Amount of Energy Required to Reduce the Climate Overshoot and Remove CO2 to Reach Safe Harbor (Z)

- **According to Dr. David King and MIT, humanity must remove 500 billion tons of CO2 from the atmosphere to reach Safe Harbor (350PPM)[1]**

Assumptions on Energy Requirement:

CO2 to be Removed	500 Million Tons
Energy Required to Remove 1 Ton of CO2[2]	3,000kwh

Calculations:

500 Million Tons x 3,000kwh = $1.5x10^{15}$ kwh

$1.5x10^{15}$ kwh ÷ 8760 (hours in a year)

= 171,233GW

1. 2023 MIT Climate Portal: How Much Carbon Dioxide Would We Have to Remove From the Air to Counteract Climate Change? https://climate.mit.edu/ask-mit/how-much-carbon-dioxide-would-we-have-remove-air-counteract-climate-change
2. Atmospheric Alchemy: The Energy and Cost Dynamics Of Direct Air Carbon Capture: https://link.springer.com/article/10.1557/s43581-024-00091-5