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Analysis of Electricity and Biomass Usage in Southern Africa

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ABSTRACT Increasing use of electricity by rural households in southern Africa should in theory lead to a corresponding decrease in the role of biomass as a major source of energy for heating and cooking. The purpose of this paper is to report an investigation using secondary energy consumption statistics of the impact of electricity access on the consumption of biomass in the rural areas of these countries. The analysis involved computing moving mean household electricity and biomass consumption levels for the period 2000-2010 in order to identify trends. The resulting trends were then analyzed for individual countries and for the region as a whole. The results indicate a respectable but variable increase in household usage of electricity from thermal stations, national power grids and private generators between countries. This increase, however, has not been matched by a parallel decline in household consumption of biomass in the region. The findings have immediate policy and planning implications for the energy sector because the heavy reliance on biomass poses a direct threat to the environment at large and to human health in particular.