

Analysis of Renewable Capabilities in California
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A hypothetical scenario was created for phasing out carbon-based energy production in California on April 10th 2022, and July 17th 2021. Data from the California Independent System Operator and the Energy Information Administration was used to calculate the required renewable capacity installment necessary to displace carbon-based energy production at its peak. The results demonstrated that inordinate quantities of renewable capacity would need to be installed to account for the amount of energy generated by carbon-based production. This disparity is further compounded by the extreme variance in renewable energy production throughout the year. The purpose of this research was to explore how renewables can be effectively implemented in the reduction of reliance on carbon-based energy production, and how current methods of renewable energy installment are not an effective method of doing so.