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## Low carbon energy development and its contribution to realize the reduction target of carbon intensity in China

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Setting low-carbon development should take account of multi-objectives with concern on different economic and policy background. This paper designed two scenarios to present the low-carbon energy development in China, including the appropriate low-carbon scenario (S1) and the advanced low-carbon scenario (S2), where three economic objectives (represented by the annual GDP growth rate) was set at 4%, 6% and 8% respectively during the period between 2015-2030. The analysis evaluated the development potentials of low carbon energy and their contributions for achieving the national target of cutting down the CO<sub>2</sub> emission per unit GDP by 60%~65% by 2030 (compared to the 2005 level). We provided several findings: (1) under the S1, low-carbon energy will reach 11.94 Gtce, whereas under the S2, it will reach 14.93 Gtce by 2030. It was predicted that if the annual GDP growth rate was set at 4%, 6%, and 8% between 2015 and 2030, China should cut down 143.63, 194.81 and 262.73 Gt CO<sub>2</sub> emission, respectively; (2) Low carbon energy would contribute 12.58% (minimum) to 31.19% (maximum) toward the 2030 carbon intensive target; (3) higher GDP growth rate would make lower contribution in carbon mitigation. Maintaining a higher GDP growth rate would require more investment to low carbon energy, along with the optimization in economic restructure and the improvement of carbon productivity.

### Biography

Limao Wang is a Professor in Energy Economy and Environmental policy at Institute of Geographical Sciences and Natural Resources Research, Chinese Academy of Sciences. He has been active in the area of Energy Economics and Energy Security for nearly 20 years. His current research interests focus on Energy Geopolitics, Energy Consumption and Climate Change Policy.

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