

THE CLIMATE GROUP

REPORT SHOWS HOW TO TURN ENERGY WASTE INTO ECONOMIC GROWTH

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LONDON: A new report indicates 98% of all energy produced globally is wasted through inefficiency. Addressing this issue, boosting energy production would greatly increase the economy and create millions of new jobs.

To visualize this number, the authors explain, consider that when boiling an egg only 2% of the energy consumed goes into actually producing the boiled egg: the rest is wasted in heating the pan, the kitchen air and the water around the egg.

The 2015 Energy Productivity and Economic Prosperity Index, authored by The Lisbon Council, Ecofys and Quintel Intelligence and commissioned by Philips, shows doubling energy productivity improvement to just 3% would reduce the global fossil fuel bill by more than €2 trillion (US\$2.28 trillion) by 2030 and could create more than 6 million jobs in the next five years.

“We don’t have to wait for any ‘magic bullet’ to implement these solutions,” remarks Ben Ferrari, Director of Partnerships, The Climate Group. “The technology is already here and is constantly improving, thanks to private and public sector research and development effort. “The Climate Group works with forward-thinking businesses to increase the use of renewables, with projects like RE100 and coalitions such as We Mean Business. But to tackle emissions and avoid what science defines as the ‘severe, widespread, and irreversible impacts’ of climate change, businesses must also focus on ‘energy productivity’ too. “The economic case is compelling: energy productivity means producing more with the same amount of energy. It can help avoid the high cost of actions to mitigate the business impact of climate disruption. But businesses need a clear policy framework in order to set long-term strategies, and we urge governments to undertake all necessary steps toward this essential solution.”

ENERGY PRODUCTIVITY MEANS ECONOMIC PROSPERITY

Energy productivity is defined as the output and quality of goods and services per unit of energy input. It means we can produce more of the same things (or have a bigger profit) using the same amount of energy.

This differs from energy efficiency, which means using less energy to deliver the same service. However, energy efficiency can actually improve energy productivity for companies and countries.

On an economic level, energy productivity is the GDP countries produce for every unit of energy they consume.

Globally, the current rate of energy productivity improvement is around 1.3%. While this is an encouraging number, it is not enough to cover increasing energy demand. As of the end of 2012, the world consumed annually 560 exajoules, but BP forecasts global demand to rise by 37% from 2013 to 2035, at an average of 1.4% a year.

The report reveals there is opportunity to invert this curve through key solutions like insulation, energy-efficient appliances and lighting. In particular, light-emitting diode (LED) technology in households can improve energy productivity by 500%.

“Within the range of energy efficiency opportunities, LED lighting is a key contributor in addressing the soaring energy demand of the future,” confirmed Harry Verhaar, Head of Global Public and Government Affairs at Philips Lighting, a member of The Climate Group. “And by connecting LED lighting to sensors, apps and controls, even greater efficiencies may be realized. It is dramatically changing the way people experience and interact with light at home, at work and in their cities.”

To put the numbers in perspective, according to the High-Energy Productivity Growth Scenario presented in the report which includes increased use of LED, 1,000 kilowatt-hours of electricity could light nearly 12 European households. But today, the same amount of electricity powers just two households.

NATIONS PAVING THE WAY

On a national level, the six biggest economies – European Union, the United States, China, India, the Russian Federation and Japan – have produced on average 18% more GDP in the last 10 years with a given amount of energy.

