Review Form 1.6

Journal Name:	**Journal of Energy Research and Reviews**
Manuscript Number:	**Ms_JENRR_87317**
Title of the Manuscript:	**CONVERTING NIGERIAN COAL DEPOSITS TO SMOKELESS COAL FUEL FOR ENERGY TRANSITION AND SOCIO-ECONOMIC TRANSFORMATION**
Type of the Article	**Original Research Article**

General guideline for Peer Review process:

This journal's peer review policy states that **NO** manuscript should be rejected only on the basis of '**lack of Novelty'**, provided the manuscript is scientifically robust and technically sound.
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PART 1: Review Comments

	Reviewer's comment	**Author's comment** *(if agreed with reviewer, correct the manuscript and highlight that part in the manuscript. It is mandatory that authors should write his/her feedback here)*
Compulsory REVISION comments	The results of the research was not properly discussed.	
Minor REVISION comments	Table Titles are not properly labelled. Table 4 should be properly prepared to indicate the time and temperature.	
Optional/General comments	Although minor, the author needs to pay attention to the typographical errors in the manuscript. The methods of study was presented as a laboratory report rather than a research report. This is unethical, the researchers should have rephrased those statements rather than using them verbatim. From the picture presented in Fig. 8, error due to parallax was clearly observed in the positioning and reading of the thermometer. This was however not accounted in this study. Though the idea behind the research is good, but the reporting style is very poor. Besides the parental material and initial decomposition before and during the peat stage, the degree of coalification (rank) is decisive for microscopic appearance of the macerals. Morphology and reflectance under incident light are the main properties in distinguishing macerals and macerals groups under the microscope (Teichmueller, 1989). In low rank coals, relatively hydrogen–rich liptinite show the lowest reflectance, the relatively oxygen–rich vitrinite a medium reflectance, while the relatively carbon–rich inertinite the highest reflectance. Amongst the inertinites, fusinite presents a special problem. High content of inertinite, represented mainly by fusinite and semi-fusinite, reduces the combustibility and smokeless fuel production capability of coals (Schapiro and Gray, 1964; Bustin et al., 1985). Inertinites (fusinite + semi-fusinite) along with the ash content (mineral matter) must greatly be reduced or removed completely to increase the quality of the coals for smokeless fuel production. 2.3 Defusinization Defusinization is a new concept proposed by researchers at IBBU after some reviews of literature on coal utilization. The concept is based on the very early studies on coal carbonization by Schapiro and Gray (1964) and Davis et al. (1976). The studies discovered that during the carbonization process, coal softens, fuses and resolidifies to form the porous carbon-rich material that is called coke. The capability of a coal to behave in this manner is very essential, and only the bituminous part of the coal series has such a capability, reaffirmed by Bustin et al. (1985). In several previous studies by Obaje et al. (1994), Obaje (1997), Obaje et al. (1999a,b), Jauro et al. (2006), it was discovered that inertinite macerals (fusinites) constitute great obstacle to the performance of coal during carbonization, combustion and liquefaction and would not act differently in its capability for the production of smokeless fuel. In relation to bulk organic geochemistry, the TOC of the coal sample is the burnable organic matter content, the HI is the inherent fuel, the OI depicts the smokability, green house gases content and the amount of retardants. The Tmax is a measure of the coal maturity and rank (see Table 2)	

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PART 2:

	Reviewer's comment	**Author's comment** *(if agreed with reviewer, correct the manuscript and highlight that part in the manuscript. It is mandatory that authors should write his/her feedback here)*
Are there ethical issues in this manuscript?	*(If yes, Kindly please write down the ethical issues here in details)*	

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