

Greener: climate

Progress against our carbon pledges

In 2020 United Utilities made six pledges that set out our initial priorities in the global goal to curb climate change to no more than 1.5°C above pre-industrial levels.

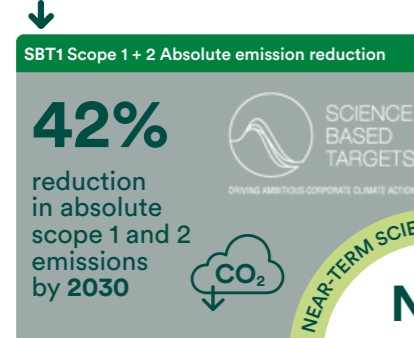
Our progress against these pledges, and where they link to remuneration, is summarised below. Before the start of the next investment period we will review our pledges and targets to reflect our business plan to 2030 and the opportunities which it will bring for emissions reduction.

Pledge 1
 42 per cent reduction of scope 1 and 2 emissions from our 2020 baseline by 2030

Our progress
3.4% Some work to do

It continues to be challenging for us to reduce scope 1 and 2 emissions whilst serving an increasing North West population. 60 per cent of scope 1 and 2 emissions are from the release of methane which has a higher global warming potential in AR5. This change, from AR4, was the primary driver for the small increase in emissions in 2023/24.

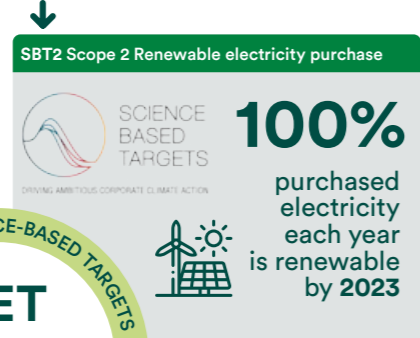
2019/20: 138,961 tCO₂e baseline
 2023/24: 134,239 tCO₂e 3.4% reduction



Pledge 2
 100 per cent renewable electricity by 2021

Our progress
100% Pledge met

Since October 2021, all electricity we buy through annual contracts is renewable. Around 22 per cent of our needs are renewably generated directly by us or with partners and the remainder is purchased and backed with REGO certificates. We are working on plans to further increase the energy we can self-supply through investment in renewable capacity and storage.



66% of construction suppliers (by emissions) have SBTs by 2025

SBT3 Scope 3 Construction supplier engagement

Pledge 6
 Set a scope 3 science-based target by 2021

Our progress
SBTs verified July 2021 Pledge met

Our two scope 3 science-based targets (SBT3 and SBT4 above) cover all our relevant scope 3 emissions. Our total scope 3 emissions in 2023/24 are now 2 per cent lower than our 2019/20 baseline. 18 per cent of our scope 3 emissions are from our construction services partners. We work with our construction partners to reduce emissions from their infrastructure projects and encourage them to set their own targets verified by the Science Based Targets initiative (SBTi). Of our construction suppliers, 23 per cent (by 2023/24 emissions) have already set SBTi verified science-based targets for their organisation. In total, 94 per cent have either already set targets or have an active commitment to set targets as can be seen on the SBTi Target dashboard.

Link to remuneration: LTP

Pledge 3
 100 per cent green fleet by 2028

Our progress
91 vehicles Confident of meeting pledge

Having assessed our travel patterns with advanced telematics we are now using this insight to develop the infrastructure a green fleet needs. We are installing home chargers for fleet drivers, have begun to install fast and rapid chargers across our operational sites and forecast to have 200 all-electric vehicles (EVs) by the end of 2025. We also encourage personal green travel through salary sacrifice schemes for bikes and EVs and discounted travel on Warrington buses.

Link to remuneration: LTP

Pledge 4
 1,000 hectares of peatland restoration by 2030

Our progress
1,211ha Confident of meeting pledge

We have carried out peatland restoration activities across the North West building on the 2,000 hectares improved through our 2005–15 SCaMP projects. We already have 1,211 hectares under restoration towards meeting this pledge and the LTP. We have also identified a potential further 2,800 hectares that may be improved or protected, subject to detailed suitability assessments.

Link to remuneration: LTP

Pledge 5
 Plant one million trees to create 550 hectares of woodland by 2030

Our progress
37ha Confident of meeting pledge

Woodland creation requires substantial preparatory work including identifying suitable sites, considering the appropriate species mix and planting density, securing funding and producing a long-term management plan. We are making great progress and our current schedule will create around 500 hectares of new woodland over the next three planting seasons.

