

Improving Energy Efficiency

Enhancing Investment Returns

This paper is one of a series of documents about environmental markets. It has been prepared by Impax Asset Management, a specialist investment manager offering a range of global and regional environmental equity funds.

Strong Drivers and Sound Economics

Demand for energy is rising incessantly, fuelled by rapid economic development and rising affluence in emerging markets. Meanwhile, mounting evidence of climate change and major events, such as the Gulf of Mexico oil spill in 2010 and the Fukushima nuclear disaster in 2011, are highlighting escalating global power generation and energy security challenges. As a result, increasing energy productivity (the level of output achieved from the energy consumed) is becoming increasingly important.

In principle, there is enormous scope for energy efficiency investment. The McKinsey Global Institute estimates that an annual investment of US\$170 billion across a number of market segments over the next 13 years would translate to a rise in energy productivity equivalent to a savings increase of US\$900 billion, with an average internal rate of return (IRR) of 17% per investment¹.

As illustrated by figure 1, the largest opportunities to improve energy productivity are found in the industrial, power (“transformation”) and residential sectors.

Companies active in these sectors are increasingly attracted by the cost savings that can be generated by allocating capital and management time to improving energy efficiency. Furthermore, governments concerned about energy security and faced with rising power demands are introducing subsidies and programmes that act as further stimuli for the deployment of energy efficiency schemes (see figure 2). As a result a range of companies across the industrial, power and residential sectors are accelerating the development of energy efficient technologies.

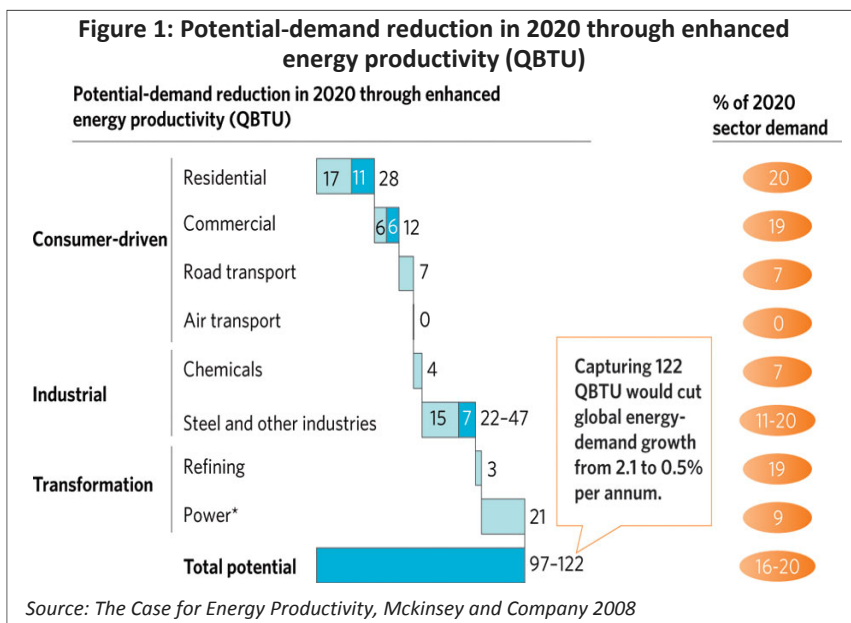



Figure 2: Key global energy efficiency targets	
European Union	<ul style="list-style-type: none"> Target 20% renewable energy and 20% improvement in energy efficiency by 2020 (based on business as usual projections from 2007) National energy efficiency obligation schemes to deliver annual energy reductions of 1.5% 3% public buildings to be renovated annually to cost-optimal levels (improved insulation, double glazing and building control systems)
Germany	<ul style="list-style-type: none"> Target for 10% reduction in energy consumption by 2020 and tightening of buildings energy efficiency standards by 30% from 2012
UK	<ul style="list-style-type: none"> Installation of 53 million smart meters in 30 million homes/businesses - estimated to have net benefit of £7.3 billion over next 20 years
Czech Republic	<ul style="list-style-type: none"> To invest as much as 60 billion koruna (\$3.16 billion) into distribution network by 2023
China (12th 5 Year Plan)	<ul style="list-style-type: none"> Target 16% decrease in energy consumption over 5 years: <ul style="list-style-type: none"> RMB 100bn to develop the new-energy automobile industry from 2011 to 2020 with 1 million electric cars by 2015 200bn yuan for rural power grid upgrades LED lighting a “strategic emerging industry” and expected to receive strong funding
South Korea	<ul style="list-style-type: none"> Target for 30% LED lighting penetration in public sector by 2015 and 100% by 2020
US	<ul style="list-style-type: none"> Vehicle fuel economy labels required on all passenger cars and trucks from 2013


A Diverse Range of Investment Opportunities

The range of investment opportunities in the industrial sector is expanding as businesses in the developed markets increase late cycle capital expenditure and simultaneously aim to cut costs and reduce carbon emissions, whilst those in the emerging markets roll-out manufacturing capacity with a focus on minimising rising power and fuel costs. Technologies that improve efficiency in discrete manufacturing and process automation - such as energy efficient motor-driven systems, low voltage products and analogue semiconductors - are therefore in high demand.


