Institution of MECHANICAL ENGINEERS

NEWS RELEASE

Climate Change: Have We Lost the Battle?

Leading scientists back new IMechE report offering a radical action plan as an 11th hour solution to the emissions crisis.

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The UK Government must begin to tackle Climate Change and the looming emissions crisis as if it was at war, according to a groundbreaking new report out today (Friday). Authors believe that with the inevitable failure of Copenhagen, adopting a MAG united front is the 11th hour solution to the emissions crisis.

The Institution of Mechanical Engineers (IMechE) has published this third and final report on climate change on the brink of the Copenhagen Conference. It is already being backed by Professor Kevin Anderson of the Tyndall Centre and America's Professor Roger Pielke. It calls for much tougher tactics and political support, possibly in the form of a new DECS (Department of Energy and Climate Security) department, to give Britain a chance of achieving the equivalent of an 80% reduction in GHG by 2050. IMechE believes the target as defined by the Act is unachievable.

If this does not happen, environmental refugees living in drought and flood afflicted countries could migrate to the UK amidst possible water and food disputes.

In the wake of what it dubs a 'failed' Climate Change Act, the report also urges Government to adopt a MAG 'battle plan' for success in tackling climate change. In reality, their targets are not likely to be met until 2100 if current policies remain in place.

COP15 or Cop-Out?

Report lead author, Dr Tim Fox, who is Head of Environment and Climate Change at IMechE said: "Even with our best intentions, the UK will not reach its 2050 emissions target until 2100 or beyond unless we radically rethink the way in which we approach climate change policy.

"This review is brave in its ambitions but as engineers we believe it is achievable. MAG is possible and whilst the Institution does applaud wholeheartedly the efforts of the UK Government for creating such an Act, it is without sanction and has no penalty for failure."

The Climate Change Act (2008) introduced a wide range of targets but for the UK to achieve them it would need to become as carbon efficient as France by 2015. This could be achieved if 30 new power stations were built in the next five years. This week plans for 10 nuclear power stations to be built in the UK were approved, but the first will not be ready until 2018.

Engineers have been collating data and information to produce the report over the past year to produce these final conclusions ahead of Cop 15. They include:

- **Adopting a MAG approach to climate change.** If the UK was brave enough to drive IMechE's suggested 100-year approach forward, it would decarbonise the economy at a realistic rate and bring with it the prospect of two million new jobs by 2050. MAG is vital because "given the magnitude of the engineering challenge and the pace of action required, IMechE concludes that the Climate Change Act has failed before it has started. The approach to emissions (as embodied by the Act) is, in our opinion, back-to-front."

- **Establishing a new centralised Government department empowered with stronger sanctions**. This could be known as DECS, Department of Energy and Climate Security and would have sole responsibility to implement and develop a MAG strategy,
- **Develop a comprehensive MAG battle plan to secure our future and help industry plan future skill requirements**. For the above recommendations to succeed, the Government must work side-by-side with engineers to develop and implement the MAG plan. The Roadmap would endure for 100 years, starting in 2010, and could secure a low carbon economy.

IMechE's first report, Adapting to the Inevitable, highlighted the need for more projects such as the Thames Barrier which is the only adaptation project of its kind in the UK. Without more efforts like this, flooding and droughts could ravage and destroy part of London and East Anglia by 2250. In August the second report, Geo-Engineering Giving Us Time to Act, focused on schemes such as algae on buildings and artificial trees. In this final report, the Institution goes a step further in predicting that 100,000 artificial trees need to be built by 2050 to absorb the expected 330 mT shortfall in CO2 emissions. (Pic of artificial trees in North Sea).

- To decarbonise the UK economy to meet emissions targets would require an unprecedented engineering effort. The commitment of human and material resources needed would not be dissimilar to the investment ploughed into the cold war.

- For example, the UK would need to build and operate 27,000 turbines by 2030 and a further 13,000 by 2050 (currently the UK has 2,600 in operation)

The paper adds that the issue is not just UK but a global one: "There is too much short-term thinking at all levels in all societies and no clear long-term strategy. Would we approach an invasion or war with such short-sightedness? Strong Government leadership is required to highlight the urgency of the problem." (IMechE's artist impression of UK in 2060)

NB: The findings of this report will be put before a group of MPs at a briefing at IMechE, Birdcage Walk, London on 24 November.

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Notes to Editors

- For further information or to arrange interviews please contact Rita Congera at the Institution of Mechanical Engineers' Press Office on 020 7304 6877/ 07730 644134 88 or email media@imeche.org.uk
- **MAG** is a term coined by IMechE and used in the report's Roadmap to highlight how each approach should work together to combat Climate Change.
- To download print quality or web optimized images, please visit: www.imeche.org/media/press/MAGpressrelease
- To download the full report and view the broadcast clip showing London from 2020 to 2110, showing widespread adoption of renewable

energy services, improved river and sea defences and artificial trees absorbing carbon dioxide directly from the atmosphere, please visit: www.imeche.org/about/keythemes/environment/Climate+Change/MAG