love every drop.

anglianwater

Working with our supply chain to reduce embodied carbon in the products we use. This modular designed UV treatment has been built off-site and uses significantly less raw materials; achieving a 52% lower embodied carbon and 56% cost saving against traditional installations.

GREENHOUSE GAS EMISSIONS

ANNUAL REPORT 2012

CEMARS

OUR UNIQUE ENVIRONMENT

Storm surge at Cromer on the east coast

Our region is particularly vulnerable to the impacts of more volatile weather: temperature rise, the potential reduction in summer rainfall, lower available water resources, increased flood risk and rising sea levels.

Our region is particularly vulnerable to the impacts of climate change: temperature rise, the potential reduction in summer rainfall, lower available water resources, increased flood risk and rising sea levels.

The ecological sensitivity of many wetland sites in the east of England adds a further challenge. The impact of hotter, drier summers, combined with a growing population, will increase the demand for water. Coastal and low-lying assets face an increased risk of flooding.

These challenges are a priority, and current actions in the adaptation of our operations include increased flood protection for 20 water sites and resilience enhancement to our water supply network, benefiting over 750,000 customers.

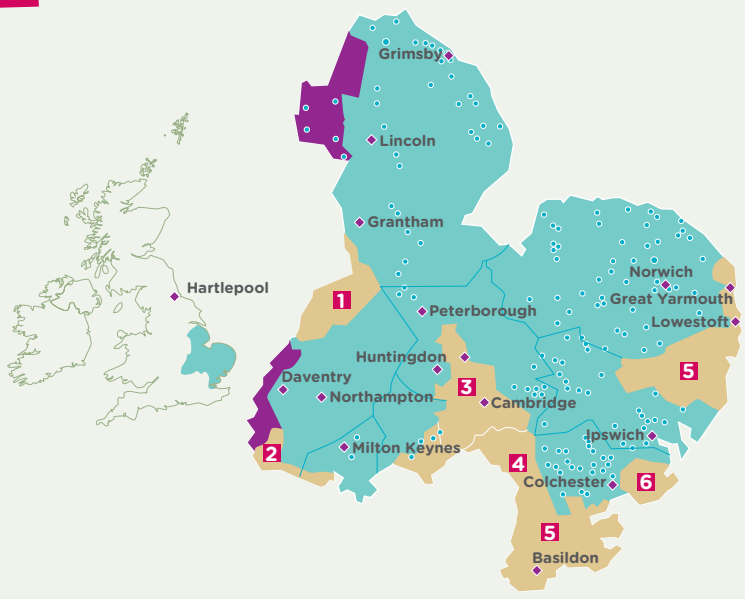
In mitigating our impacts on climate change we are improving our energy efficiency, increasing our understanding of our carbon footprint, investing in renewable energy generation and promoting water efficiency. Over the long term, we are also designing and commissioning more sustainable treatment and delivery systems.

Supply and services across our region

The map shows our sources of supply and the services we and other water companies provide.

