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Strategies to Achieve Deep Decarbonisation in Power Generation: A Review

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Abstract : The transition to low-carbon power generation is essential for mitigating climate change and achieving sustainability. This process, however, entails considerable costs, and understanding the factors influencing these costs is critical. This is necessary to cater to the increasing demand for low-carbon electricity across the heating, industry, and transportation sectors. A crucial aspect of this transition is identifying cost-effective and feasible paths for decarbonization, which is integral to global climate mitigation efforts. It is concluded that hybrid solutions, combining different low-carbon technologies, are optimal for minimizing costs and enhancing flexibility. These solutions also address the challenges associated with phasing out existing fossil fuel-based power plants and broadening the spectrum of low-carbon power generation options.

Keywords : review, power generation, energy transition, decarbonisation
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