

# From Microgrids to Global Interconnection: The Electricity System of the Future

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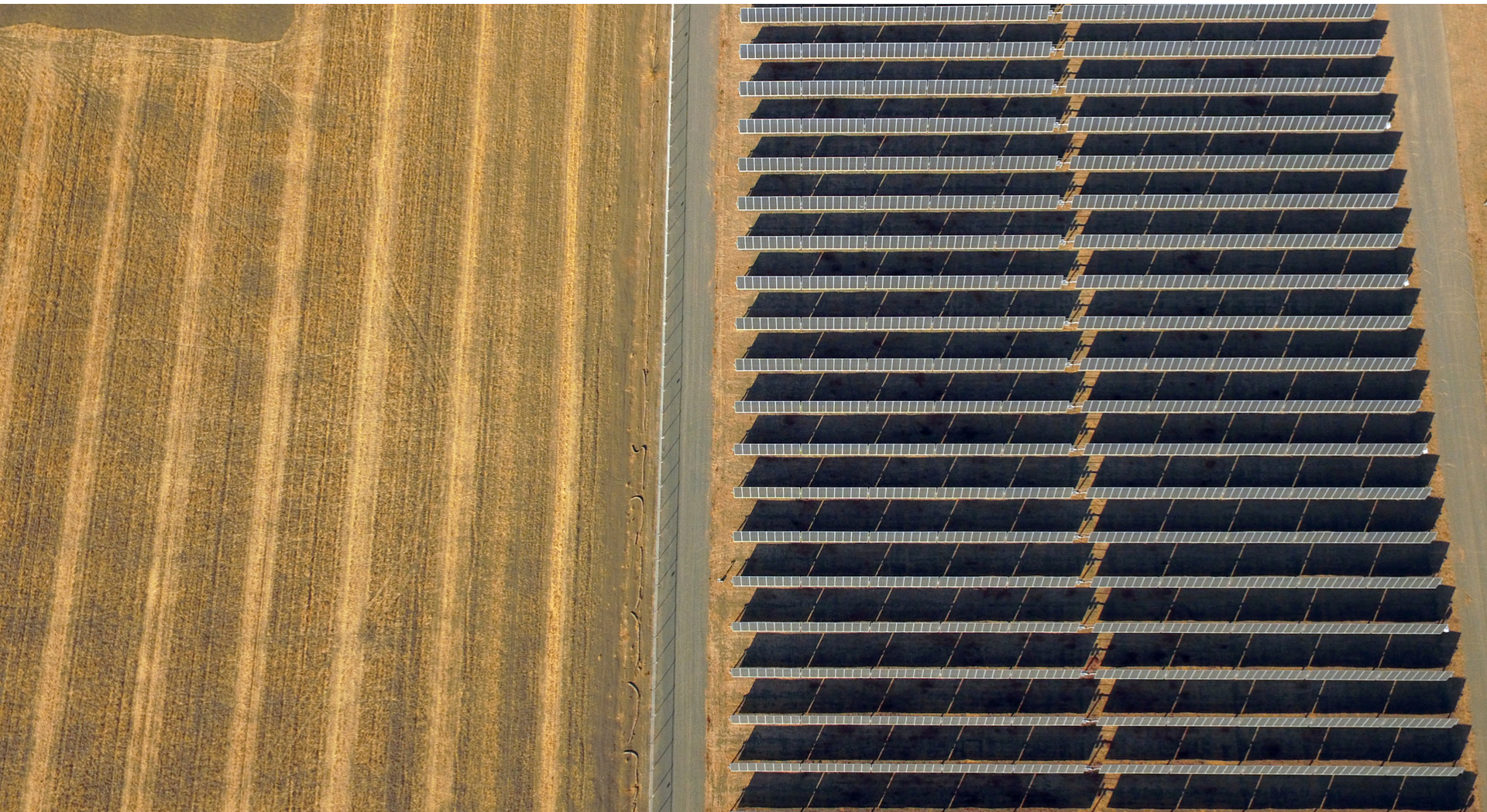












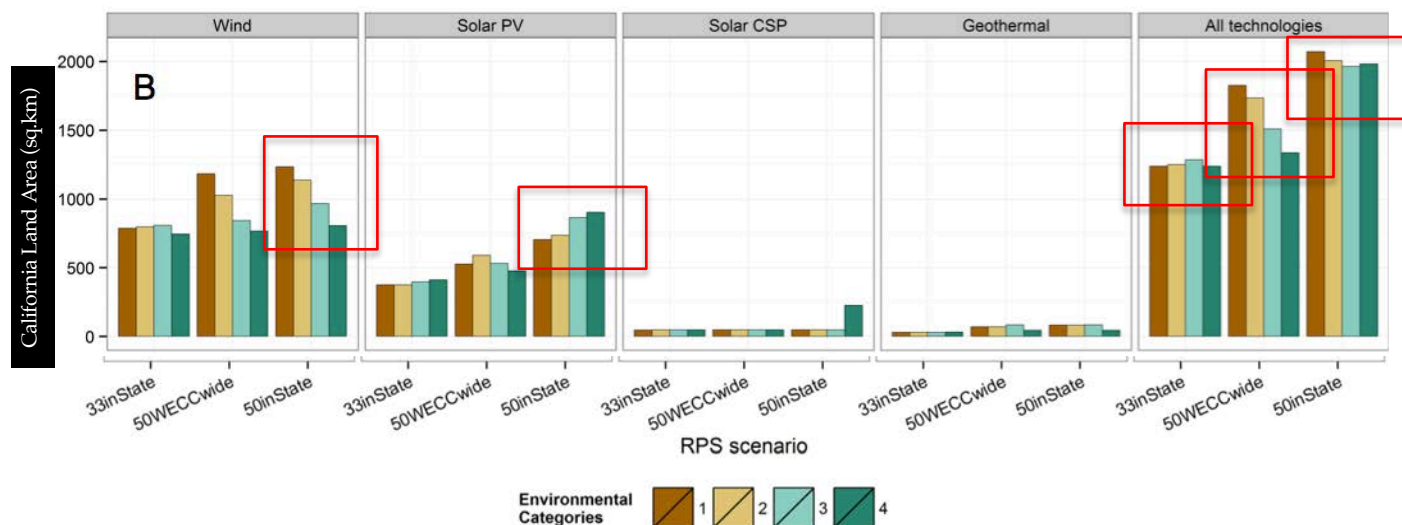


A wide-angle photograph of a solar farm at sunset. The sky is a gradient of blue and orange, with the sun low on the horizon. Rows of solar panels, mounted on metal structures, stretch across the desert floor. The foreground shows the underside of a panel and the ground. The overall scene is serene and emphasizes renewable energy in a natural setting.

Can a 50% Renewable Portfolio Standard be achieved and avoid impacts to natural lands and habitats?

# California Land Area Requirements

- Total land area requirements increase with level of renewables (RPS %)
- Environmental constraints change generation mix
  - For 50% in-state, stronger exclusions reduce wind, increase solar
  - For 50% WECC-wide, stronger exclusions reduce CA land area



50% renewables portfolio with a low impact to natural lands and habitat can be achieved at a cost premium of 2% or less