Link to remuneration: LTP

Greener: climate

Energy and carbon report: Energy

The Companies Act 2006 (Strategic Report and Directors' Reports) Regulations require us to publish this energy and carbon report applying the 2019 UK Government Environmental Reporting Guidelines, including the Streamlined Energy and Carbon Reporting Guidance (SECR). We use the financial control approach so our energy and carbon accounting is aligned with the consolidated financial statements for United Utilities Group PLC for 1 April 2023 to 31 March 2024. This includes subsidiaries listed in section A8 on page 228.

Our greenhouse gas inventory, including the underlying energy data summarised below, has undergone independent third-party verification by the Achilles Group to the requirements of Toitū CarbonReduce programme.

	2023/24 GWh	2022/23 GWh ⁽⁴⁾	2021/22 GWh	2020/21 GWh
Energy use				
Electricity	819.6	818.8	803.3	807.3
Natural gas	34.1	33.6	33.8	40.0
Stationary fossil fuels (Gas oil, kerosene, diesel)	54.7	59.2	50.5	36.5
Stationary low-carbon fuels (HVO, LPG)	0.14	0.01	<0.01	0
Energy for transport (from fuel used or distance travelled)	80.2	79.1	72.6	67.5
Total energy used	988.7	990.7	960.2	951.3
Electricity purchased				
Grid renewable ⁽¹⁾	657.6	655.6	611.0	591.4
Grid standard tariff ⁽²⁾	0.09	0.13	22.3	47.8
Total purchased	657.7	655.7	633.3	639.2
Renewable energy generated				
CHP	120.4	123.0	133.8	127.6
Solar	47.3	46.4	47.8	50.7
Wind	5.2	5.1	4.8	5.3
Hydro	7.6	6.9	7.2	6.9
Biomethane ⁽³⁾	40.2	44.7	48.9	47.0
Total generated	220.7	226.1	242.5	237.5
Renewable energy exported				
Electricity	18.6	18.3	23.5	22.4
Biomethane ⁽³⁾	40.2	44.7	48.9	47.0
Total exported	58.8	63.0	72.4	69.4

⁽¹⁾ All contractually purchased electricity has been bundled with, or backed by, REGO certificates since October 2021.
⁽²⁾ Grid standard tariff electricity is the consumption on interim tariffs for newly adopted sites.
⁽³⁾ Biomethane generated and exported to grid was expressed as an electricity equivalent in previous annual reports.
⁽⁴⁾ The figures for 2022/23 are restated for some fuel purchased but not consumed in 2022/23 and to correct an error using petrol fuel properties for diesel and vice versa when calculating energy.

Energy efficiency actions taken
 We have an integrated approach to energy efficiency based on continuous improvement of people – optimising ways of working; systems – improving visibility of use and analysis of data systems; and technology – targeted investment to remove technological inefficiencies.

Our energy management programme is delivered by a specialist team of energy engineers working with operational staff. It sets a common approach for benchmarking performance and develops action plans to optimise site-based energy use. The programme held 59 workshops this year and is supported by operational carbon e-learning and a comprehensive energy performance reporting and analysis capability.

We have completed hundreds of systems and technology measures to improve energy efficiency from installing low energy lighting to automating operations of our water and wastewater assets such as with new controls for secondary treatment and pumps. We have also installed over 3,000 sub-meters to identify opportunities to restrain energy use and quantify the benefits of interventions.

Improving energy efficiency is a primary focus of our capital programme and also integrated into our Dynamic Network Management (DNM) capability to ensure our asset base is as efficient as possible. We have developed training courses to engage and develop colleagues across the business and implemented our 'Use Less, Save More' campaign.

Energy strategy

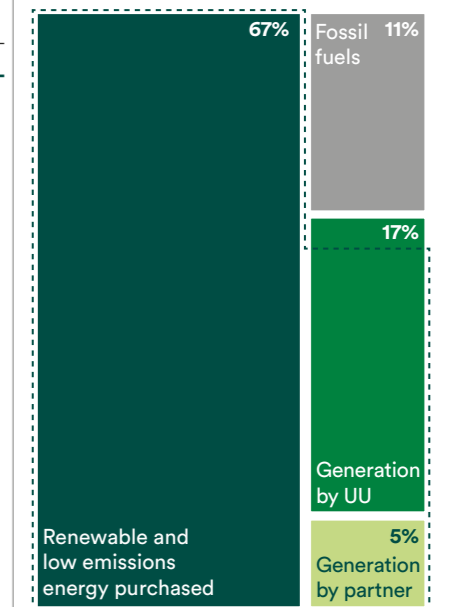
Our energy management strategy has four objectives:

- Efficient use of energy;
- Maximising self-generation and direct supply opportunities;
- Minimising costs; and
- Building supply resilience to ensure we can deliver our services.

