



Temperature effects on future energy demand in Sub-Saharan Africa

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Climate change is projected to adversely impact different parts of the world to varying extents. Preliminary studies show that Sub-Saharan Africa is particularly vulnerable to climate change impacts, including changes to precipitation levels and temperatures. This work will analyse the effect of changes in temperature on critical systems such as energy supply and demand. Factors that determine energy demand include income, population, temperature (represented by cooling and heating degree days), and household structures. With many countries in Sub-Saharan Africa projected to experience rapid growth in both income and population levels, this study aims to quantify the amplified effects of these factors - coupled with temperature changes - on energy demand. The temperature effects will be studied across a range of scenarios for each of the factors mentioned above, and identify which of the factors is likely to have the most significant impact on energy demand in Sub-Saharan Africa. Results of this study can help set priorities for decision-makers to enhance the climate resilience of critical infrastructure in Sub-Saharan Africa.