News release

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Contact	Rowena Mearley, Global Media Relations, PwC Tel + 1 646 313 0937 E-mail: rowena.j.mearley@us.pwc.com
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China sets the pace for record-breaking decarbonisation levels, doubling the worldwide average for first time since 2000

- *Major economies decarbonising at 2.8% – the highest rate since 2000, more than double the business as usual average, and in line with targets set in the Paris Agreement last year*
- *China, the UK and the US top the league table this year*

For the first time, China has topped an index measuring the carbon intensity of the major economies, as a result of falling coal use and a shifting economic base with rapid growth in less carbon-intensive services.

The findings, from the eighth annual PwC Low Carbon Economy Index illustrate how recent progress to decarbonise is in line with national targets set by governments in the lead up to the Paris Summit. China consumes half the global coal output, so changes that affect consumption in that country have global significance for the coal market and emissions. It means that in 2015, the rate of decarbonisation globally more than doubled.

China, the UK, and the US led the way in the Index, with others including some major emerging economies, showing sharp reductions in carbon intensity last year. South Africa, Mexico, Canada and India all exceeded their Paris targets, demonstrating for the second year running signs that emissions growth are decoupling from economic growth.

Argentina, Indonesia Brazil, Saudi Arabia and Italy have more work to do as their carbon intensity reductions last year did not even meet the rate needed to meet their own Intended Nationally Determined Contributions (INDC) targets.

The PwC Low Carbon Economy Index tracks the progress G20 countries have made to meet their carbon budgets and decarbonise their economies since 2000.

While this year marks a step change in the decarbonisation of the global economy, the report warns 2015's high point is less than half of what is actually required to limit global warming to the levels committed to in the Paris Agreement.

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For the last 15 years the global average decarbonisation rate has been only 1.3% a year, leading to predictions of the global carbon budget running out as early as 2036. However in the lead up to the Paris Agreement last year, carbon intensity fell by a record-breaking 2.8% (up from 2.7% in 2014). This is in line with the national targets set in the Paris Agreement. However, even at this faster decarbonisation rate, the global carbon budget will last only four years more to 2040.

Jonathan Grant, sustainability and climate change director at PwC, said:

> "In 2015 the world economy decarbonised at record levels but it still falls far short of the rapid reductions needed to achieve the two degrees goal. With each passing year, the global challenge gets tougher. To stay within the two degrees carbon budget the annual reduction in carbon intensity now needs to reach 6.5%, up from 5.1% four years ago.
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> "On business as usual trends we'll use up the two degrees global carbon budget for this century by 2036. But our Index shows that national targets set in the Paris Agreement only buy another four years. If governments want to hit the global goal of 'well below two degrees' they will need to raise the ambition of their targets immediately and do much more to accelerate low carbon investment.
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> "The issue for business is simply one of how to deal with risk. How do they react to a disrupted supply chain; changes to policy or regulation like carbon pricing; changing consumer preferences; financing long term infrastructure projects; or unpredictable extremes of weather? This is a checklist for effective risk management in the post-Paris era."
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> "Coal consumption falling has been the most significant factor in levelling China's emissions and is partly the result of policies to improve air quality and power plant efficiency. And although it is a small part of China's economy, solar power grew by 70% in 2015."

The results may give delegates a temporary boost at the opening of the UN Climate Summit in Marrakech, the first since the entry into force of the Paris Climate Agreement at the Conference of Parties (COP) 21. All eyes will be on the discussions around financing and the development of the detailed rules for the agreement, particularly on how to review progress and raise the ambition of the national targets.

Jonathan Grant added:

> "This was never expected to be a big COP. But politicians have maintained momentum post-Paris and with the Agreement entering into force, the pressure is now on the negotiators to make progress in Marrakesh. The focus will be on putting words into action, finance and how to close the huge gap between the national targets and the global goal."

