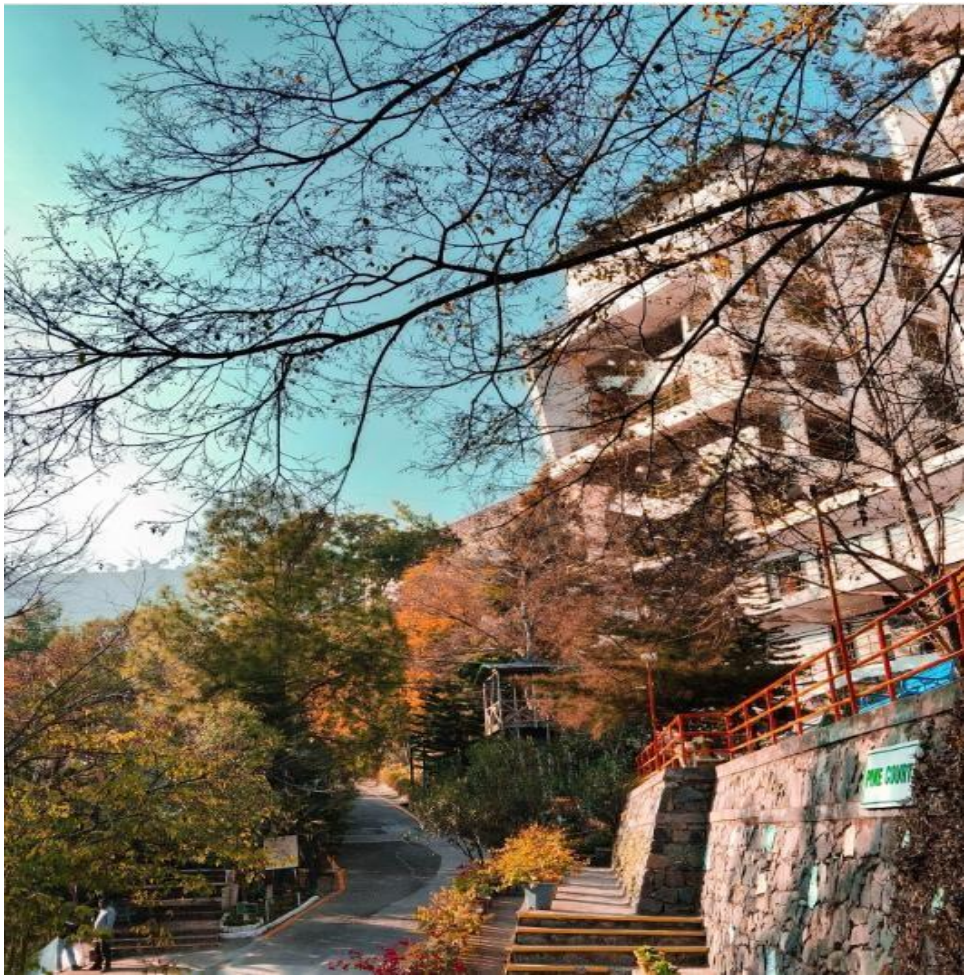
Carbon Emissions Reporting in Alignment with GHG Protocol

