Appendix 3

Calculation of Carbon Footprint Per Year

The Carbon footprint calculation can be conducted based on the stage of calculation as stated in www.carbonfootprint.com, which is the sum of electricity usage per year and transportation per year.

a. **Electricity usage per year (EC 2.7)**
   The CO_2 emission from electricity
   = (electricity usage per year in kWh/1000) x 0.84
   = (1633286 kWh/1000) x 0.84
   = 1371.96 metric tons
   Notes:
   Electricity usage per year= 1633286 kWh
   0.84 is the coefficient to convert kWh to metric tons (source: www.carbonfootprint.com)

b. **Transportation per year (Shuttle) (TR 5.6)**
   = (Number of the shuttle bus in your university x total trips for shuttle bus service each day x approximate travel distance of a vehicle each day inside campus only (in kilometers) x 240/100) x 0.01
   = ((15 x 150 x 5 x 240)/100)) x 0.01
   = 270 metric tons
   Notes:
   240 is the number of working days per year
   0.01 is the coefficient (source: www.carbonfootprint.com) to calculate the emission in metric tons per 100 km for bus

c. **Transportation per year (Car) (TR 5.2)**
   = (Number of cars entering your university x 2 x approximate travel distance of a vehicle each day inside campus only (in kilometers) x 240/100) x 0.02
   = ((2000 x 2 x 5 x 240)/100)) x 0.02
   = 960 metric tons
   Notes:
   240 is the number of working days per year
   0.02 is the coefficient (source: www.carbonfootprint.com) to calculate the emission in metric tons per 100 km car

d. **Transportation per year (Motorcycle) (TR 5.3)**
   = (Number of motorcycle entering your university x 2 x approximate travel distance of a vehicle each day inside campus only (in kilometers) x 240/100) x 0.01
   = ((4000 x 2 x 5 x 240)/100)) x 0.01
   = 960 metric tons
   Notes:
   240 is the number of working days per year
   0.01 is the coefficient (source: www.carbonfootprint.com) to calculate the emission in metric tons per 100 km for motorcycle

e. **Total emission per year**
   = total emission from electricity usage + transportation (bus, car, motorcycle)
   = 1371.96 + (270 + 960 + 960)
   = 3561.96 metric tons

Note: You can use your own method and put it in evidence (i.e., figure, link, etc.)