

# Carbon reduction figures, Lochrin Belle replacement with electric barge

	2024 calendar year					Emission factor (kgCO2eq /ltr)	Estimated carbon emissions (kg CO2)	Annual consumption, 2026 calendar year onwards				Estimated reduction in emissions (tonnes CO2)
	Estimated mileage 2024	Hours in use	Fuel consumption (litres per hr at 1.75 mph)	2024 consumption (litres)	Electrical energy equivalent rate (kW)			Projected consumption of energy for 2026 (kWh)	Emission factor for electricity	Estimated emissions 2026 (kg CO2)	Estimated reduction in emissions (kg CO2)	
Engine / drive	1,000	506	2.5	1,265		3,377.6	20	10,120	0.20705	2,095	1,282	1.3
Generator	N/A	1,046	0.17	181	2.67	483.3	0.08	83.68	N/A	48.33	435	0.4
Engine + generator combined total				<u>1,446</u>		<u>3,860.8</u>					<u>1,717</u>	<u>1.7</u>

## Notes

New generator will be used "minimally as opposed to our current arrangement", as it will be run on electricity when moored, and from battery most of the time when sailing.

Therefore, assume roughly one tenth the fuel usage compared to 2024.

Emission factor for electricity from UK government:

<https://www.gov.uk/government/collections/government-conversion-factors-for-company-reporting>