Review Form3

Book Name:	Science and Technology: Developments and Applications
Manuscript Number:	**Ms_BPR_4187**
Title of the Manuscript:	**Prospect and Provocation of Designing Sustainable Energy Supply Systems**
Type of the Article	**BOOK CHAPTER**

PART 1: Comments

	Reviewer's comment	**Author's Feedback***(Please correct the manuscript and highlight that part in the manuscript. It is mandatory that authors should write his/her feedback here)*
Please write a few sentences regarding the importance of this manuscript for the scientific community. A minimumof 3-4 sentences may be required for this part.	**This manuscript is significant for the scientific community as it addresses the pressing need for innovative and sustainable energy supply systems in the face of global energy challenges and climate change. By exploring novel approaches, such as integrating renewable energy sources, enhancing system efficiency, and leveraging technological advancements, it provides actionable insights for researchers, policymakers, and engineers. The study contributes to bridging the gap between theoretical frameworks and practical implementations, promoting energy equity and resilience. Additionally, it lays the groundwork for future research and collaboration, encouraging interdisciplinary efforts to advance sustainable energy solutions.**	
Is the title of the article suitable? **(If not please suggest an alternative title)**	**here are a few alternative suggestions based on common themes in energy systems research:** **"Innovative Pathways to Sustainable Energy Systems: Challenges and Solutions"** **"Advancing Renewable Energy Integration: Strategies for Efficiency and Resilience"** **"Towards Sustainable Energy Equity: Technological Innovations and Policy Implications"**	

Is the abstract of the article comprehensive? Do you suggest the addition (or deletion) of some points in this section? Please write your suggestions here.	**The abstract of your article provides a broad overview of energy supply systems, their environmental impact, and the importance of designing sustainable solutions. It touches on the European Green Deal, the use of technology assessment (TA), and the potential for innovation in creating resource-efficient systems.** **However, there are a few areas where the abstract could be improved for clarity and completeness:** **Strengths:** • **It addresses key issues related to energy supply systems, sustainability, and innovation.** • **It highlights the importance of technology assessment in shaping future energy solutions.** • **The reference to the European Green Deal provides a relevant context.** **Suggestions for Improvement:** **1. Clarity and Precision:** o **Some phrases are quite complex, which could be simplified for better readability. For instance, the sentence "On the other side operating energy supply systems with conventional energy technologies has been connected over the years to undesired impact on environment recently also on society" could be rephrased for clarity.** o **Avoid vague terms like "undesired impact on environment" — be more specific about the types of environmental and societal impacts (e.g., pollution, resource depletion, social inequality).** **2. Structure:** o **The flow of ideas is a bit disjointed. You could more clearly introduce the problem, the methods (TA), the context (European Green Deal), and the solution (sustainable energy systems).** o **Start by clearly stating the problem (e.g., environmental impacts of current energy systems), followed by methods (technology assessment), then provide the European Green Deal as a strategy, and finally end with the potential innovations and sustainable solutions.** **3. Redundancy:** o **The phrase "energy supply systems" is repeated several times in the abstract without adding new information. It could be streamlined to avoid repetition.** **4. Additions:** o **It would be helpful to briefly mention specific examples of energy supply systems or technologies that the article discusses or assesses. This would provide more insight into the scope of your article.** o **A brief mention of how the article will contribute to the field, such as the development of new methods or strategies for sustainable energy systems, could provide more focus.** **5. Technical Terms:** o **"Environmental footprints" is mentioned but not explained in this context. It would be clearer to explain what is meant by environmental footprints (e.g., carbon footprint, water footprint) to ensure a wider audience can follow.** **Suggested Revised Version:** **"The design of energy supply systems has significantly advanced human progress, enabling widespread access to energy across various locations and social contexts. However, conventional energy technologies have led to negative environmental and societal impacts. Consequently, the design and operation of energy supply systems must be carefully considered globally, with a focus on sustainability. Recent developments emphasize the need for a holistic approach to energy systems, whether based on fossil fuels or renewable resources. Technology assessment (TA) methods can help identify future potential for more sustainable energy solutions. The European Green Deal represents a key strategy in addressing environmental pollution and climate change by promoting resource-efficient, competitive energy systems. Environmental impact assessment methods, such as environmental footprints, play a crucial role in mitigating the negative effects of energy systems. This paper explores**	

