

## Savings and Statistics

# Northern Ireland renewables summary statistics 2021

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### Conditions of use

These can be used in media communications provided:

- the Energy Saving Trust is referenced as the source;
- the figures are not used to insinuate any endorsement of a particular product;
- the appropriate caveat is used to accompany the statement (see below).

Please do not combine savings without checking with the Energy Saving Trust beforehand.  
Some savings directly affect the savings of others and may need to be recalculated if combined.

## PV (solar electricity panels)

<b>PV</b>	<b>Annual saving</b>	An average 3.5kWp solar electricity system could generate income of around £215 from exporting electricity and could save £120 off your electricity bill every year. It could also save over 780kg carbon dioxide every year. <sup>1</sup>
	<b>Size and cost</b>	A typical household PV system is 3.5kWp, and costs on average around £4,800 for the unit and installation <sup>2</sup> . Typically, the inverter will also need replacing once within the lifetime of a system (around 25 years), costing around £800 <sup>3</sup> .

## Wind Turbine

<b>Wind turbine</b>	<b>Annual saving</b>	A 5kWp wind turbine could generate up to 7,550kWh every year, saving 1.8 tonnes carbon dioxide every year. <sup>4</sup>
	<b>Size and cost</b>	A typical 6kWp system costs between £23,000 and £34,000. <sup>5</sup>

## Solar water heating

<b>Solar water heating</b>	<b>Annual saving</b>	A typical 3-person household in an oil-heated home could save up to £45 a year off their water heating bill <sup>6</sup> .
	<b>Size and cost</b>	A solar water heating system for a 3- to 4-person home costs between £3,000 and £5,000. <sup>7</sup>

<sup>1</sup> Based on a south-facing roof, at 35 degrees using annual average solar irradiation data for the BT2 8FE postcode area; export rate assumed at 84% of generation and 611kWh is assumed to be used on site. Based on an average electricity price of 17.50p/kWh and export rate of 5.47p/kWh.

<sup>2</sup> Based on 2019 MCS data.

<sup>3</sup> Based on recommendation from Solar PV industry.

<sup>4</sup> Based on a 17.2% load factor.

<sup>5</sup> Based on a 5kWp free-standing turbine, around 6m in height. Based on data provided by MCS.

<sup>6</sup> Based on an average oil price of 4.35p/kWh.

<sup>7</sup> Based on data provided by MCS.

## Air source heat pump

<b>Air source heat pump</b>	<b>Annual saving</b>	Replacing an average oil boiler with an air source heat pump in a 4-bedroom detached house can reduce your home's carbon dioxide emissions by 4.5 to 4.8 tonnes a year. <sup>8</sup>
	<b>Size and cost</b>	A typical larger air source heat pump, suitable for a 4-bedroom detached house costs on average between £7,000 and £13,000 <sup>9</sup> .

## Ground source heat pump

<b>Ground source heat pump</b>	<b>Annual saving</b>	Replacing an average oil boiler with a ground source heat pump in a 4-bedroom detached house can reduce your home's carbon dioxide emissions by 4.6 to 4.9 tonnes a year. <sup>10</sup>
	<b>Size and cost</b>	A typical ground source heat pump suitable for a semi-detached or detached house with a large garden costs between £20,000 and £30,000. <sup>11</sup>

<sup>8</sup> Based on an average 89% efficient oil boiler replaced with an ASHP with SPF(H4) between 2.74 and 3.45 depending on distribution system. The savings range incorporates savings for properties with solid walls, cavity walls, and installations with underfloor heating, regular radiators, and oversized radiators. Using an average oil price of 4.35p/kWh, electricity price of 17.85p/kWh.

<sup>9</sup> Based on MCS data.

<sup>10</sup> Based on an average 89% efficient oil boiler replaced with an GSHP with SPF(H4) between 2.97 and 3.81 depending on distribution system. The savings range incorporates savings for properties with solid walls, cavity walls, and installations with underfloor heating, regular radiators, and oversized radiators. Using an average oil price of 4.35p/kWh, electricity price of 17.85p/kWh.

<sup>11</sup> Systems could cost considerably more depending on access, space and location. Based on MCS data.

## Biomass pellet boiler

<b>Biomass pellet boiler</b>	<b>Annual saving</b>	Replacing an average oil boiler with a biomass boiler in a 4-bed detached house can reduce your home's carbon dioxide emissions by 4.7 to 5.0 tonnes a year. <sup>12</sup>
	<b>Size and cost</b>	A typical biomass pellet boiler costs between £9,000 and £15,000. <sup>13</sup>

<sup>12</sup> Based on an average 88% efficient oil boiler replaced with a 84% efficient biomass pellet boiler, saving ranged between solid and cavity walls. Using an average oil price of 4.35p/kWh, electricity price of 17.85p/kWh.

<sup>13</sup> Based on MCS data.

## Find out more

See our website at <http://www.energysavingtrust.org.uk>

## For FREE Northern Ireland help and advice

Householders can call the Northern Ireland Energy Advice Line, managed by The Housing Executive on **0800 111 4455** for:

- Free advice on the best ways to save energy in the home.
- Details of local grants or discounts to help with the cost of energy efficiency improvements.

## General enquiries

028 9244 9821

## Media enquiries

07528 856405

## Our calculations

To find out more about the assumptions we made when calculating these figures, see <https://energysavingtrust.org.uk/about-us/our-data/>