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Journal Name:	**Advances in Research**
Manuscript Number:	**Ms_AIR_39431**
Title of the Manuscript:	**Dual Fueling a Diesel Engine with Syngas Produced From Woodchips**
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.
To know the complete guideline for Peer Review process, reviewers are requested to visit this link:

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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 manuscript suffers from grammatical errors and some superfluous material. Thus it demands compulsory revision before being considered for publication. **1. Grammatical errors:** Introduction section a) Paragraph 2 line 1 (P2L1): Put comma after 2016 b) Restructure the sentence "According to the …….. reach 439.0 million in 2050 [5]." Revise it like population increased from *population data* in 1950 to *population data* in 2010. Use small p for population in this sentence. c) and But? Correct it. d) Use reference [9] in the last of sentence "Biomass feedstock accounts ….. greater than its use." e) Restructure the sentence "The U.S. joint study …….agricultural resources [11]." Also mention year corresponding to biomass data. f) Costs or cost? in the sentence "The increasing costs of energy…are finite [13]." Many studies suggest that the costs or cost? of fossil fuel…. g) Remove full stop before reference [17]. h) Define FB where it appears first and later use it in the abbreviated form. i) Low overall process performance? or overall low performance in the process. j) Correct the sentence as "This will result…process which helps in maximizing the…performance." k) Space after (FB) in the sentence "The present cost range …..be expected [19]." l) Use ',' and 'the' after in addition and before pretreatment, respectively in the sentence "In addition pretreatment and ….. feasible [20]. In the same sentence, use 'the' after raise and replace costs with cost. Last few words of this sentence ….from economically feasible biomass? m) Remove research word from the sentence "Figure 1 shows….(WWTP)." Materials and methods section n) Use ','after generator in the sentence "As a load to ….heater was used." o) Restructure the sentence "At the same time and ……at the lighting port level." p) Only use SI units throughout the manuscript. No need of writing °F in the bracket. Mention woodchips dimensions in mm only, no need to write these in inches. Results and discussion section o) Use standard abbreviated form 'avg.' for average instead of ave. **2. Superfluous materials**: a) Fig. 3 is unnecessarily as the manuscript does not cover the design aspect of gasifier. b) Fig. 4 is only zoomed view of a particular section of Fig. 5 and it is unnecessarily at all. Mention all the components in the Fig. 5 itself. **3. Technical aspects:** a) Include technical specifications of engine, gasified and generator in the manuscript. b) Whether it's syn gas or producer gas? Figure 1 shows the syn gas having N_2. The composition of syn gas doesn't have N_2. c) It is very inadequate to test the engine only at one load. Why did not this investigation involve different engine	

	loadings? d) Why there is a need of vacuum cleaner? Doesn't engine running initially on diesel fuel provide start ability to gasifier by sucking the flame during suction stroke of cycle? e) In eqn. 3, instead of genset efficiency, write it as overall efficiency of genset which is the ratio of output energy (electrical power) to input energy (fuel) expressed as a percentage. Correct it to $100*G_{en}/D_{en.}$ f) When considering the dual fuel mode operation, this is completely wrong. What's about energy of syn gas? For dual fuel model, Overall efficiency of genset = 100 * Output energy/(input energy of diesel + input energy of syn gas). It is one of the major defects in the manuscript when considering technical aspects. g) Have you measured and maintained the same speed of engine having the same load in both single and dual fuel mode? If yes, then why there is so much increase in the output energy (electrical power) during dual fuel operation for the same load? If not, then the whole procedure is completely wrong for comparing the overall genset efficiency in both mode and also for the calculation of diesel fuel savings. If you have not measured and maintained the same speed of engine having the same load in both mode, then this is to be done by following the right procedure. The G_{eff} is the product of engine thermal efficiency and generator efficiency. As for the same load, the thermal efficiency of engine is different in single fuel and dual fuel mode. Finally there will be significant difference in G_{eff} of both mode. If you want to compare both the processes, maintain the same speed of engine having the same load in both single and dual fuel mode. When you run the engine on dual fuel mode for the same load (output power) like in single fuel mode, engine speed increases due to supplement energy from producer gas, Although, here governor will reduce the fuel, but it will not exactly match the speed so now you have to adjust the throttle and measure the speed of the engine and adjust until you get same engine speed like in single fuel mode for same load (output power). In this process, based on the difference of diesel consumed in both mode, you will get the diesel fuel savings. h) If you have not followed the right procedure, G_{eff} column in Table 1 for dual fuel mode is meaningless as it is not calculated in the right way. Either remove this column or correct it after following the right procedure as mentioned above for which you will require flow rate and calorific value of syn gas. **References:** **a)** References [22], [25] and [26] are not in the standard format required by any journal. These are not either from published papers or from any text book. It is better to remove these from references. You can give credit/courtesy in the bracket after figure title itself.	
Minor REVISION comments		
Optional/General comments	–	

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