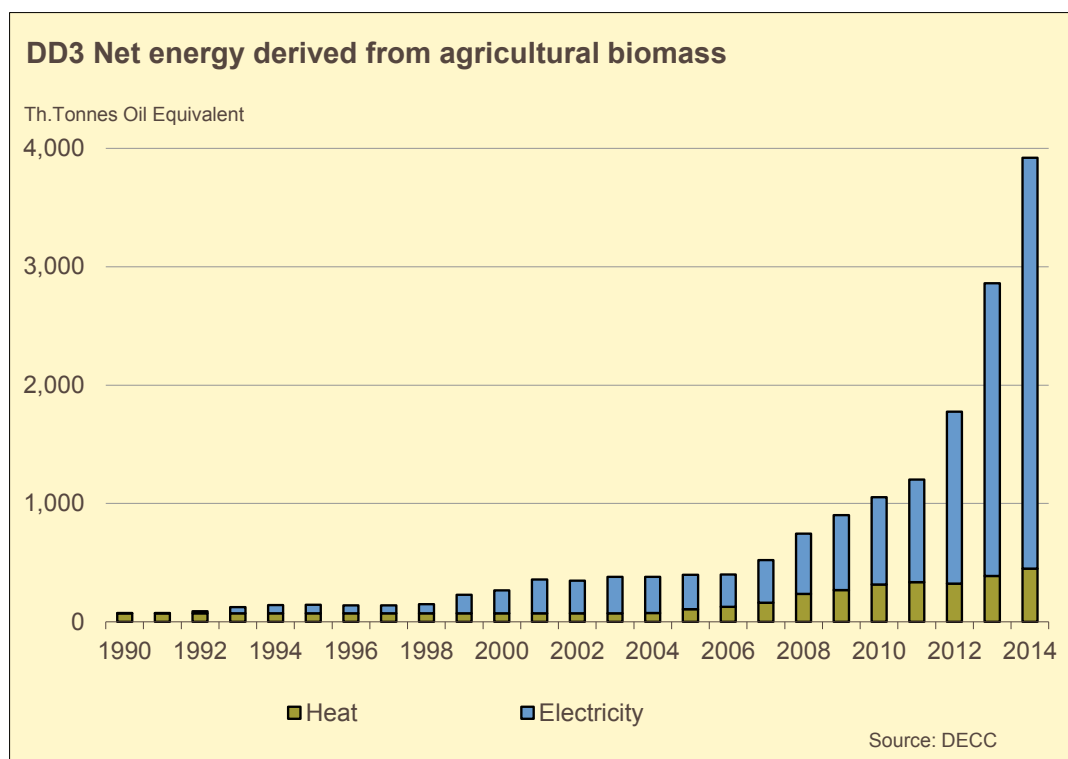


Observatory monitoring framework – indicator data sheet

Environmental impact: Climate change

Indicator DD3: Net energy derived from agricultural biomass

This indicator shows the electricity and heat generated from renewable sources in the UK: animal and plant biomass and anaerobic digestion measured in thousand tonnes of oil equivalent.



- In 2014 the total net energy derived from agricultural biomass was 3,919 ktoe; generation of electricity from farm waste and biomass accounted for 3,469 ktoe and heat generation from plant and animal biomass accounted for the remaining 451 ktoe.
- Between 2013 and 2014:
 - Total net energy derived from agricultural biomass increased by 37%;
 - Electricity generation increased by 40%. Within this, electricity generation from plant biomass rose by 45% to 2,913 ktoe and electricity generated by anaerobic digestion (AD) rose by 40% to 331 ktoe; electricity generated from animal biomass has stayed relatively stable at around 225 ktoe;
 - Heat generation increased by 16%. Within this, heat generation from plant biomass increased by 9% to 373 ktoe and heat generated by animal biomass increased by 19% to 35 ktoe. Heat generated by AD more than doubled to 43 ktoe.
- Between 1990 and 2014:
 - Up to 2006 total net energy derived from agricultural biomass gradually increased to 399 ktoe;
 - Between 2007 and 2014 total net energy derived from agricultural biomass increased rapidly leading to an 8-fold increase in the amount of electricity generated.

This indicator was updated in September 2015. The next update will be in August 2016.

Further information and contact

Background information can be found in the accompanying fact sheet.

For further queries or information on this indicator contact Defra's Observatory team on +44 (0) 1904 455058 or email Observatory@defra.gsi.gov.uk

Observatory monitoring framework – indicator fact sheet

Environmental impact: Climate change

Indicator DD3: Net energy derived from agricultural biomass

<i>Indicator</i>	Net energy derived from agricultural biomass
<i>Data</i>	Energy and heat generated from biomass and farm waste in thousand tonnes of oil equivalent (ktoe)
<i>Geographic coverage</i>	UK
<i>Years</i>	1990 – 2014
<i>Source</i>	Digest of UK energy statistics, DECC
<i>Origin of data</i>	Department of Energy and Climate Change (DECC)
<i>Updates</i>	This indicator will be updated annually. The next update will be in August 2016.
<i>Background</i>	<p>Farm products or by-products are used to generate electricity (mostly off-farm) and heat (mostly on-farm). Electricity can be generated from energy crops grown specifically for this purpose and also from digestion of farm wastes and the combustion of poultry litter, meat, bone, straw and short rotation coppice. Heat generation is largely from straw, but also includes farm waste digestion and heat from short rotation coppice.</p> <p>The amount of electricity and heat generated by anaerobic digestion (AD) are collected by DECC. Of the 207 electricity-generating AD plants operating at the end of 2014, 67 qualified as Combined Heat and Power (CHP) plants. An additional 18 were heat only, and 8 were producing bio-methane for grid injection. The majority of the heat-only schemes were small on-farm installations.</p>
<i>Statistical & methodological information</i>	<p>Data are presented in thousand tonnes of oil equivalent (ktoe), on the basis of 1 tonne of oil equivalent (toe) having an energy content of 41.868 gigajoules (GJ).</p> <p>Historically, the data for heat from agricultural biomass were approximate estimates based partly on 1990 information and partly on a survey of straw-fired boilers carried out in 1993/94. A DECC/Defra initiative to investigate opportunities to improve these data has resulted in questions on the end use of straw being introduced to the Cereal and Oilseed Production survey in 2014.</p>
<i>Further information</i>	<p>The Digest of UK Energy Statistics and information on renewable sources of energy (Chapter 6, DUKES 6.1.1) can be found on the DECC website at: https://www.gov.uk/government/organisations/department-of-energy-climate-change/series/digest-of-uk-energy-statistics-dukes</p> <p>Area of crops grown for Bioenergy can be found at: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/434098/n-onfood-statsnotice2012-10jun15.pdf</p>