

# Hybrid Renewable Energy Systems – towards Sustainable Energy For All in 2030

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**The challenge?** The role of research community to transfer state-of-the-art technology and innovative business models to contribute to achieve universal energy access in 2030 according to the Sustainable Energy for All (SE4ALL) scenario.

## Why is this important?

- 1.3 billion people without energy access is a global challenge for human and societal sustainable development.
- \$1 trillion of investment is expected in SE4ALL scenario. Around 60% of the investments will be in isolated off-grid and mini-grid systems, with the relevant goal of duplicating the renewable energy sources in the energy mix.

**What opportunities can be identified** after the contributions from recent years research?

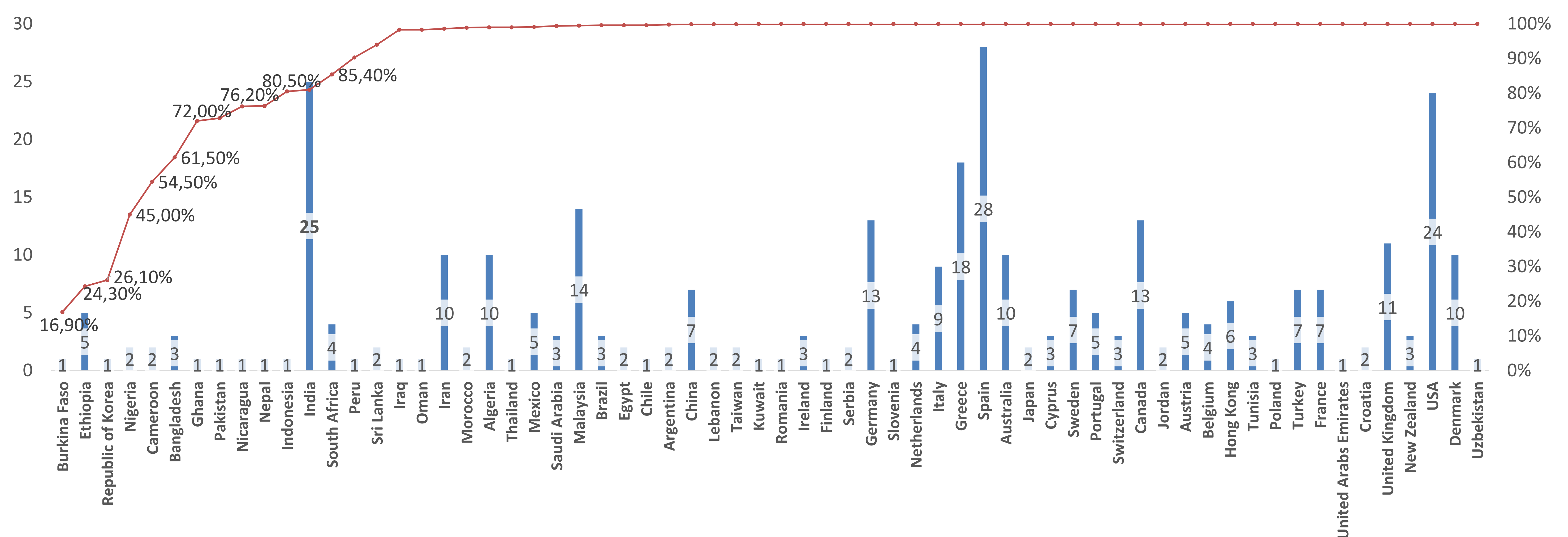
-> **More multidisciplinary research integrating technical and economical approach, with environmental, social, or political aspects to develop innovative business models and enabling investments.**

Most of the research publications are related to technical and economical aspects  
(68% out of a total of 265 in the period 2005-2015, so 179 publications)



-> **More integration of real-life projects and stakeholders from poorly electrified countries in research work.**

Low research publications by Universities or Research centers in countries with electrification under 85%  
(15% out of a total of 328 in the period 2005-2015, so 48 publications)



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