



Evidence(s)



THE-Impact Ranking

University : Sri Sri University
Country : India
Web : www.srisriuniversity.edu.in

7.2.3 Carbon Reduction and Emission Reduction Process:



Plate 7.2.3.a Battery operated shuttle



Plate 7.2.3.b Staff shuttle



Plate 7.2.3.c Double ride cycle for staff



Plate 7.2.3.d Promoting cycle to security staff



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Plate 7.2.3.e SSU promote Electric sooty



Plate 7.2.3.f Electric bicycle



Plate 7.2.3.g Petroleum natural gas



Plate 7.2.3.h. Plantation drive in the Sri Sri
University Campus

Description:

When it comes to removing human-caused emissions of the greenhouse gas carbon dioxide from Earth's atmosphere, trees are a big help. Through photosynthesis, trees pull gas out of the air to help grow their leaves, branches, and roots. Our university organizes plantation drives throughout the year inside the campus as well as in nearby localities. Our university ranks 6th in India and 238th in the world in the UI Green Metric World University Rankings. Various other process that helps in reduction of carbon are



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1. **Eco-Friendly Transportation (Plates 7.2.3.a, b):** Battery-operated and fuel-based vehicles are provided for staff and guests, offering convenient alternatives to private vehicles within the campus. This approach promotes cleaner and more sustainable modes of transportation.
2. **Bicycle Usage (Plates 7.2.3.c, d):** Double-riding bicycles and common bicycles are made available to staff and security personnel, reducing the reliance on motorized bikes within the campus. This encourages eco-friendly commuting.
3. **Electric Vehicles (Plates 7.2.3.e, f):** SSU actively promotes the use of electric vehicles among staff and students, contributing to a reduction in carbon emissions and the adoption of sustainable transport options.
4. **Natural Gas Adoption (Plate 7.2.3.g):** The university has replaced LPG (liquefied petroleum gas) with petroleum natural gas, a cleaner and more environmentally friendly energy source.
5. **Tree Plantation (Plate 7.2.3.h):** As part of an extensive plantation program during the monsoon season, SSU has planted a total of 4,600 fruit plants on the campus. This not only enhances the greenery but also aids in carbon sequestration.
6. **Green Audit :** Sri Sri University conducted a comprehensive green audit of the campus on March 3, 2023. The audit findings have guided measures to reduce carbon emissions within the campus.

Total carbon footprint (CO₂) emission in the last 12 months, in metric tons)

Liquefied petroleum gas (LPG) = 2.983 kg CO₂ per kilogram, Source: Emission factors are taken from the file “Emission factors from across the sector -tool” extracted from <http://www.ghgprotocol.org/calculation-tools/alltools>

Electricity usages per year

The CO₂ emission from electricity

$$=(\text{electricity usages per year in kWh}) \times 0.85$$

$$=(2,55,7617 \text{ kWh} \times 0.84) / 1000$$

$$= 2148.39 \text{ metric ton}$$

Note: Electricity = 0.85 kg CO₂ per KWh, Source: CO₂ emission factor database, version 06, CEA (Government of India), http://www.cea.nic.in/reports/planning/cdm_co2/cdm_co2.htm

b. Transportation per year (Bus)

We can calculate the total CO₂ emissions as follows:

Total distance travelled by all buses = Number of buses * Average distance travelled by each bus per day * Number of days



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Total distance travelled by all buses = 8 buses * 2 km/bus/day * 277 days = 4416 km

Total CO₂ emissions = Total distance travelled by all buses * CO₂ emissions per km

Total CO₂ emissions = 4416 km * 120g CO₂/km = 529920g CO₂

So, the total CO₂ emissions would be approximately 529.92 kg or 0.52992 metric tons.

Notes: 277 is the number of working days per year

c. Transportation per year (Car)

The average petrol car produces about 164 grams of CO₂e per km

Number of cars = 81

Average distance travelled per car inside the university = 2 km

Total emissions = Number of cars * Average distance traveled per car * Average emissions per km
per car = 81 cars * 2 km/car * 164 g/km = 26,568 grams

Since 1 metric ton is equal to 1,000,000 grams, we can convert the total emissions to metric tons:

Total emissions in metric tons = Total emissions in grams / 1,000,000 = 26,568 g / 1,000,000 = 0.026568 metric tons

Total emissions for 277 days = Daily total emissions * Number of days = 0.026568 metric tons/day * 277 days = 7.358776 metric tons

d. Transportation per year (Two wheeler)

The average bike produces about 21 grams of CO₂ per kilometre

Number of bikes = 215

Average distance traveled per bike = 2 km

Average emissions per km per bike = 21 grams

Total emissions = Number of bikes * Average distance traveled per bike * Average emissions per km per bike = 215 bikes * 2 km/bike * 21 g/km = 9,030 grams



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Since 1 metric ton is equal to 1,000,000 grams, we can convert the total emissions to metric tons:

Total emissions in metric tons = Total emissions in grams / 1,000,000 = 9,030 g / 1,000,000 = 0.00903 metric tons

Daily total emissions = 0.00903 metric tons Number of days = 277

Total emissions for 277 days = Daily total emissions * Number of days = 0.00903 metric tons/day * 277 days = 2.49931 metric tons

e. LPG consumption per Year

LPG (Liquefied Petroleum Gas) produces around 1.51 kg of CO₂ per litre

Total weight of LPG used = 55 kg/day * 277 days = 15235 kg

Total CO₂ emissions = Total weight of LPG used * CO₂ emissions per kg of LPG

Total CO₂ emissions = 15235 kg * 1.51 kg CO₂/kg LPG = **22995.85 kg CO₂**

So, the total CO₂ emissions would be approximately 22.99585 metric tons.

Total Emission per Year: 2148.39 + 0.52992 + 7.358776 + 2.49931 + 22.99585 = 2181.77 metric ton