How rapidly can the world's energy system be decarbonized?

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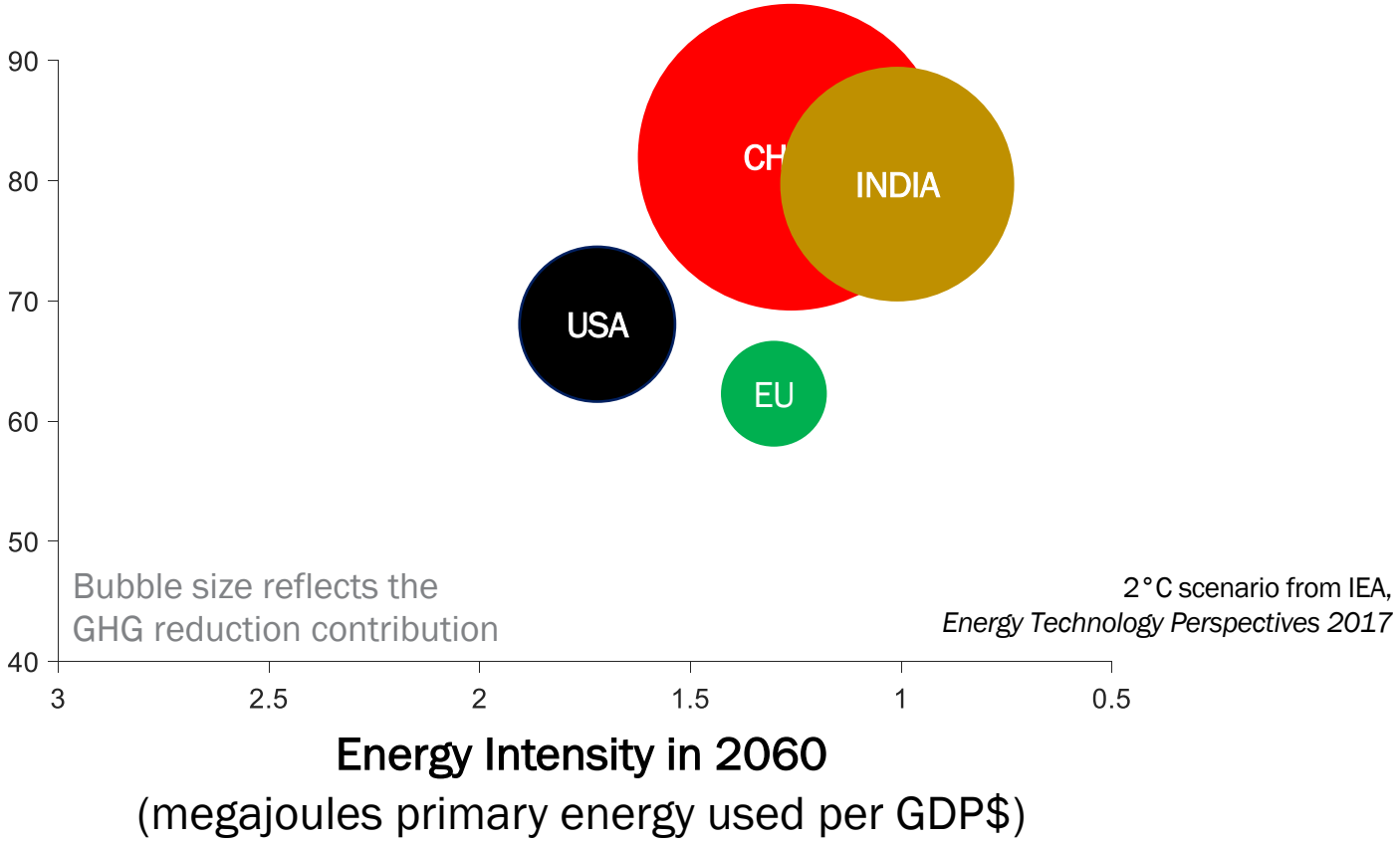
Challenges for energy-productivity improvement



