Dear Dr. Wang,

Thank you for sending the manuscript/revised manuscript, "Performance analysis and optimization of a combined cooling and power system using low boiling point working fluid driven by engine waste heat" to Energy Conversion and Management for publication. I apologize for the lengthy period of review. The review is now complete, and unfortunately, it is not completely favorable. Therefore, the paper cannot be published in Energy Conversion and Management as it is presented. I have consolidated the review comments below in the hope that they will be helpful to you in modifying the paper.

Reviewer Comments:

Editor: Avoid lumping references as in [2, 3] and all other. Instead summarize the main contribution of each referenced paper in a separate sentence. How each paper is related to the work presented in the manuscript? What is being challenged or extended?

Please avoid having heading after heading with nothing in between, either merge your headings or provide a small paragraph in between.

Avoid using abbreviations and acronyms in title, abstract, headings and highlights.

The first time you use a chemical formula in the text, please write the full compound name and the formula in parenthesis. Do not use chemical formula in the title, abstract, chapter headings and highlights.

The first time you use an acronym in the text, please write the full name and the acronym in parenthesis. Do not use acronyms in the title, abstract, chapter headings and highlights.

The introduction should include problem context, literature review and the hypothesis based on the gap analysis of the previously published research.

The originality of the paper needs to be further clarified.

Reviewer #1:This manuscript introduces the performance analysis and optimization of a combined cooling and power system using low boiling point working fluid driven by engine waste. The novelty and the impact of the present manuscript is limited and the relation to previous works is poor.

Reviewer #2: Corrections mainly involve formatting points, such as English grammar, citation of references, etc.; and insufficient information regarding some equipment used in the research. Concerning the formatting and methodology the points are as follows:

- In Nomenclature, present separately the Latin symbols, Greek symbols, Acronyms, Subscripts and Superscripts, because of the form that is presented, it is confused; include the acronym TEG - Thermoelectric generator and GA - Genetic Algorithm; if the "K" of K$" is "kilo", must be represented by "k".

- In lines 72, 96, 97 and 203, separate the temperature values of its units, for example, 90 ºC (line 72).

- In line 104 change "to the utilize" by other word.

- In line 126 put comma between gas and while, and after "But" in line 127.

- In line 139 and 140 change the word "flew" by "flows".

- In lines 148, 149 and 150 put "2" of "CO2" as subscript.

- In line 166 change the word "consumption" by "combustion".

- In line 174 put comma after "Meanwhile".

- From line 197 to 206 write "Several assumptions are made to simplify the simulation of the system, which are: (1) the system keeps a steady state; (2) the heat and friction ….are not considered; and so on.

- In line 228 put a comma after "thermodynamic".

- Begin the sentence of the line 236 by "In this study, all components in the system …" and remove "in this study" of the end of the sentence.

- In line 257 put comma between "expenses" and "etc."

- Indicate that equations from 11 to 21 are proposed in [33].

- In line 265 write "where Ki,turb are the constants corresponding to the turbine type; and W is the power …."; and in similar manner in lines 276, 282 and 286.

- In lines 297 and 784 I suggest to change the word "Tube-and-shell heat exchangers" to "Shell-and-tube heat exchangers".

- Verify in the equation (23) if the exponent of the term in brackets of the numerator is "n - 1".

- In line 336 add the word "years" after 30.

- In lines 340 and 348 change the word "steams" by "streams"; and in lines 342, 343 and 349 change the word "steam" by "stream".

- In line 348 remove the space before "where" and verify if the variable "c" is the "levelized exergy cost of the system" or is the "average cost per unit of exergy" according to the Nomenclature.

- In line 349 add "of" after out.

- In line 360 and 363 add the word "where" before "cfuel" and "cBt", respectively; and remove the initial space.

- In line 365 add "… and the fuel-cost-related part, given by Eq. (32) and (33).

- I suggest that sections 4.1.1, 4.1.2 and 4.2 are inserted at the end of section 3, because they represent materials and methods and not results and discussion.

- In line 380 remove the word "gas" and maintain only "… supercharger engine."; in line 382 replace "The heat load capacity" by "The thermal load of the …" and deleted "when cooled down to the acid dew temperature".

- In line 386 express the seven key parameters by its symbols.

- In lines 392, 393, 395 and 396 express the variables "W", "Q" and "c" in italics.

