Dear Dr. Azim Eskandarian,

My colleages and I are grateful for the opportunity to revise our paper. The reviewers have provided excellent feedback which we have utilized to improve the quality of the manuscript. Our response to each reviewer comment appears below. The reviewer comments are given in the red format and our responses are in blue.

Reviewer 1

The comments for reviewer 1 are addressed here:

1. **Reviewer:** For the system model, the main innovation is that the uncontrolled power loads are considered. However, in Section I, we cannot find the detailed expressions about the uncontrolled loads. Please add more references and practical example to express it, to make the manuscript more readable.

   Response: Thank you for the feedback. In this paper, the uncontrolled load profile comes from historical data provided by the Utah Transit Authority in Salt Lake City, which describes the power load for an electric train as it enters and leaves the station. In practice, buses share a meter with the train power substation. If buses charge at high rates while the train accelerates out of the station, the resulting 15-minute average power spikes resulting in a dramatic increase in the monthly cost. A discussion of how uncontrolled loads contribute to cost has been included in the introduction of the paper to increase readability.

2. **Reviewer:** In the system model, the bus may be overlapeed in the charging station. Actually, in my opinion, the control center can schedule the charging orderly. More expressions are needed.

   Response: The reviewer is correct that there will be overlap in bus schedules and that a decision must be made to determine which buses will be allowed to charge, which would very easily be given by a control center. Unfortunately, determining which bus should charge and when is non-trivial because simply scheduling buses according to their arrival time fails to account for each bus's state of charge and future availability. The method developed in our paper accounts for these complexity (route schedules, contention at the charger, battery states of charge, etc.). The charge schedule solution obtained using our method can be used by a control center to schedule bus charging session for all buses on all routes throughout the day.

3. **Reviewer:** In Section III, why the bin packing approach is suitable for the needs in this manuscript?

   Response: Great question. Bin packing problems have been used in a variety of resource allocation problems such as the berthing problem. In our paper, we applied the bin packing concept to encode the start and end times for charging sessions. The width of the bin describes the duration of a charging session. The bin packing concept is not absolutely necessary, but we adopted the bin packing concept for convenience and to connect our work with other literature on resource allocation. This is relevant in Section III of the paper because that is where we develop constraints related to charging session start and end times and charging session duration.

4. **Reviewer:** For the simulation, the authors should give more comparison with the current existing works, to make the effectiveness more clearly.

   Response: Thank you for the feedback! Based on the reviewer's suggestion, in the results section we have added an additional comparison with other existing work. The new comparison shows how our method compares to an approach developed by Ojer et al. which focuses on managing the peak energy without considering uncontrolled loads. The method we have already compared with by He et al. focuses on minimising the cost from time of day tarrifs. Between Ojer et al. and He et al. we believe the comparisons should demonstrate the effectiveness over a range of related existing methods.

5. **Reviewer:** The paper writing should be improved. For example, in page 9 , line 49, section ??

   Response: Great catch, we have read through the paper again with a view to improve readability. This has led to a number of changes and improvements. We believe the paper has been improved. Thank you for noticing and for your feedback!

Reviewer 2

The comments for reviewer 2 are addressed here:

1. **Reviewer:** Simply removing references does not justify the motivation. I recommend the below three papers.

   - He, J., Yan, N., Zhang, J., Wang, T., 2022. Battery electric buses charging schedule optimization considering time-of-use electricity price. Journal of Intelligent and Connected Vehicles, 4(2), 138-145

- Liu, Y., Wang, L., Zeng, Z., Bie, Y., 2022. Optimal charging plan for electric bus considering time-of-day electricity tariff. Journal of Intelligent and Connected Vehicles, 5(2), 123-137.
- Ji, J., Bie, Y.M., Zeng, Z., Wang, L., 2022. Trip energy consumption estimation for electric buses. Communication in Transportation Research 2, 100069.

Response: Thank you, we have incorporated the given references to better support the focus of the paper which has been shifted so that the primary motivation centers on cost savings in the presence of uncontrolled loads.

2. **Reviewer:** The authors need to carefully describe the charging activities for each BEB bus in a day.

   Response: We thank the reviewer for identifying the need to expand the discussion about daily charging activities for battery electric buses. We have added an expanded dicsussion about this in the introductory section of the paper.