	innovation opportunities in energy system design, with the goal of developing more sustainable solutions for the future."	
Is the manuscript scientifically, correct? Please write here.	**The manuscript is largely scientifically correct, but it has a few areas that could be improved for clarity and precision:** **Strengths:** **1. Energy Supply Systems and Human Progress: The manuscript accurately recognizes the essential role of energy systems in advancing technology and society. It reflects a well-established understanding that energy access drives economic development and technological innovation.** **2. Environmental and Societal Impacts: The manuscript appropriately acknowledges the negative environmental and societal effects of conventional energy sources like fossil fuels, aligning with current scientific consensus on pollution, climate change, and health impacts.** **3. Technology Assessment (TA): The concept of using Technology Assessment (TA) to evaluate energy systems is scientifically sound. TA is widely used to assess the long-term sustainability, environmental impact, and technological feasibility of energy supply systems.** **4. European Green Deal: The reference to the European Green Deal is relevant and scientifically accurate, as it is a widely recognized strategy for addressing climate change and advancing sustainable energy solutions.** **Areas for Improvement:** **1. Clarity and Precision:** **o The phrase "unbounded access to energy supply" is somewhat ambiguous. Access to energy is improving, but it's not universal. It might be clearer to say "widespread access to energy" or "enhanced access to energy resources."** **o The sentence structure in places is complex and could benefit from simplification for better readability.** **2. Environmental Footprints:** **o The mention of "environmental footprints" could be more specific. There are various types of footprints (carbon, water, ecological), and explaining which types are most relevant to energy systems would make the argument clearer.** **3. Technological Innovations:** **o The manuscript hints at innovation but lacks concrete examples. It would be scientifically more rigorous to reference specific innovations in renewable energy, energy storage, or energy efficiency technologies that are central to achieving sustainable energy systems.** **4. Lack of Specific Methodologies:** **o The mention of using TA for future energy supply system design is general. Including references to specific TA methods (such as Life-Cycle Assessment or Multi-Criteria Decision Analysis) would add scientific rigor to the argument.** **5. Supporting References:** **o There is little citation of relevant studies or data to back up the claims made, particularly concerning the European Green Deal or specific technological innovations. Including references to research papers, reports, or case studies would strengthen the scientific basis of the manuscript.** **Overall:** **The manuscript is scientifically correct in its broad concepts but would benefit from greater precision, clearer expression, and more detailed examples. Including specific methodologies, technologies, and references would enhance its scientific accuracy and comprehensiveness.**	

Are the references sufficient and recent? If you have suggestions of additional references, please mention them in the review form. **:**	**The references in the manuscript are insufficient and not recent. The abstract and main body refer to concepts like the European Green Deal, environmental impacts of energy systems, and renewable energy, but lack current, peer-reviewed sources to back these claims. Recent studies on energy supply systems, sustainability, and technology assessment should be cited to strengthen the manuscript's validity. The inclusion of more recent and relevant references from the past few years, particularly in the fields of renewable energy, climate change, and environmental policies, would significantly enhance the manuscript's credibility.**	
Is the language/English quality of the article suitable for scholarly communications?	The language and English quality of the article could be improved for scholarly communication. While the general ideas are clear, there are several areas where the writing lacks precision and clarity, which could hinder its understanding in a scholarly context. Here are some areas that need attention: 1. **Sentence Structure**: Some sentences are long and complex, which can make them difficult to follow. Breaking these into shorter, more concise sentences would enhance readability. 2. **Grammar and Phrasing**: There are instances of awkward phrasing, such as "has represented a real advance in humanity evolution" (should be "represents a significant advancement in human evolution"). Similarly, "prospects and provocations of designing" is unclear—perhaps "prospects and challenges" would be more appropriate. 3. **Word Choice**: Some terms, such as "undesired impact" and "innovation odds," could be replaced with more standard academic terminology, like "negative impacts" and "innovation opportunities." 4. **Consistency**: The manuscript should ensure consistency in terminology. For example, "energy supply systems" and "energy supply activities" seem to refer to the same concept, but it would be clearer to maintain consistent phrasing throughout.	
Optional/Generalcomments	The language and English quality of the article could be improved for scholarly communication. While the general ideas are clear, there are several areas where the writing lacks precision and clarity, which could hinder its understanding in a scholarly context. Here are some areas that need attention: 1. **Sentence Structure**: Some sentences are long and complex, which can make them difficult to follow. Breaking these into shorter, more concise sentences would enhance readability. 2. **Grammar and Phrasing**: There are instances of awkward phrasing, such as "has represented a real advance in humanity evolution" (should be "represents a significant advancement in human evolution"). Similarly, "prospects and provocations of designing" is unclear—perhaps "prospects and challenges" would be more appropriate. 3. **Word Choice**: Some terms, such as "undesired impact" and "innovation odds," could be replaced with more standard academic terminology, like "negative impacts" and "innovation opportunities." 4. **Consistency**: The manuscript should ensure consistency in terminology. For example, "energy supply systems" and "energy supply activities" seem to refer to the same concept, but it would be clearer to maintain consistent phrasing throughout. **Based on the provided assessment and assuming the manuscript has issues such as clarity in language, adequate references with some potential for improvement, and no ethical or competing interest concerns:** **Rationale:** 1. **Scientific Merit: The manuscript addresses an important topic and demonstrates a good understanding of the subject matter. However, the clarity of the methodology and some sections could be improved.** 2. **Language Quality : The English language quality is adequate for scholarly communication but requires refinement to improve readability and clarity.** 3. **References : The references are sufficient but could benefit from the inclusion of more recent sources to strengthen the work.** 4. **Ethics and Integrity : No ethical or competing interest issues were identified.**	

Review Form3

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)***	

Reviewer Details:

Name:	**Agus Kiswantono**
Department, University & Country	**Bhayangkara University Surabaya, Indonesia**