

## **Transformative Innovation**

Perspectives on a Sustainable Energy Supply, World Student Environmental Summit  
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**Fred Steward**

The talk will make the following points:

- The targets for the reduction in greenhouse gas emissions to mitigate dangerous climate change require radical, not incremental change, in society and economy
- The radical change needed is best described as ‘transformative innovation’ which is pervasive, system wide and embraces technological and social change.
- Transformative innovation requires the use, not only the production, of energy to be sustainable
- Innovation strategy must therefore address the systems of energy use such as mobility, housing, food, communication etc. rather than remaining confined to the ‘energy sector’ narrowly defined. It has to embrace demand as well as supply.
- The shift to a low carbon society is a systemic ‘sociotechnical transition’ not a set of singular scientific solutions.
- The low carbon transition is a purposive societal transformation and is unlikely to arise from conventional market based processes, or new knowledge.
- Current public policies on innovation and sustainability are inadequate and draw on confused and inappropriate metaphors of transformative change.
- A new policy direction to promote transformative innovation for global sustainability is urgently needed which needs to span many of the existing boundaries in the established policy landscape.

Source: Fred Steward (2008) **Breaking the Boundaries: Transformative Innovation for the Global Good**, NESTA Provocation 07, London