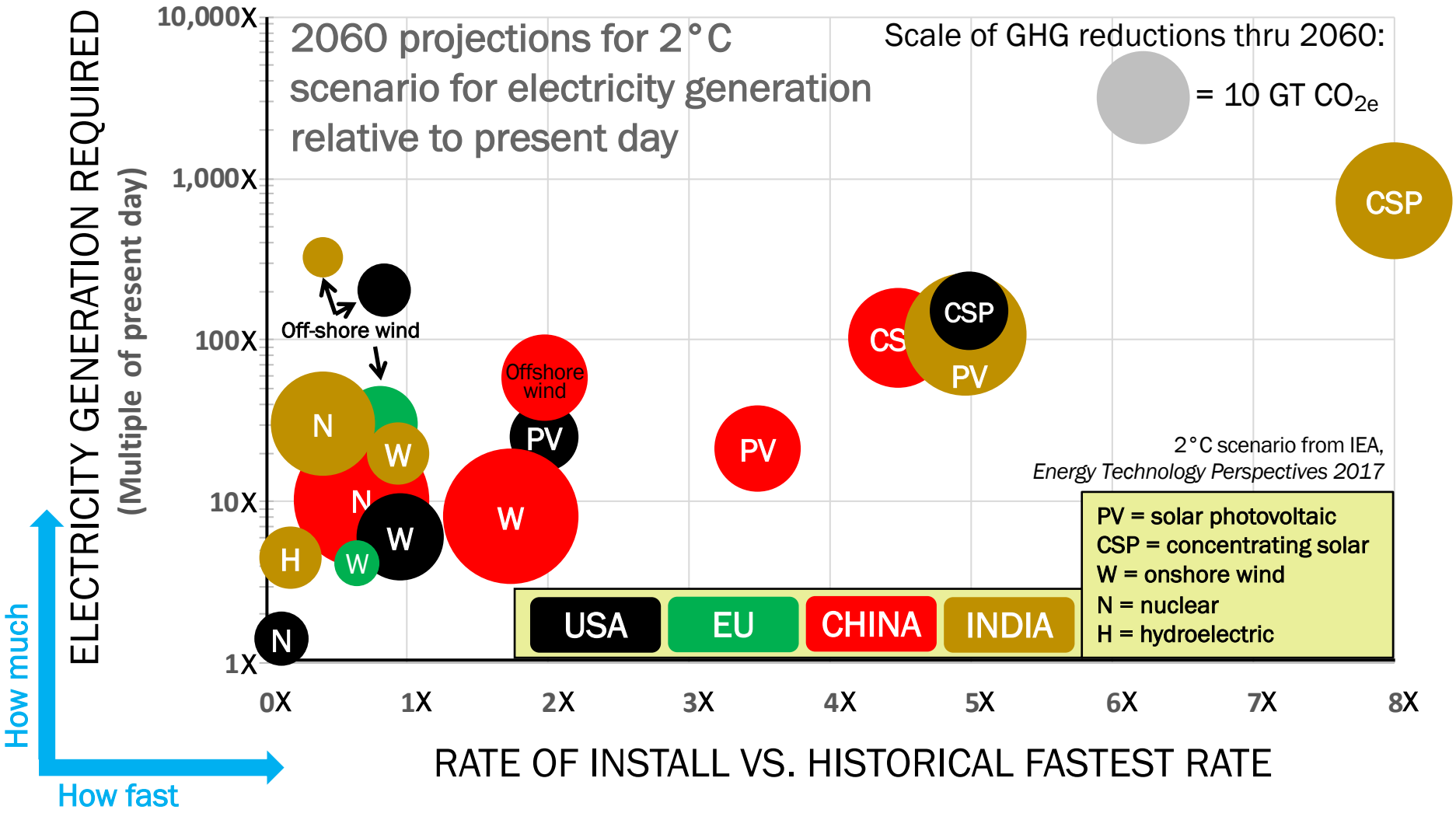
By 2060, India and China are projected to have

(a) The highest energy productivity in the world.