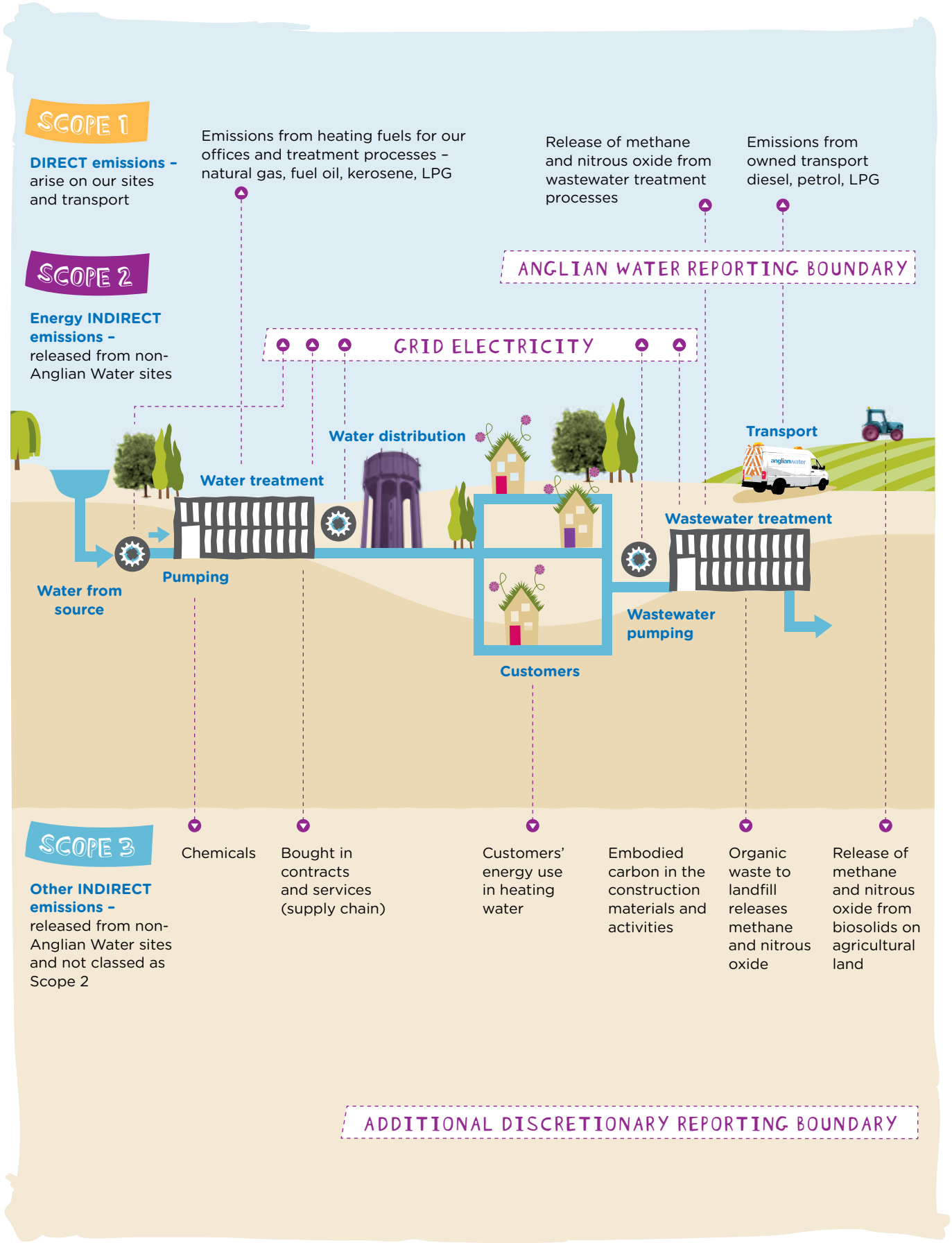
- 1 Severn Trent Water
- 2 Thames Water
- 3 Cambridge Water
- 4 Veolia Water Central
- 5 Essex and Suffolk Water
- 6 Veolia Water East

- Water services only
- Wastewater services only
- Water and wastewater services
- Groundwater supply



OUR APPROACH

We have followed the Defra guidance 2009 on how to measure and report greenhouse gas emissions.



Our mitigation activities have been brought together under 'Drop CO_2'. Drop CO_2 forms part of our long-term visionary campaign and business strategy 'Love Every Drop'. This communication and behavioural change campaign brings all our stakeholders and customers together to put water at the heart of a new way of sustainable living.

www.anglianwater.co.uk/loveeverydrop

1	2	3	4	5	6	7
Energy initiative	**Sustainability in design**	**Renewables**	**Supplier engagement**	**Transport initiative**	**Process emissions**	**Water efficiency**
Primary focus is the delivery of energy efficiency projects.	Reducing the carbon in our capital investment programme.	Development of our own renewable power.	Reducing carbon in the supply chain.	Reducing transport emissions.	Measuring, managing and reducing process emissions.	Helping our customers to deliver water and carbon efficiencies.