2024-25

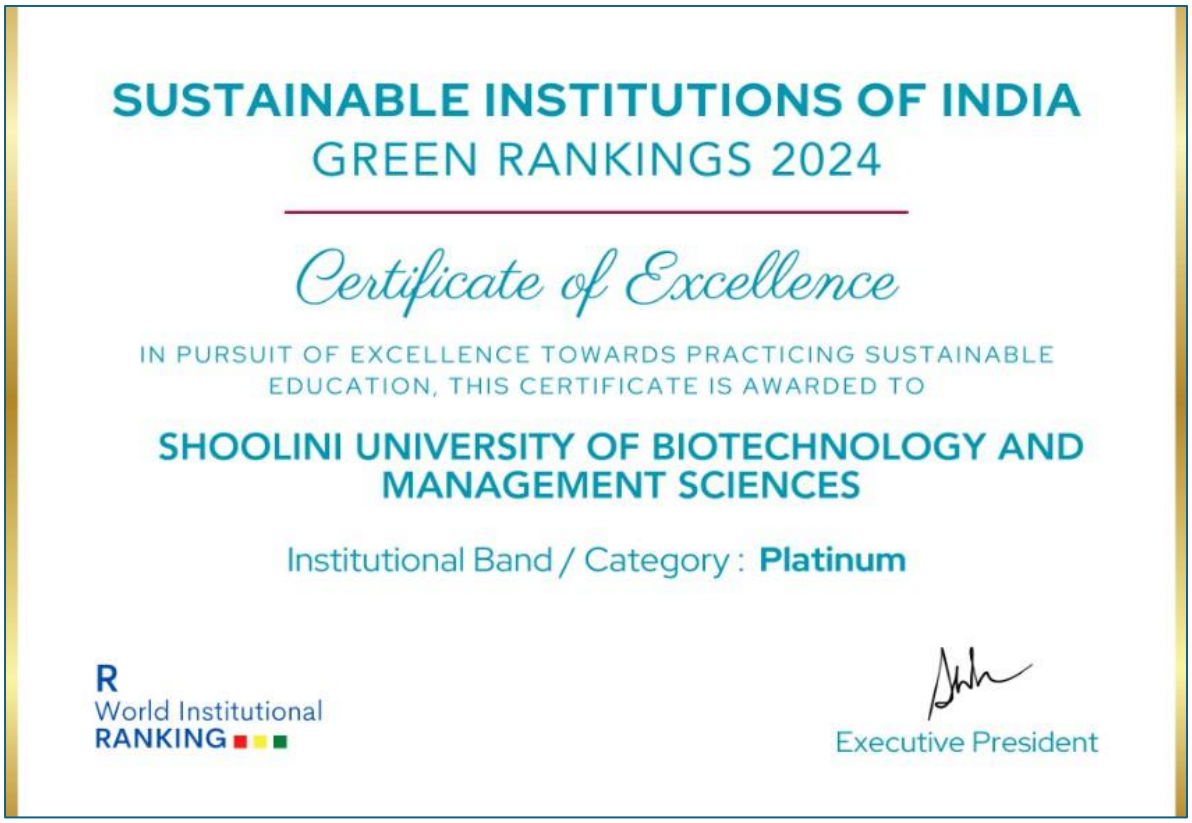


Shoolini University of Biotechnology and Management Sciences,

Bajhol, Solan, Himachal Pradesh-173229

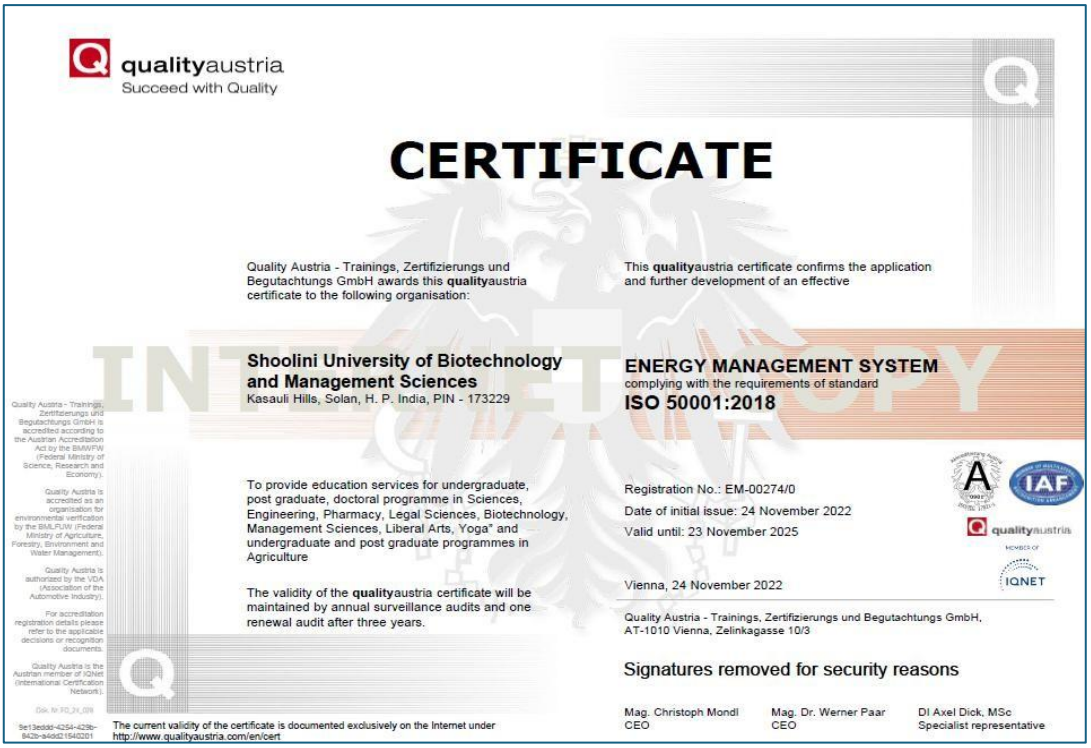
Carbon emissions

Carbon emissions are a key indicator of an institution's environmental impact, reflecting the **total greenhouse gas (GHG) emissions** generated through its operations. Shoolini University diligently reports its carbon emissions in compliance with the **GHG Protocol Corporate Standard**, ensuring a transparent, consistent, and comprehensive approach to measuring and managing its carbon footprint. The university monitors emissions across various operational areas, including energy consumption, transportation, and waste management. As per the Energy and Emissions during AY 2024-25, Shoolini University systematically quantifies its Scope 1 and Scope 2 emissions using internationally recognized methodologies, including IPCC guidelines and Central Electricity Authority standards. Scope 1 emissions arise primarily from fuel consumption in generators and institutional operations, while Scope 2 emissions are associated with electricity consumption. In