

## Optimising Energy Efficiency Investments Through Offset Inclusive Carbon Management

### Energy Efficiency and Climate Change

Energy efficiency is increasingly a top-of-mind concern for executives, not just as a way to trim rising energy bills, but also to reduce a corporation's carbon footprint.

This is not surprising given the large potential for energy efficiency improvements that exist within and across the global economy. More fuel-efficient car engines, better insulation of buildings and efficiency controls on manufacturing equipment are just a few of the possibilities. In fact, according to a recent study published by McKinsey & Company<sup>1</sup>, energy efficiency alone could reduce global greenhouse gas emissions by 14 GtCO<sub>2</sub>e per year by 2030, if properly captured. This would be equivalent to taking roughly 8.5 billion passenger vehicles off the road for a year.

Many of these opportunities involve upfront investments to make existing or new infrastructure more carbon efficient, and then recouping part or all of that investment through lower energy spending in future years.

### Is Energy Efficiency the 'Silver Bullet' for Mitigating Climate Change?

Energy efficiency is certainly needed to address climate change but it should not be viewed as a silver bullet.

It is one thing to have the potential to make deep cuts in greenhouse gas emissions; it is another for policy makers to agree on and implement effective emission reduction policies, and for companies and the public sector to take action to make this reduction a reality.

The reality is there are significant barriers to improved energy efficiency that will require long-term institutional, financial and behavioural changes. The "principle-agent" barrier is probably the most difficult obstacle to overcome. It occurs in landlord/tenant, or more generally, equipment-purchaser / energy-bill-payer situations, where both the landlord and the tenant may be aware of the benefits of energy-efficient investments, but because the tenant pays for the energy bills the landlord has no incentive to pay for new energy efficiency improvements.

Similarly, under current energy pricing, for example, the amount of bottom line savings from energy efficiency is too small and too fragmented to drive real change in the vast majority of businesses. This is supported by the frequently quoted 'wisdom' of management –

*"I know there are \$20 bills lying all around my operations due to energy inefficiencies, but frankly I'm too busy on core operations to bend down and pick them up."*

This behaviour towards energy efficiency continues despite a large number of valuable government incentives to do the 'bending down'.

Such behaviour is further enforced by the lack of a carbon price. But this will change due to national and international efforts to put a price on carbon through the development of a carbon market. In simple terms, introducing a price on carbon increases the price of energy and therefore improves the pay back on any given energy efficient investment. Therefore companies cannot continue to invest in and operate businesses without factoring in this certain cost increase. Forecasting these costs and how to minimise them is becoming a strategic imperative for businesses wishing to remain competitive in a rapidly changing regulatory landscape.

### How Can a Business Respond?

Forward looking businesses understand they will compete in a future economy constrained by carbon and, in order to future-proof their business models, are introducing a price of carbon to their operations. This is achieved by implementing offset-inclusive carbon management strategies that demonstrate how they are accounting for their impact on the climate within the constraints imposed by their current infrastructure (e.g. leased offices, mature manufacturing facilities) and business models (e.g. a dependence on air travel to visit clients).

Companies executing offset-inclusive carbon management strategies are implementing four key activities:

1. Measuring baseline CO<sub>2</sub> emissions and establishing processes to measure future emissions
2. Setting “stretching targets” (i.e. 80% by 2050, carbon neutrality, etc)
3. Meeting these targets by making the most cost effective investments and
4. Communicating their activity to key stakeholders.

Practically speaking, this means evaluating all energy efficiency projects in terms of the cost of reducing a tonne of carbon, and then implementing those energy efficiency projects with a lower cost of carbon than the cost of an offset. The remainder of the target is then met through the next most cost effective source of emission reductions - carbon offsets. In simple terms, businesses pay to outsource emissions reductions when it is more cost efficient or technologically feasible than doing so in-house, in the same way as if they were making the decision to outsource a business process like accounts payable. Every business makes strategic decisions to make or buy, to in-source or outsource, and delivering emissions reductions is no different.

## What is the Global View?

Legislators across the globe recognise the role of carbon offsets as a cost containment measure in corporate carbon management. Offsets are an integral part of the European Emissions Trading Scheme (EU ETS) and are set to play a major role in the U.S. under the proposed cap-and-trade system. An economic analysis prepared by the U.S. Environmental Protection Agency (EPA) points to the effectiveness of offsets in containing costs within a cap-and-trade system. This has influenced U.S. policy makers to allow for 2 billion tonnes per year of offsets under the Waxman-Markey Bill, recently approved by the U.S. House of Representatives. The EPA estimates that, without international offsets, allowance prices would rise by 96%<sup>2</sup>.

It is important to recognise that investments in quality offsets are funding real and permanent reductions within the global economy. As far as the climate is concerned, where reductions take place is of no consequence. Yvo de Boer, Executive Secretary of the United Nations Framework Convention on Climate Change (UNFCCC), estimated that if developed economies commit to reduce emissions by 60-80% by 2050, and, if half of the emission reductions were met through investment abroad, it could generate up to \$100 billion per year in green investment flows to developing countries<sup>3</sup>.

Offset-inclusive carbon management allows your business to participate in this investment flow, becoming part of a climate solution that greens economic growth and facilitates the transfer of clean technologies to the developing world. Simply put, offsets provide immediate climate benefits as well as a carbon price signal to investors.

## Conclusion

Significant opportunities exist to improve energy efficiency in our businesses. However, energy efficiency alone will not solve climate change. Climate change is the result of the market failure to internalise the cost of carbon in investment decisions and so, in order to mitigate climate change, businesses need a clear price signal to drive investments in energy efficiency and other clean technologies. Carbon offsets provide this price signal by establishing the benchmark against which to measure investments in energy efficiency. Offset-inclusive carbon management pursues both strategies concurrently and is key to future-proofing your business in an increasingly carbon constrained world.

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<sup>1</sup> Pathways to a Low-Carbon Economy: Version 2 of the Global Greenhouse Gas Abatement Cost Curve. McKinsey & Company. 2009.

<sup>2</sup> EPA Analysis of the Waxman-Markey Discussion Draft: The American Clean Energy and Security Act of 2009, April 2009, EPA

<sup>3</sup> Statement at the high-level segment by Yvo de Boer, Executive Secretary, November 2006, UNFCC