(b) Achieved bigger energy productivity gains than any other countries

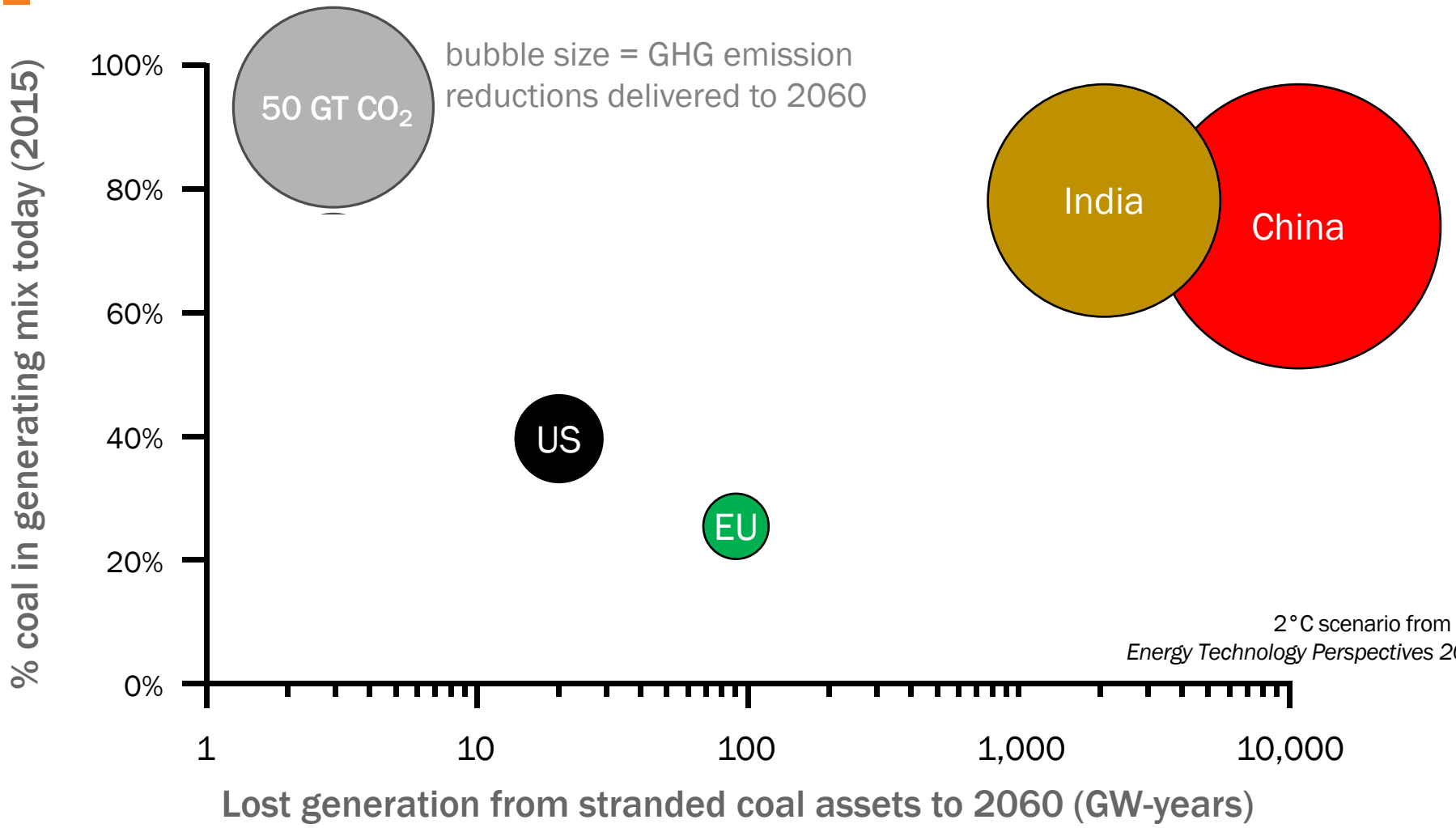
Courtesy of Joe Lane and Chris Greig, The University of Queensland

Challenges for low-carbon electricity supply



Courtesy of Joe Lane and Chris Greig, The University of Queensland

Challenges of early coal-plant retirements



2°C scenario from IEA, *Energy Technology Perspectives 2017*

Courtesy of Joe Lane and Chris Greig, The University of Queensland

Rapid Switch – a new global, cross-disciplinary collaboration seeking insights to maximize the pace of decarbonization

- Regional, sectoral, and technological assessments of
  - Industrial bottlenecks -- critical materials, manufacturing capacity, supply chains
  - Human & organizational capacity for systems and infrastructure transformations
  - Political systems, social norms/behaviors, and other influences
  - Broader social and economic consequences of transitions
- Inform technology innovation and investment decisions, human resource development efforts, policies to accelerate mitigation.
- Initial focus on grid decarbonization: India, U.S. case studies and comparative analysis.

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