MD of Talk Paper, says, "Recycling paper is about keeping a valuable resource – the fibre – and not sending thousands of tonnes to UK landfill sites."

The first step in the recycling process is that fibres and fillers are extracted from recovered paper and made into new paper. Several process steps are necessary to remove printing inks, foreign particles and contaminants as well as excessively short and brittle fibres from the recovered paper. The higher the paper quality required, the more steps are needed to process recovered paper. If necessary, hydrogen peroxide or sodium dithionite is used for bleaching. About 70–80% of the original volume of recovered paper can be used for the production of new printing papers.

Most residues from the recycling processes are reused and separated non-paper materials like staples or plastic film are sent to designated recycling facilities, landfills, or can be used as fuel together with fibre residues.

BASIC CONDITIONS OF RECOVERED PAPER USAGE

- The input of virgin fibre is essential for the paper cycle. Otherwise the quality of the paper would be unusable.
- Recovered paper should be available close to mills
- The paper grade determines the use and proportion of different fibres.

Efficient use of wood fibre

This renewable resource is very efficiently utilised both in products and for energy generation. Furthermore, through recycling of paper, some paper companies are able to use valuable wood fibres several times in paper production.

The largest diameter and best quality parts of the trees are used for making sawn goods and plywood. Paper is made from smaller size pulpwood which is not suitable for sawmills and plywood mills. Pulpwood is used to make both chemical and mechanical pulp which is used as a raw material for paper. In addition to pulpwood, chips and other wood residues from saw mills and plywood mills are also used for pulp production.