

## **Resource scarcity, now is the time to invest in solutions**

### **A revolution in efficiency has begun and is creating unprecedented opportunities for investors.**

Resource Scarcity is a topic of increasing concern, and interest, to long term investors. The drivers are fundamental and long term in nature.

There is now strong evidence which highlights that depleted environmental resources such as clean water, clean air and arable land will limit the potential for future global economic growth.

The global population is currently estimated at 7 billion and is anticipated to exceed 9 billion by 2050, with most of the increase in developing countries. The speed of growth of emerging markets and escalation in demand as these economies grow is without precedent. Countries such as China and India, home to nearly 40% of the world's population, have doubled their GDP per capita in only 12 and 16 years respectively. This growth took over 150 years to achieve in the UK, after the industrial revolution.

Ian Simm, CEO of Impax Asset Management commented:

“Investors who assume that incremental efficiency improvements will continue to ensure that the supply market of energy, water, food, materials and other resources will expand to meet demand without dislocation, could miss out on an enormous opportunity for value creation.”

#### **So how can investors access these opportunities?**

1. **Energy** - trends expected to lead to substantial investment opportunities:

- *Incremental efficiency improvements*: the energy efficiency of current products and services, particularly in industry and transportation, are set to increase. For example the continuing development of more fuel efficient engines. Many are now capable of 80 mpg, a figure that is expected to rise to 100mpg within 15 years.

- *Rapid adoption of breakthrough technologies:* such as light emitting diodes where the market is expected to grow by 25% a year to 2020, reaching US\$100 billion.
  - *Leapfrogging by developing countries:* emerging economies faced with limited fossil fuels are encouraging the adoption of the most efficient technologies.
2. **Water** – key areas for investment include:
- *Companies involved in new asset creation:* the construction of new water supply and treatment infrastructure in emerging economies will be a dominant theme over the next decade, yielding many promising investment opportunities. The Chinese government has earmarked \$780 billion of investment in water assets by 2020 to cope with the increase in urbanisation as an estimated 100 million people move to urban areas over the next ten years.
  - *Asset upgrading:* existing assets need continual upgrading as developed countries improve and extend their water infrastructure, particularly in areas of drought and flood risk.
  - *Roll out of proven technology:* new technologies are being rolled out in response to increasing regulation of the quality of water supplies. These include membrane filtration, ultra violet light disinfection or using activated carbon.
3. **Food:** in order to feed the global population in 2050, two thirds of which is likely to live in urban areas, the world will have to increase food production by 70%. Major opportunities are emerging for investment and efficient management of global food and agriculture resources:
- *Improving productivity will be vital:* investment in seeds, crop protection and irrigation should all expand in the search for higher yields.
  - *Improving storage, transport and distribution:* there is considerable wastage during transport, storage, preservation and processing but numerous technologies are emerging to help minimise waste in supply chains as well as driving greater efficiencies (such as the use of enzymes in food production).
  - *Changing tastes:* consumers' tastes are changing with increased affluence in developing countries. This is leading to opportunities for companies with products in dominant market positions and brands.
4. **Materials:** the use of industrial materials and ores has risen seven fold in the last century. Investment opportunities are likely to arise in:

- *Improving extraction and processing yields:* rising costs and complexity in the primary materials sector has created a demand for products and services to raise efficiency. For example, industrial gases can be used in steel and chemicals to improve yields.
- *Efficient industrial manufacturing processes:* there are significant cost savings to be realised by optimising the use of materials during manufacturing and through the use of new technologies such as automation equipment, sensors and controls.
- *Recycling and reuse:* recycling is now estimated to supply 40% of global raw material needs, with an annual turnover of US\$200 billion.
- *Smart materials:* advanced materials offering increased efficiency, lower cost and reduced environmental impact are replacing incumbents. For example, the market for smart electric materials is estimated to grow at 16% over the next four years and 50% of the new Boeing 787 Dreamliner's frame is comprised of a lightweight carbon fibre composite which will dramatically decrease fuel consumption.

- ENDS -

**Enquiries, or to request a copy of the full report “Resource Scarcity and the Efficiency Revolution”, please contact:**

**Anne Gilding**  
**Head of Brand Communications**  
**Impax Asset Management**  
Norfolk House, 31 St James's Square,  
London, SW1Y 4JR  
[www.impaxam.com](http://www.impaxam.com)

Tel: +44 (0) 20 7434 1122 (switchboard)  
Tel: +44 (0) 20 7432 2602 (direct)  
Tel: +44 (0) 7881 249612 (mobile)  
Fax +44 20 7434 1123  
Email: [a.gilding@impaxam.com](mailto:a.gilding@impaxam.com)

## **Notes to Editors**

### **About Impax Asset Management**

Founded in 1998, Impax Asset Management (“Impax”) was one of the world’s first managers dedicated to exploiting the investment opportunities created by resource scarcity and demand for cleaner, more efficient products and services through listed and private equity strategies.

Impax now manages £1.8 billion\* for institutional and high net worth investors globally, and is committed to providing strong long-term risk-adjusted returns. The team of 28 investment professionals has been assembled over 13 years.

Impax's listed equity funds seek out mis-priced companies that are set to benefit from the long-term trends of changing demographics, rising consumption, limited natural resources and urbanisation. Investment is focused on the alternative energy, water, waste and related markets. Impax's private equity infrastructure funds invest in power generation assets in the renewable energy sector.

Impax is a thought leader in defining the markets in which we invest, for example through a partnership with FTSE to develop and manage the classification system underpinning the FTSE Environmental Markets Index Series.

\*data in £ sterling as at 30 September 2012.