- Start the Results and discussion section from section 4.2.1.

- In all results shown from Fig. 2 to Fig. 15 only one parameter at a time was varied, while the others were maintained constants? Clear this in the text.

- In line 552 change "The can be explained …" by "This can be explained …".

- Seems incomplete to me the sentence of the line 612 "Thus, the capita-cost-related …".

- In line 641 remove the word "vapor" after "… vapor generator 2".

- In line 658 add "of" after "Though".

- In the sentence of line 676 I suggest to write "The cooling capacity (Qcool) increases slightly with the …" because by Figure 12 the increase is very small and, hence, should also be corrected at the end of line 680.

- In line 709 add a "t" after "can'".

- Rewrite the two sentences from line 713 to 715.

- In the paragraph from line 751 to line 753 I suggest to refer to Fig. 8 and 9 where are evidenced the highest output power, exergy efficiency and the lowest levelized exergy cost (but not the cooling capacity) at the highest inlet pressure at the high-pressure side ORC turbine.

- The sentence of conclusion (2) is very extensive and I suggest ending it in "… for the system product.", beginning the next sentence such as, "Meanwhile, the increase of the ORC …".

- In line 810 replace the word "frication" by "friction".

- In the "References" use the abbreviation names of the Journals, such as, Energy Convers Manage and the number of pages as 201-14, instead of using 201-214, for example; in the reference [14] line 863 change the number of the pages to 215-32 to differentiate from reference [12]; in reference [16] correct the names of authors to Rajabloo T, Bonalumi D, Lora P; in reference [17] add at the end of the author names, the author Zhu W; in reference [31] add at the end of the author names, the authors Liu H, Wang E, Yao B; in reference [32] correct the author names to Bejan A, Tsatsaronis G, Moran M and the first name of the publisher to John; in reference [33] add other authors, i.e., Turton R, Bailie RC, Whiting WB, Shaeiwitz JA; what is the reference [35]?

- In table 3 replace the word "Term" by "Parameter" and the same in Table 8; in this table I suggest that the values presented be limited in two digits after comma to standardize all.

- In Table 6 replace "Ranges of the decision variables" by only "Parameters or Variables" and add "Operation" before "Range".

- In Table B1 the source is [33} and not [32].

Reviewer #3: The authors have conducted a study that covers a topic of great interest: "Performance analysis and optimization of a combined cooling and power system using low boiling point working fluid driven by engine waste heat". This very important topic deserved a great deal of attention. However, many shortcomings can be identified. Therefore, I recommend that these shortcomings, as listed in the following, should be addressed before it can be considered for publication;

- Abstract section, present in more detail and clarity

- Please, Give more numerical results about the study results in the abstract section.

- Analysis of the state of the art in the introduction is insufficient, which undermines novelty of this work. An updated and complete literature review should be conducted.

-Literature section should be given current papers after 2017.

-How were reference conditions (environmental pressure and temperature) considered?

- The level of English throughout the manuscript does not meet the journal's desired standard. There are a number of grammatical errors.

- Introduction part needs to be extended by some of the recently published papers to show the importance of multigeneration systems in high-quality journals

- Originality of the paper should be emphasized clearly. How this study differs from related published papers?

- Discuss and elaborate more on the exergy destruction rates of system and sub-systems. They were not written in the text.

I hope these comments will be helpful to you. My sense of the reviewers' comments is that there is a very good basis on which I can recommend that this paper be modified in a responsive manner to the comments above.

In the revision process we would like to request you return three files:

(1) Please submit a list or table of changes (or your rebuttal) against each point raised when you upload your revised article and upload this as your 'Response to Reviewers' file/doc - note our system will not allow you to complete the resubmission process without this file.

(2) Also please highlight any revised text using coloured highlighting in a separate word document. This will enable the Editor /Reviewers to identify the amendments and subsequently make faster decisions on the revisions.

(3) In addition we request one final file, a 'clean' word document of the revised manuscript without any annotations, highlighting or comments, in font 10 or 12 pt with double line spacing.

If the modification is done carefully and completely, upon re-submission and evaluation, I think you can be confident that the paper will be accepted for publication in Energy Conversion and Management. Thank you again for sending this paper to Energy Conversion and Management for consideration.

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Best regards,

Neven Duic

Editor

Energy Conversion and Management

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