AY 2024-25, total **Scope 1 emissions were recorded at 84,183 Kg CO_2e**, while **Scope 2 emissions reached 13,12,349 kg CO_2e**, resulting in a combined **total Scope 1 & 2 emission of 13,96,532 kg CO_2e**. The university also integrates renewable energy through solar power generation, contributing to partial carbon offset and reduced dependence on conventional energy sources.



Demonstrating its strong commitment to sustainability, Shoolini University has obtained ISO certifications for its Energy Management System, Environmental Management System, and Quality Management System. These certifications highlight the institution's focus on energy

efficiency, environmental protection, and operational excellence. Additionally, the university has adopted renewable energy solutions and promotes sustainable practices across campus. Through systematic carbon reporting and continuous improvement initiatives, Shoolini University sets a benchmark for responsible environmental stewardship, contributing meaningfully toward a greener and more sustainable future.



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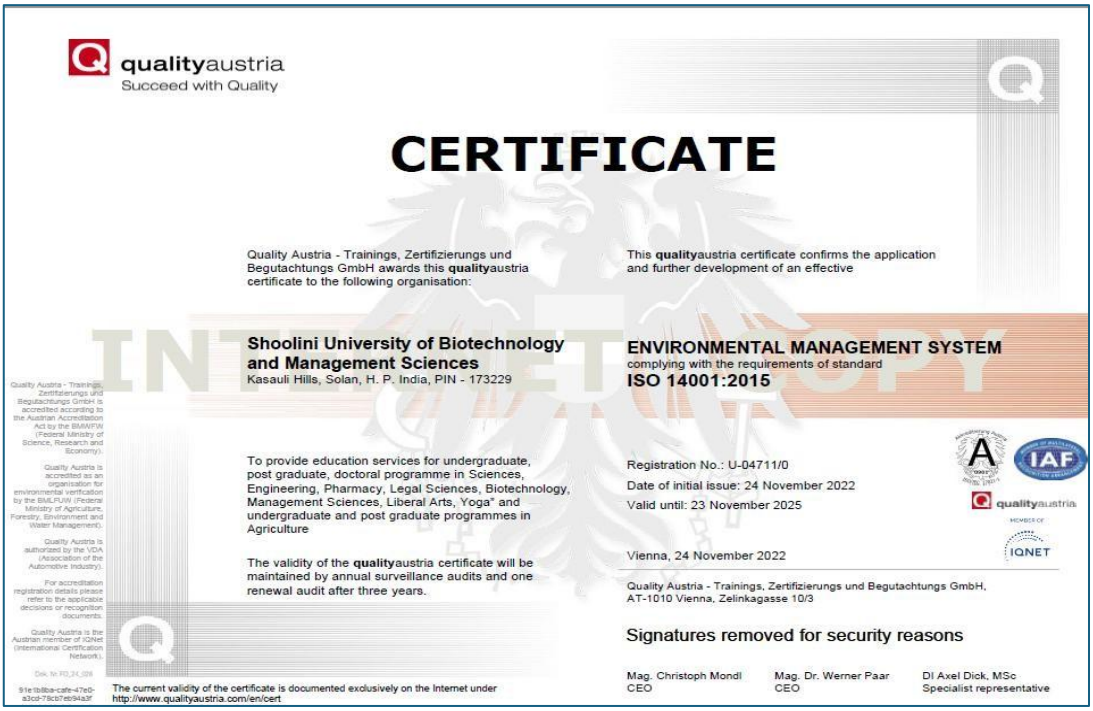

