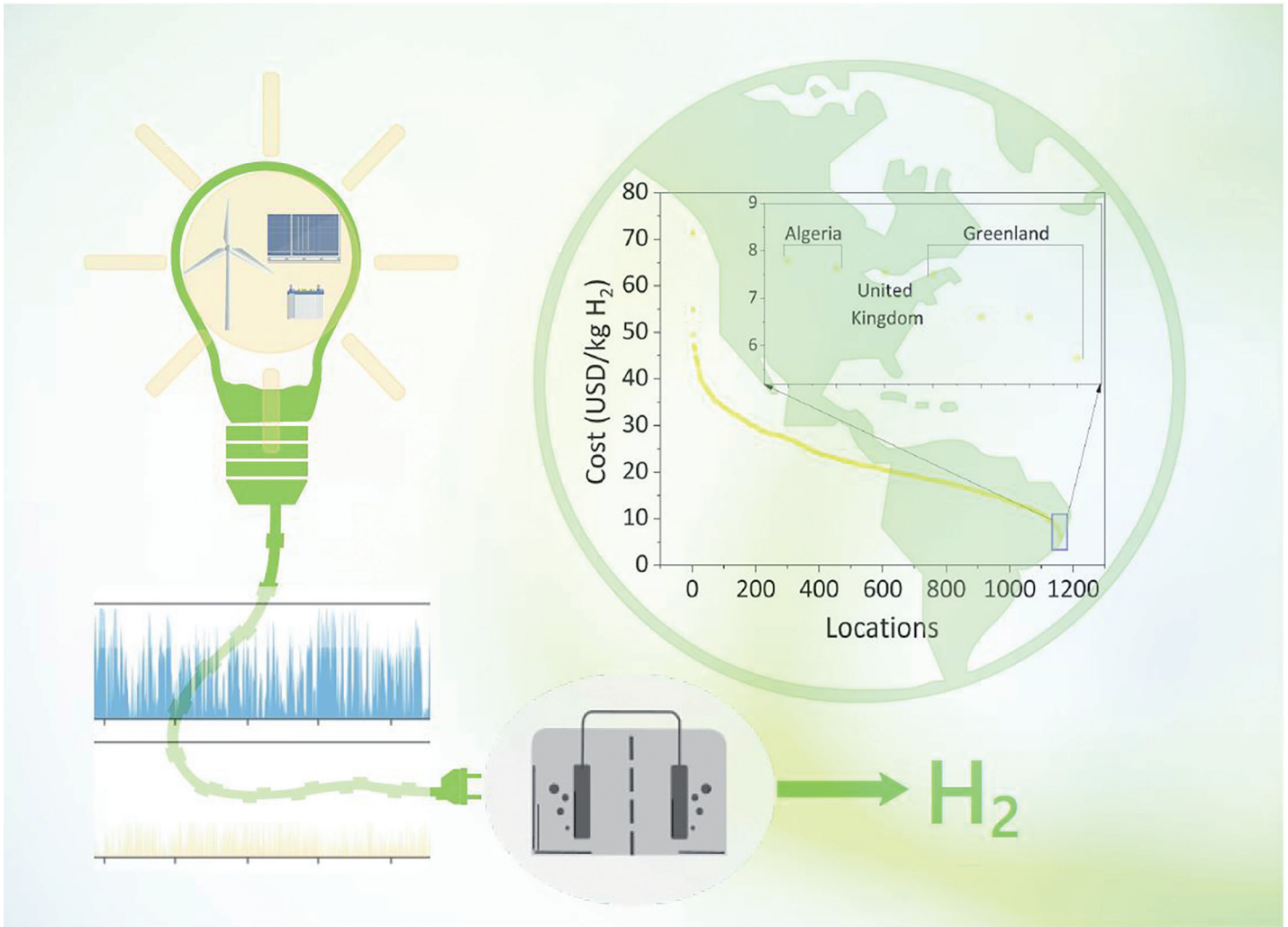

Showcasing research from Professor Niall Mac Dowell's group, Centre for Environmental Policy, Imperial College London, UK.

Quantifying global costs of reliable green hydrogen

This study assesses the present and future costs of reliable green hydrogen, considering inter- and intra-annual variability of renewables, based on 20 years of hourly-resolved wind and solar data from 1,140 locations around the world. Current costs range from \$18 to \$22 per kg of H_2, with a minimum of \$5 per kg. Future projections foresee costs decreasing to \$8–\$10 per kg, with a minimum of \$3 per kg. Success hinges on minimising energy asset oversizing, cutting renewable energy and capital investment costs, and capitalising on surplus energy sales.

As featured in:

See N. Mac Dowell *et al.*, *Energy Adv.*, 2023, **2**, 2042.

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