





















Efficiency related to transportation of H2 [%]	88	
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Table 5 shows the parameter used in the calculation of WTW in both UK and Japan.

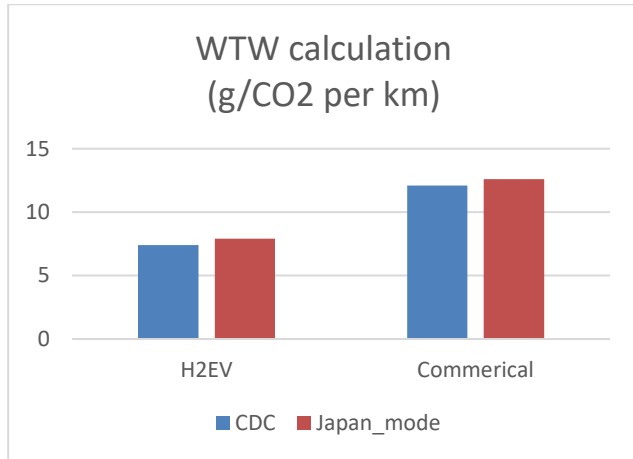


Figure 15. Carbon footprint ( $C_f$ ) based in the UK and Japanese using H2EV and a commercial vehicle.

Figure 15 shows that by adapting H2EV or similar vehicle during Japan Olympics 2020 can reduce carbon footprint ( $C_f$ ) and increase the fuel economy. A detailed analysis based on this calculation will be included in the final paper.

## 6 Conclusion

In this research paper an acausal system-level model of a fuel cell plug-in series hybrid electric vehicle (H2EV) is presented. With the help of this system-level model, performance, energy efficiency and carbon footprint of H2EV are analysed based on different realistic and standard drive cycle tests. Climatic condition of both the UK and Japan has considered while investigating the vehicle range due to additional climatic load. By comparing the results obtained from WTW analysis of H2EV and a commercial FCHEV show a promising result.

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