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PwC Low Carbon Economy Index 2016

Country	Change in carbon intensity 2014-15	Paris target annual change in carbon intensity 2015-2030	Annual average change in carbon intensity 2000-2015	Change in energy related emissions 2014-2015	Real GDP growth (PPP) 2014-2015	Carbon intensity (tCO2 / $m GDP) 2015
World	-2.8%	-2.8%	-1.3%	0.2%	3.1%	295
G7	-3.6%	-3.4%	-2.1%	-1.9%	1.8%	252
E7	-4.0%	-2.5%	-1.3%	0.5%	4.6%	363
China	-6.4%	-3.5%	-2.4%	0.04%	6.9%	475
UK	-6.0%	-3.1%	-3.5%	-3.8%	2.3%	157
US	-4.7%	-4.3%	-2.4%	-2.4%	2.4%	301
South Africa	-4.5%	-4.5%	-1.7%	-3.2%	1.3%	583
Mexico	-4.4%	-3.9%	-0.6%	-2.0%	2.5%	206
Canada	-4.2%	-3.9%	-1.9%	-3.1%	1.1%	351
Japan	-2.7%	-3.0%	-0.9%	-2.3%	0.5%	257
Turkey	-2.6%	0.7%	-0.9%	1.3%	4.0%	211
India	-2.0%	-1.9%	-1.5%	5.4%	7.6%	276
Korea	-1.4%	-4.3%	-1.3%	1.1%	2.6%	419
Germany	-1.1%	-3.1%	-1.9%	0.5%	1.7%	195
EU	-0.7%	-3.1%	-2.3%	1.2%	1.9%	180
Australia	-0.5%	-4.5%	-2.1%	1.8%	2.3%	347
France	-0.2%	-3.1%	-2.6%	0.9%	1.2%	121
Russia	0.0%	0.8%	-3.2%	-3.7%	-3.7%	418
Argentina	0.0%	-2.2%	-0.8%	1.4%	1.3%	190
Indonesia	0.6%	-5.9%	0.0%	5.4%	4.8%	208
Brazil	0.8%	-3.9%	0.2%	-3.0%	-3.8%	157
Saudi Arabia	1.1%	-0.3%	0.5%	4.6%	3.5%	411
Italy	4.7%	-3.1%	-1.8%	5.5%	0.8%	153

Key: Top 5 | Bottom 5

Sources: *BP, Energy Information Agency, World Bank, IMF, UNFCCC, National Government Agencies, PwC data and analysis*

Notes to editors

1. Carbon budget: The target is an estimate of how much countries need to reduce their energy related emissions by, while growing their economy, in order to limit global warming to 2°C. 2°C of warming is the limit scientists agree is needed to ensuring the serious risks of runaway climate change impacts are avoided.
2. Under the UN climate negotiations process, countries have made emissions pledges (Intended Nationally Determined Contributions or INDCs) with the collective aim of reducing greenhouse gas emissions globally to limit the potential for global warming to 2°C by 2100.Global emissions were flat in 2015 while GDP grew by a respectable 3.1%. Coal consumption fell by 1.8%, with a switch to lower carbon gas (+1.7%) as well as oil (+1.9%). Wind and solar energy output grew at 17.4% and 32.6% last year, but are still tiny fractions of the whole energy system. (Source IMF, BP).
3. As China looks to rebalance its economy, the service sectors have experienced significant growth, with average annual services exports growth of 14.3% since 2010. Financial services dominated this growth, as the financial intermediation industry's share of Chinese GDP grew 1.5 times over 5 years: from 6.2% in 2010 to 9.2% in H1 2016.
4. For the second year running, the UK's consumption of coal has fallen by over 20% and has maintained its position as a leader in our index.
5. A 3°C world is one in which the IPCC's Fifth Assessment Report describes potential impacts including ocean acidification and frequent heatwaves and drought challenging global food supply and trade, with knock on effects for migration and conflict. Furthermore there is potential that rising numbers of species face extinction, and more frequent extreme weather events will cause infrastructure damage, loss of life and business disruption
6. About The Low Carbon Economy Index (LCEI): The LCEI model combines energy-related carbon dioxide emissions with historic and projected GDP data, and the IPCC's carbon budgets. The model covers energy and macroeconomic data from individual G20 economies, as well as world totals. Details of our model structure are available the Appendix of the LCEI report. The analyses of the Paris targets are based estimates of the decarbonisation rates implied by the INDCs submitted to UNFCCC and include the full national inventory of emissions (i.e. emissions from energy as well as land use change, forestry, and industrial process).

About PwC

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