Each year we serve a growing population, which means increased energy use as we strive to achieve stringent environmental performance targets. We seek to mitigate this through our energy management and in recent years have maintained consistent energy use in the face of considerable upward pressures.

This year, to support our aims to switch to clean, green energy, we have introduced a new energy metric: 'Energy generated directly, and with partners, as a percentage of used'. The measure has also been included in the 2023 Long Term Plan for executive directors and will encourage energy efficiency, fuel switching away from fossil fuel and clean energy generation, each of which support our net zero transition. Energy generated directly, and with partners, from low carbon sources together with renewable and low emissions energy purchased in 2023/24 is equivalent to 89 per cent of the total energy used.

Switch to clean, green energy



Electricity use (100% renewable)

Energy and carbon report: GHG emissions inventory

Emissions are calculated by estimating the individual greenhouse gases that result from all United Utilities' activities, converted into a tonnes carbon dioxide equivalent (tCO₂e).

Tools and values used in 2024 include UK water industry Carbon Accounting Workbook v18, the 2023 UK Government GHG conversion factors for company

reporting, global warming potentials from IPCC 5th Assessment report and Global CEDA (Comprehensive Environmental Data Archive) v6.

Our greenhouse gas inventory, and the underlying data, has undergone independent third-party verification by Achilles group and is certified to the requirements of the Toitū CarbonReduce

programme, as aligned to the GHG Protocol Corporate Accounting and Reporting Standard (2015) and the international carbon reporting standard ISO 14064, Part 1:2018. The assurance certificate and report can be found at unitedutilities.com/corporate/responsibility/environment/climate-change

	2023/24 ⁽⁴⁾ tCO ₂ e	2022/23 tCO ₂ e	2021/22 tCO ₂ e	2020/21 tCO ₂ e	SBT baseline 2019/20 tCO ₂ e	
Scope 1 and 2 greenhouse gas emissions						
Scope 1: Emissions from activities we own or control, e.g. burning fossil fuels, wastewater and sludge processing.						
Direct emissions from burning of fossil fuels	20,188 ⁽⁵⁾	21,166	19,207	17,371	15,247	
Process and fugitive emissions – including refrigerants	96,173	94,915	96,020	98,569	96,186	
Transport: Company-owned or leased vehicles	17,838	17,665	16,507	16,634	15,739	
Scope 2: Emissions from purchased electricity including for use in vehicles.						
Purchased electricity – generation	Market-based ⁽¹⁾	32.9 ⁽⁶⁾	9.3 ⁽⁶⁾	4,201	8,507	11,789
	Location-based ⁽²⁾	136,183	126,813	134,492	149,030	164,521
Purchased electricity – vehicles	Market-based	6.8	1.7	0.04	0	0
	Location-based	6.8	1.7	0.04	0	0
Gross scope 1 and 2 emissions total	Market-based	134,239	133,757	135,936	141,081	138,961
	Location-based	270,389	260,561	266,226	281,604	291,693
Emissions reduction from:						
Renewable electricity exported ⁽³⁾	-3,101	-2,888	-4,317	-4,184	-3,979	
Biomethane exported	-8,439	-9,360	-10,283	-9,725	-9,302	
Green tariff electricity purchased ⁽³⁾	-136,162	-125,746	-133,197	-138,015	-164,210	
Net scope 1 and 2 emissions total	Market-based	131,138	130,869	131,619	136,897	134,982
	Location-based	122,687	122,567	118,429	129,680	114,202

⁽¹⁾ Market-based figures use emission factors specific to the actual electricity purchased. For electricity supplied on a standard grid tariff we use CO₂e per kWh from suppliers' public fuel mix disclosures.
⁽²⁾ Location-based figures use average UK grid emissions to calculate electricity emissions and are shown in *grey italics*.
⁽³⁾ Exported electricity emissions use the average UK grid emissions factor for both market and location-based totals.
⁽⁴⁾ 2023/24 emission factors use IPCC AR5 global warming potentials where CH₄ = 28, N₂O = 265. All previous years use AR4 where CH₄ = 25, N₂O = 298.
⁽⁵⁾ Emissions from electricity for recently adopted sites supplied on standard tariffs until they can be moved onto our corporate renewable contracts.
⁽⁶⁾ Restated to correct for some fuel previously included in 2022/23 accounts but consumed in 2023/24.

