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Group Assignment

**CEE1IEE Final Report Assessment Sheet**

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| **Group Name/Student Names: Group 9.** Thomas Robinson - Andrew Lewis - Mustafa Mangel Sarah Jackson - Benarsh Laly  **Supervisor:** |

The following sections are included for your guidance and to help you rank the groups.

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| **Group Writing Skills [0 – 10 marks, to 0.5 mark accuracy]:**  Structure and fitness for purpose.  Clear introduction, easy to read and general flow.  Edited to remove repetitions; adequate coverage of important areas.  Thoroughly checked before submission. | 7 |

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| **Technical and Analytic Content [0 – 20 marks, to 0.5 mark accuracy]:**  Analytic understanding of the problem.  Performance modelling. Technical progress.  Demonstration of working/completed sections. | 14 |

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| **Conclusions, clarity of client recommendations [0 – 10 marks, to 0.5 mark accuracy]:**  How useful is the report to the client  Correctness of the conclusions and implementation plan | 5 |

Total mark allocated [out of 40]: 26

**Please include comments to justify your decision on this page or overleaf.**

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| You have presented a well argued analysis. You have clearly carried out significant research into your numbers and presented appropriate references. I think your estimates of power consumption are in the correct ballpark. They are roughly 10 times average domestic usage so if anything they are rather low. Your factor of 16 for converting between kW and kWH/day is not clear. Is this assuming 16 hours per day of usage? This should be stated as you have also included a usage factor (typically 0.3) into your calculations. Also your calculations for consumption by gym equipment is confused. Why do ‘standalone’ machines consume net power? I think you could have presented more detail about the power infrastructure. For example how can you harness human power? Your assumption about using river/hydropower is not valid as this would still be on-grid (although a renewable resource – the two are not the same). Use of solar power for heating the swimming pool is a good idea as is the use of transparent solar panels. Finally your cost analysis needed more expansion. What would be the effect on gym membership costs of going completely off-grid? Would there be a ‘green demand’ from potential clients who might be willing to pay a premium. Also you have not presented an implementation plan for the client which would installation costs. However, overall I think you have done a good job. |

Assessor: . Dr Mike Spann . Date: 30th March