THE EFFECTS OF BIOGAS ENERGY ON HOUSEHOLD WELFARE IN WAITALUK LOCATION, TRANS NZOIA COUNTY KENYA

By

Hubert Wamalwa Weyao

This Dissertation is submitted as partial fulfillment of the requirements for the award of a Masters Degree in Development Studies (MDS) from

St. Paul's University, Kenya.

August, 2015

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Abstract

Increased demand of renewable energy is high on government development agenda globally for several reasons. The world is experiencing global warming and increased respiratory infections caused by green house gases and carbon smoke from fossil fuel and biomass.Since the innovation of biogas technology in Persia and the coming to being of the theories on diffusion of innovations by Rogers many countries have adopted the biogas technology.Kenya has made strides in the right direction for the last 58 years since biogas technology was adopted in the country.While recognizing the potential to install an estimated 65,000 biogas plants in Kenya in just over 10 years, it was revealed that the current market for biogas in Kenya was immature, with sluggish albeit NGO and private sector-led sales, driven by a small number of pioneers. Again, it was noted that the stakeholders had limited capacity to generate the level of activity that could spur absorption of the inherent but untapped demand. It was important for the study to carry out an assessment of the effects of biogas on household welfare with the purpose to assess the effects of biogas energy on household welfare in Waitaluk location Trans- Nzoia County in Kenya. To achieve the purpose the study was guided by the following objectives;the effects biogas energy on household incomes, health of household members, household chores and time management. The data was collected from 300 households that were targeted by ministry of livestock in provision of biogas in Waitaluk location that was represented by a sample size of 60 households that comprised of 30 households connected with biogas and 30 households that had not been connected with biogas. The study used focus group discussions, interviews and questionnaire to collect the data. The study design was descriptive which was to enable collect much information which was analyzed and presented by the use of narrative for qualitative data, tables and figures for quantitative data. Guided with the above objectives the study came out with the following findings, 54.3% agreed that use of biogas save household incomes as opposed to 50% who are not sure from those households not connected with biogas (Table 4.10) implying that there were substantial effects on incomes of the household. it found out that 80% agreed that the use of biogas improved the health of household members by reducation on respiratory infections that were being caused by the use of biomass(table 4.12) .All the respondents, (100%) strongly agreed or agreed that meant the use of biogas for cooking improved the health of the members (Table 4.13). The main reason for using biogas revolved around the availability of the technology that was brought to area by the ministry of livestock. The reason was the availability of cattle that provided the dung which is used to feed the bio-digesters (Table 4.5). However, most of the respondents (62.2%) who were not connected with biogas missed out because they neither aware or the project had not reached them. It was also established that there was major improvement (60%) agreed that biogas improved gender participation in house chores (Figure 4.2). The use of biogas energy had influenced and changed the perception of men on their belief that Kitchen work is solely for women and children. The reason could be cumbersome work of fetching firewood. Consequently, it was found out that the use of biogas indeed save timed for cooking (66.7%) strongly that use biogas improve gender participation in house chores(Figure 4.3). The reason could that biogas there is no time to go round fetching it except putting on biogas cooker.

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