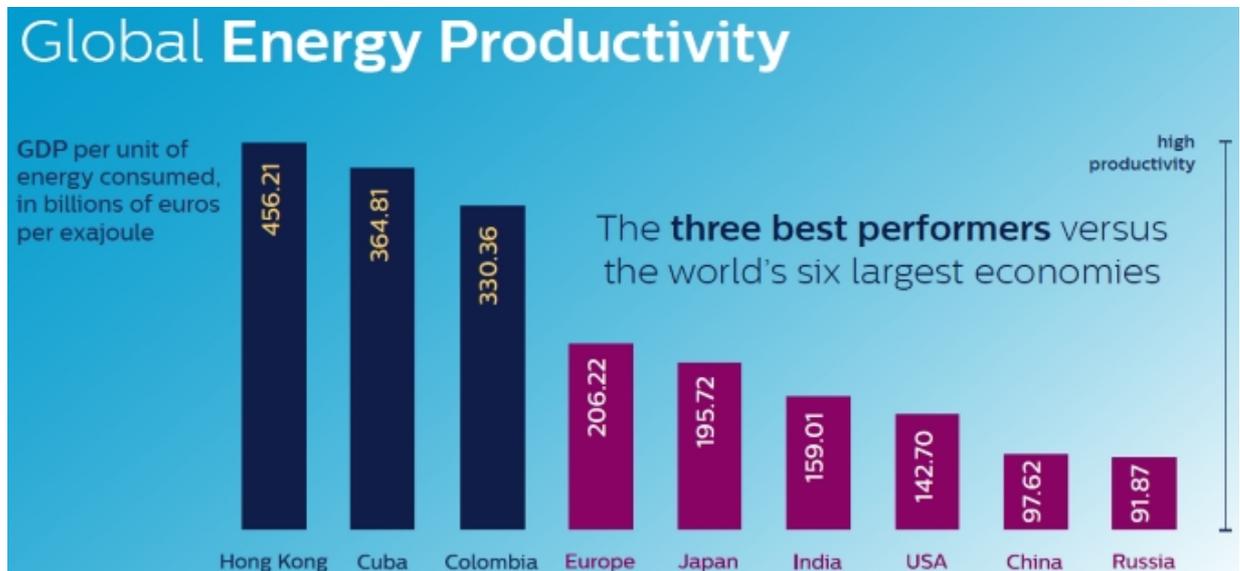


Image: Global Energy Productivity, from The 2015 Energy Productivity and Economic Prosperity Index - courtesy of Philips

The report shows Hong Kong leads the way though, creating €456.21 billion (US\$520 billion) in GDP per exajoule of energy consumed, thanks to its service-based economy.

The US, which has pledged to double its energy productivity by 2030, ranks only 87th at €143 billion (US\$163 billion) of GDP per exajoule – in line with the world average.

UK ranks 26th, with Germany placed 35th, the Netherlands 40th, Japan 51st, France 56th and India 72nd. China and Russia come 111th and 114th respectively, with an energy productivity

well below the world average (€98 billion / US\$111 billion and €92 billion / US\$105 billion respectively).

By comparison, the EU produces less than half the GDP of Hong Kong with the same amount of energy, just €206.22 billion (US\$235 billion).

But Europe has huge potential in this sector, with an economic expansion of 35% by 2030 and plans to cut its energy use to 30.1 exajoules per year – a 35% improvement on current levels, with the potential of doubling its energy productivity performance by 2030. The IEA estimates this would create at least 1.1% of additional GDP in the Union.

ENERGY PERFORMANCE

The technology to implement these savings are already here. Buildings offer the best opportunity to improve energy performance, with an estimated annual energy savings of around 4% between now and 2030.

To help achieve these goals the paper pushes policymakers to implement bold policies like mandating high energy-efficiency standards, and improved labelling: for example, not many people know appliances labelled with 'A+++' use less than half the energy of a label 'A' device.

“Energy efficiency is a powerful instrument for job creation with great potential for stimulating economic growth and EU competitiveness,” said Miguel Arias Cañete, European Commissioner for Climate Action and Energy. “Energy productivity provides us with an excellent framework to harness underutilized resources. I welcome the publication of this report. It will help us in coming years in using innovation to drive efficiency and improving Europe’s performance in this key area.”

“World leaders are convinced that energy is the golden thread connecting economic growth, increased social equity and a healthy environment, but we still need to enforce more ambitious goals to improve energy productivity”, added Kandeh Yumkella, UN Under-Secretary-General and CEO of Sustainable Energy for All. “This report helps to focus minds on these goals and their benefits. Doubling of the global rate of improvement in energy efficiency by 2030 is our shared objective, underpinned by the Global Energy Efficiency Accelerator Platform launched by the UN last year.”