Drop CO_2 drives reductions in carbon emissions and power costs through the above routes.

Organisational boundary

We have included emissions within the regulated activity of Anglian Water, where we have operational control.

Reporting period

Our base year is 1 April 2009 – 31 March 2010, which we set using a fixed-base year approach.

Intensity measurement

We have chosen 'kg of CO_2e per mega litre' for water supply and wastewater treated as these are common business metrics for our industry sector.

Our intensity measurement for water has reduced in line with more efficient pumping and lower GHG emissions in grid electricity we use.

Our intensity measurement for wastewater has reduced due to lower GHG emissions in grid electricity we use and an increase in the volume of renewable energy generated on our sites.

Data assurance

The carbon data has been externally verified as part of our regulatory reporting requirements. Since 2010, we have met the requirements of the CEMARS (Certified Emissions Measurement and Reduction Scheme), having measured greenhouse gas emissions in compliance with ISO 14064-1:2006.

Carbon offsets

At present, carbon offsets do not form part of our carbon mitigation strategy.

Green tariffs

The 'green tariff' electricity we have purchased complies with guidance from Ofgem and HM Treasury, however it does not conform to the latest Defra guidance.

PERFORMANCE

Operational scopes

We have measured our Scope 1, Scope 2 and significant Scope 3 emissions for business travel and outsourced transport.

Greenhouse gas emissions data for period 1 April 2009 to 31 March 2012

	Tonnes of CO_2e		
	2012	**2011**	**2010**
Scope 1	129,411	118,050	115,035
Scope 2	351,252	382,037	375,301
Scope 3	4,610	3,939	3,367
Total annual gross emissions	**485,273**	**504,026**	**493,702**
Exported renewables	3,929	3,134	687
Green tariff	0	0	0
Total annual net emissions	**481,343**	**500,892**	**493,015**
Kg CO_2e per Ml water treated	428	452	448
Kg CO_2e per Ml wastewater treated	757	781	792
Kg CO_2e per Ml wastewater treated, flow to full treatment*	476	n/a	n/a

*This is a new measure.

	Tonnes of CO_2e	Specific exclusions
Scope 1		
Gas/fuel oil consumption	37,800	None
Process and fugitive emissions	65,119	None
Owned transport	26,482	None
Total Scope 1	**129,411**	**None**
Scope 2		
Purchased electricity	351,252	
Total Scope 2	**351,252**	
Significant Scope 3		
Business travel	893	None
Outsourced transport	3,717	None
Total significant Scope 3	**4,610**	We have not included commuting, embodied carbon and emissions from use of water in customers' homes.

Change in emissions

Our gross annual carbon emissions have decreased by 8,429 t/CO_2e between 2010 and 2012. Overall emissions have reduced in the last financial year due to more efficient use of energy, increase in generation of renewable power and a reduction in emissions associated with grid electricity.

During 2011/12, as part of our carbon mitigation strategy we saved 11.69 GWh of electricity (6,100 t/CO_2e) and generated 46 GWh of renewable power.