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Emissions Report of Shoolini University

Shoolini University monitors its GHG emissions and electricity consumption according to GHG emissions protocol. The calculations are made for direct emissions of CO_2, CH_4 and N_2O emissions from the combustion of fuel in boilers, furnaces and other stationary combustion equipment (Scope-1 emissions) and indirect emissions through electricity consumption (Scope-2 emissions). The emission factors used are according to the IPCC Guidelines for National Greenhouse Gas Inventories as well as issued by Central Electricity Authority Guidelines.

(A) Scope-1 Emissions Calculation for the Academic Year 2024 (Aug 2024-July 2025):

GREENHOUSE GAS PROTOCOL

Source ID	Sector	Fuel type (e.g., solid fossil)	Fuel	Total Fuel Consumption	Total Anthropogenic GHG Emissions (metric tonnes CO_2e)
1	Institutional	Liquid fossil	Gas/Diesel oil	5,600	16.96
2	Institutional	Liquid fossil	Gas/Diesel oil	3,000	9.08
3	Institutional	Liquid fossil	Gas/Diesel oil	400	1.21
4	Institutional	Liquid fossil	Gas/Diesel oil	2,800	8.48
5	Institutional	Liquid fossil	Gas/Diesel oil	1,600	4.85
6	Institutional	Liquid fossil	Gas/Diesel oil	600	1.82
7	Institutional	Liquid fossil	Gas/Diesel oil	2,600	7.87
8	Institutional	Liquid fossil	Gas/Diesel oil	1,600	4.85
9	Institutional	Liquid fossil	Gas/Diesel oil	3,000	9.08
10	Institutional	Liquid fossil	Gas/Diesel oil	2,200	6.66
11	Institutional	Liquid fossil	Gas/Diesel oil	2,400	7.27
12	Institutional	Liquid fossil	Gas/Diesel oil	2,000	6.06
Total (mt CO2e)					84.18

Scope-1 Total Emissions for the Baseline Year 2021 = 36.62 mt CO_2e

(B) Scope-2 Emissions Calculation for the Year 2021 (Baseline) and 2024:

Year	Energy Consumption (kWh)	Energy Consumption (GJ)	Solar Generation (kWh)	Solar Fraction (%)	Total CO2 Offset (kg)	Total CO2 Emissions (kg)	Total CO2 Emissions after Offset (kg)
2021 (Baseline)	12,34,852	4,445	4,08,942	33%	3,33,288	10,06,404	6,73,116
2024 (AY)	19,61,582	7,264	3,74,703	19%	3,09,879	16,22,228	13,12,349

(C) Summary:

Summary of Results			
Year	**Scope-1 Emissions (kg CO2e)**	**Scope-2 Emissions (kg CO2e)**	**Total Scope-1 and Scope-2 (kg CO2e)**
2021 (Baseline)	36,616	6,73,116	7,09,732
2024 (AY)	84,183	13,12,349	13,96,532