Review of: "Increasing Renewables and Building Retrofit in a Coal-Based Cogeneration District Heating System"

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Potential competing interests: No potential competing interests to declare.

The paper aims at demonstrating the role of energy efficiency in buildings and the coupling of the power and heating sectors in a cogeneration coal-based district heating system. The topic is worthy of investigation; however, the main concern is related to the research approach that needs more strong support from case studies and previous works. In the same way, the results need to be validated and verified in order to increase the scalability and replicability of the approach. Please find hereafter the minor comments:

-Please explain in detail why the EnergyPLAN environment has been selected and describe the specific functionality. The reference needs to be added.

-Please detail the set of energy conservation measures adopted in the different simulation scenarios.

-The methodology section needs, in my opinion, to be integrated, specifying in detail the approach and the different steps of the process.

-Are the scenarios 1 to 4 feasible and applicable, or do they represent a pure assumption?

-The case study needs to be specified; moreover, the authors have to detail if the specific case study represents a proper/replicable/scalable reference case.

-The results collected in figure 2 need to be more detailed.

-Figures 3 and 4: It is not clear how the RES for electricity production in percentage and the RED in primary energy supply have been respectively calculated.

-The conclusion section is poor and contains general and well-known statements that should be re-elaborated such as “ large-scale heat pumps in district heating and heat-saving measures in buildings can contribute significantly to RES integration in the electricity sector…”