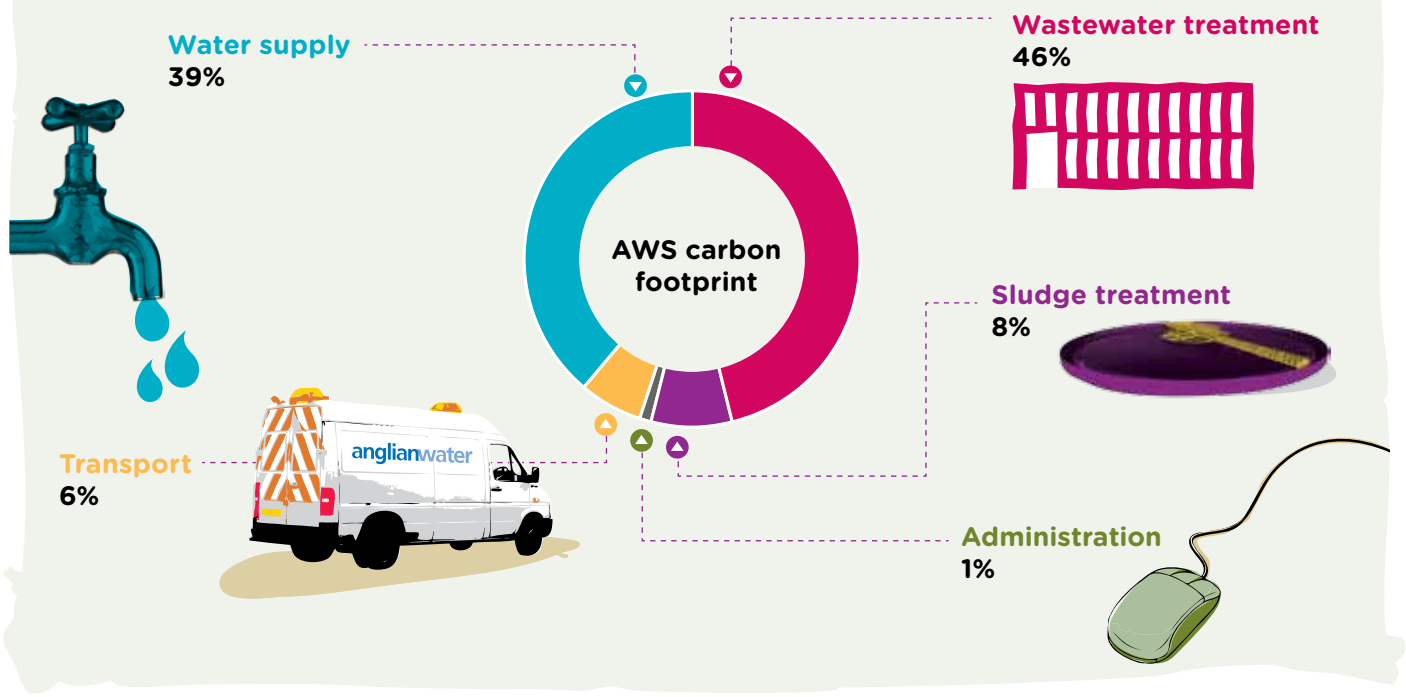
485,273 TONNES (of CO_2e)

measurement of greenhouse gas emissions in compliance with ISO 14064.

46 GWh

of renewable generation equating to a 67% increase compared to 2010.

Operational footprint by activity



We recognise that a significant proportion of our carbon emissions (99%) is as a result of the provision of water and wastewater services to our customers. Only 1% of emissions are attributed to administration.

Targets

Through the period 2010–2015, we are mitigating against pressures on our business with potential increasing GHG emissions through serving a growing population and meeting tighter quality standards. By the end of this five-year period, we will have invested £2.3 billion in maintaining and improving our infrastructure. This investment will result in a forecast 1.5 million t/CO_2e of embodied carbon in the materials we use to build and replace assets. These new assets will also add an additional 45,000 t/CO_2e of annual operational carbon emissions in 2015.

With a continued focus on energy management, innovation in design and commissioning of new generation assets, we have set a challenging objective of mitigating against future potential increases in operational carbon emissions. We have also targeted to halve the embodied carbon of assets we design and build in 2015 against similar assets we built prior to 2010.

Medium-term target

Our medium-term target is to reduce our operational carbon emissions by 10% in real terms by 2015 from a 2010 baseline. We also expect to report a reduction in gross emissions during this period in line with a decreasing grid electricity emissions factor as forecast by Defra.

Long-term target

Our long-term aspiration is to reduce our total annual GHG emissions by 50% from a 2010 baseline by 2035. This assumes successful implementation of the Government's low carbon transition plan (2009).

Responsibility for achieving these carbon targets lies at Board level with Chris Newsome, Asset Management Director and Paul Gibbs, Director of Wastewater.

Contacts

For further information on GHG emissions within Anglian Water, please contact our carbon manager David Riley:

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Company information

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