Insert 1

- Market cap: \$8.6bn
- Listed on: US NYSE
- Manufacturer of transmission and distribution equipment and high-voltage capacitors for the regulation and efficient distribution of electricity
- Also makes energy efficient lighting products
- M&A likely to supplement 6-9% of annual organic growth
- Impressive return on invested capital with a 5 year historic average of >22%

A similar theme is propelling growth in the number of energy efficiency opportunities found across the power sector. Investment in ageing grid infrastructure in developed markets, and rapid roll out of new grid infrastructure in emerging markets is providing opportunities for companies offering more efficient technologies, such as “smart grids”, that smooth erratic productivity and incorporate multi-directional power flows. Cooper Industries (US) (see insert 1) is one company particularly well poised to benefit from enhanced levels of transmission and distribution spend. Attractive investment opportunities in the transport sector are found in companies such as Borg Warner (US), which utilises existing efficient clutch and turbocharger technology. Technologies in the electric vehicle market are at a relatively early stage and are taking time to achieve mass market penetration.


Insert 2

- Market cap: 10bn SEK
- Listed on: Stockholm
- Manufacturer of ground source heat pumps and boilers
- 5% heat pump penetration in European market to double in 5 years to 600k units (€2.5bn)
- 30%+ European market share
- 23 acquisitions since 2003
- CEO of 22 years proven in all market conditions

Energy efficient investment opportunities in the residential sector have also expanded as government incentive schemes (such as Energy Star in the US, Eco Point in Japan and the Green Deal in the UK) grow in prominence and new technologies, such as Light Emitting Diodes (“LEDs”), evolve. Indeed, LED lighting is now on the cusp of achieving mass market adoption in the US, and South Korea has targets for 100% public sector LED lighting penetration by 2020. Other equally compelling opportunities are found in companies utilising traditional technologies, such as heat pumps, water heaters and insulation materials (see Nibe Industrier, Sweden, insert 2).

Capturing the Opportunity

The range of opportunities to capitalise on the need to improve energy productivity is impressive, yet mainstream investors’ traditional valuation methodologies often fail to account for the additional growth offered by rapidly expanding energy efficiency markets. Companies increasing their exposure to the sector are therefore often mispriced with further significant upside potential.

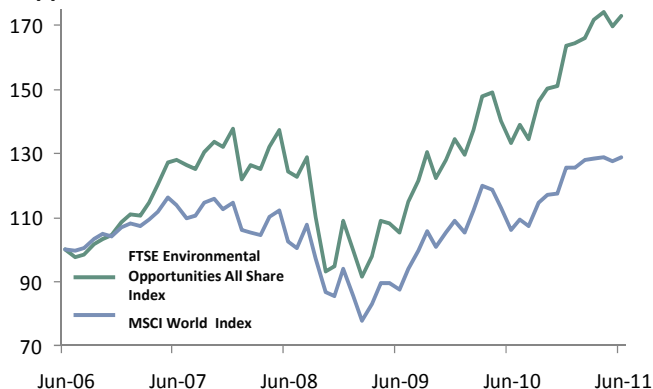
Indeed, investors who have chosen to allocate to energy efficiency have been rewarded with strong returns. The FTSE EO Energy Efficiency Index has outperformed the MSCI World Index by 40% over the past two years (11% over 1 year)² in a trend that looks set to continue as both fundamental growth drivers and policy support strengthen further.

Diversifying Risk and Positioning for the Long Term

The principal advantage of improving energy efficiency is the generation of short term costs savings; however, government subsidies and programmes often additionally enhance prospective returns, and therefore the potential upside from any investment allocation is not immune to the risk that policy is delayed, or revoked. Technology risk must also be assessed, particularly when analysing early stage technologies, such as energy storage.

Investors can minimise non-systematic risk by maintaining a diversified portfolio; indeed, the energy efficiency sector is most strategically allocated to by investing in a broader environmental markets portfolio which also includes companies in the renewable energy, water

Figure 3: Five year performance of FTSE Environmental Opportunities All Share Index versus MSCI World Index



FTSE Environmental Opportunities All Share includes the renewable energy, water, pollution control, and waste management sectors. Five year performance in Esterling as at 30 June 2011. Source: Factset, WM Reuters. FTSE index is total return, MSCI index is total net return.

infrastructure, pollution control, and waste management sectors. All these sectors are benefiting from the same underlying top level secular growth themes but outperform at different points during the economic cycle due to sub-sector drivers that have a low correlation to each other, facilitating long-term out-performance of mainstream global equity indices (see figure 3).

A Strengthening Outlook

Rising power prices, growing energy security concerns and strengthening policy momentum have recently enhanced the long term growth prospects for the energy efficiency sector. Purchasing smaller, specialised businesses in order to acquire exposure to the superior growth of the energy efficiency opportunity is also proving attractive to diversified industrial groups, and generating additional upside for investors (see insert 3).

This is at a time when the valuations of both energy efficiency stocks, and diversified environmental market portfolios, are at the low end of the historical range, so there is strong potential for re-rating on the back of rising earnings and as the world economy and financial markets continue to recover, we look forward to sustained positive returns from across the sector.



Insert 3

- Schneider produces power distribution and automation systems with the goal of becoming a leading provider of “smart grid” solutions in the low and medium voltage power distribution markets
- Telvent is an information technology company providing software and services solutions to infrastructure clients in the energy and utility sector
- Schneider announced the acquisition of Telvent on 1 June 2011. The acquisition doubles Schneider’s software development capabilities allowing the company to provide complete solutions to utility customers in sub-station automation, distribution management, and smart meter data management businesses
- The transaction was completed at a 26% premium with an EBITDA valuation of Telvent at ca. 12.5x

Source: Bloomberg

¹Curbing Global Energy Demand Growth: McKinsey Global Institute, *The Energy Productivity Opportunity*, May 2007.

²Annualised outperformance of FTSE Energy Efficiency Index versus MSCI World index from 1 June 2009 to 30 June 2011 in £ sterling. Data from Factset and WM Reuters. FTSE indices are total return, MSCI indices are total net return.

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