

# **THE ADOPTION AND USE OF RENEWABLE ENERGY TECHNOLOGIES: EXAMINING THE EFFECTS OF THE 2014 ENERGY CRISIS IN GHANA.**

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## **Abstract**

Adoption of renewable energy technologies

This study sought to investigate the factors that affect behavioral intentions to adopt and use renewable energy technologies in Ghanaian households as well as explore the moderating role of consumers' environmental consciousness in the factors that influence behavioral intentions to adopt and use renewable energy technologies in Ghanaian households. The study evaluated the effect of consumers' behavioral intention on adoption renewable energy technology. The study employed a mixed methods approach where a sample of two-hundred and fifty 187 respondents were selected for the quantitative study while three experts (3) were used for the case study. Participants were drawn using a purposive sampling method. The reliability and validity of the constructs were within the minimum threshold. The outcome of the study showed that performance expectancy and facilitating conditions were positively related to behavioral intentions while behavioral intentions was also positively related to adoption. Again, effort expectancy also showed a positive relationship with performance expectancy. The test of the moderation hypothesis showed that environmental consciousness negatively moderated the relationship between performance expectancy and behavioral intentions. The study recommended that the Energy Commission, ECG, Entrepreneurs and other stakeholders should mainly focus on creating more awareness of what can be done with renewable energy technologies and what benefits can be obtained by them. Feed on the expectations of the customers by practically proving to them difference the new technology can bring on board. Increasing customer's expectations that such new technologies will benefit them by helping them to accomplish their tasks more quickly, increasing their productivity and improving their job performance will greatly improve the use of technologies. Stakeholders should also focus on taking away barriers for the use of renewable energy technologies to enable its easy use.

**Keywords:** performance expectancy, effort expectancy, environmental consciousness, behavioral intentions, adoption.