	2023/24 tCO ₂ e	2022/23 tCO ₂ e	2021/22 tCO ₂ e	2020/21 tCO ₂ e	SBT baseline 2019/20 tCO ₂ e
Scope 3 greenhouse gas emissions					
Category 1: Purchased goods and services ⁽⁷⁾	233,480	250,189	292,946	271,871	213,442
Category 2: Capital goods ⁽⁷⁾	99,962	138,182	112,498	95,968	128,286
Category 3: Fuel and energy-related emissions ⁽⁸⁾	53,189	53,446 ⁽⁶⁾	58,948	42,599	45,262
Category 4: Upstream T&D – sludge transport ⁽⁸⁾	6	35	103	1,119	3,374
Category 5: Waste generated in ops: including sludge disposal ⁽⁶⁾	26,135	27,454	25,458	26,333	27,936
Category 6: Business travel: public transport, private vehicles and hotel stays ⁽⁶⁾	1,464	1,486	1,138	1,226	3,508
Category 7: Employee commuting and homeworking ⁽⁹⁾	5,136	5,336	4,066	4,108	4,231
Scope scope 3 total	419,372	476,128	495,158	443,224	426,039
Scope 3 SBT measure (excluding category 2)	319,410	337,946	382,660	347,256	297,753

⁽⁷⁾ Categories 1 (excluding chemicals) and 2 use Global CEDA v6 to estimate emissions based on the amount spent by spend category. CEDA is a multi-region, environmentally extended input-output database and has global coverage, annual updates and is a CDP recommended tool.
⁽⁸⁾ Categories 3, 4, 5 and 6 use activity records and 2023 UK Government GHG conversion factors for company reporting.
⁽⁹⁾ Category 7 uses EcoAct models to estimate emissions from employee commuting and homeworking based on company FTE figures and home, site, hybrid working policies.

	2023/24 tCO ₂ e	2022/23 tCO ₂ e	2021/22 tCO ₂ e	2020/21 tCO ₂ e
Greenhouse gas emissions intensity				
Scope 1 and 2 gross emissions per £m revenue	68.9	73.3	73.0	78.0
Scope 1 and 2 net emissions per £m revenue	67.3	71.7	70.7	75.7
Water net operational emissions per megalitre water treated ⁽¹⁰⁾	177.6	101.4	106.9	118.5
Wastewater net operational emissions per megalitre sewage treated ⁽¹⁰⁾	209.0	158.8	144.2	152.3

⁽¹⁰⁾ UK water industry intensity metrics. The method for calculating these has been redefined by Ofwat in 2024.

Scope 1 emissions

Wastewater and sludge processes cause approximately 70 per cent of our scope 1 emissions as the gases released, nitrous oxide (N₂O) and methane (CH₄), have much greater global warming potentials than carbon dioxide (CO₂). Our process emissions are currently estimated as a direct function of the amount of wastewater we treat and from recent monitoring we believe this to be an underestimate. We are collaborating with other UK water companies to improve the method to quantify these emissions and to identify ways to reduce or capture those emissions for beneficial use.

Scope 2 emissions

Our market-based scope 2 electricity emissions are negligible as all our contract purchased electricity is REGO backed. In the light of increasing costs, we are reviewing our commitment to REGO back 100 per cent of our electricity purchase in the future.

Scope 3 emissions

Most of our scope 3 emissions are in GHG Protocol categories 1 (products and services) and 2 (capital goods); the latter being the construction services we buy. The current methodology to estimate these emissions uses records of the amount we have spent. This provides an

estimate that is determined by the scale and timing of our investment programme rather than our design choices. We are working with supply chain partners to implement processes and systems to quantify category 2 emissions based on materials and techniques used, thereby giving us the opportunity to influence and track the emissions impacts of our management decisions.

The next highest category is indirect emissions from fuel and energy use so our clean energy and renewable generation ambitions will tackle these as well as scope 1 emissions.

