Gwasanaeth Ynni
Energy Service

Yn cefnogi ymgyrch Cymru dros economi carbon isel lwyddiannus.

Supporting Wales' drive towards a successful low carbon economy

# Regional energy strategies

## Technical annex B:

## Economic modelling

- Cardiff Capital Region
- North Wales
- Mid Wales
- South West Wales

**Final version**

March 2021

# Contents

# 1. Introduction

This technical annex (annex B) provides additional detail on the methodology for the **economic assessment** presented in the regional energy strategies for Cardiff Capital Region, North Wales, Mid Wales and South West Wales.

Technical annex A provides additional detail on the methodology used to produce the **energy modelling** results presented in the regional energy strategies.

All data sources referenced in this technical annex are listed in section 6.

## 1.1 Scope: activities covered by the economic assessment

The economic assessment estimates the jobs, gross value added (GVA), and investment related to the actions detailed in the energy modelling scenarios for the region (see annex A).

The energy modelling covers two scenarios for the future energy system in 2035:

1) The **business as usual (BAU) scenario** describes actions that are expected to take place if the region's energy system continues to develop on the current trajectory; and

2) The **energy system vision (ESV) scenario** defines a series of actions that puts the region on a pathway towards net zero.

## 1.2 Direct, indirect and induced jobs

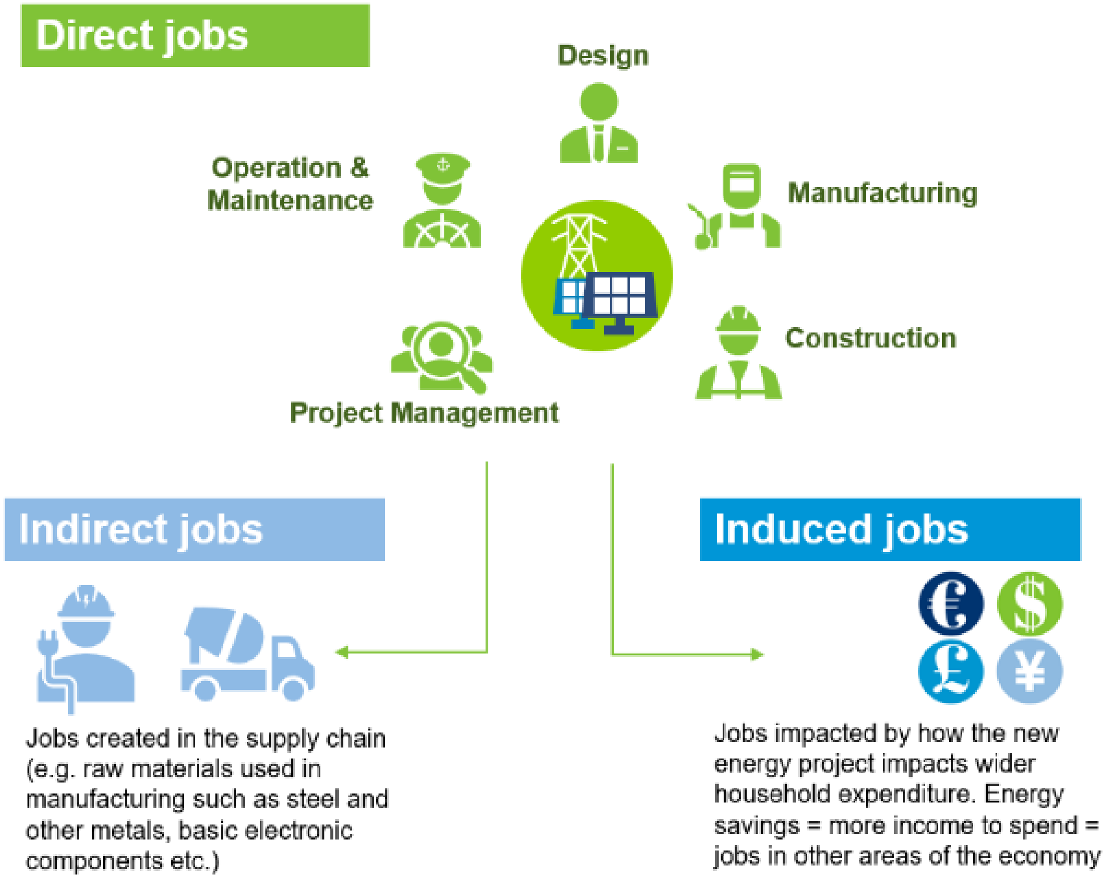
We distinguish between 'direct', 'indirect' and 'induced' jobs in the context of the energy system (Figure 1).

**Direct jobs** are typically associated with the design, manufacture, construction, installation, operation and maintenance of equipment required for the energy system transition.

**Indirect jobs** arise in the supply chain of the energy technologies.

**Induced jobs** are the jobs linked to the impact of the energy system transition on wider household income and spending i.e., where savings are made on household energy costs, a household potentially has more available income to spend on other goods and services, generating jobs in other sectors producing those goods and services.

**Figure 1: Direct, indirect and induced jobs**




## 1.3 Location of jobs

It is not possible to specify exactly where the various types of jobs will be located, geographically. Some jobs are likely to be located in the Cardiff Capital Region and other jobs may be held by people based outside of the region.

Our methodology focuses on direct jobs, a greater proportion of which are considered likely to be located in the region than indirect or induced jobs.

The experience of Wales to date has been that many electricity generation jobs are held by those living outside of the region (e.g., manufacturing jobs associated with making solar panels in Asia). This contrasts with energy efficiency jobs which are often held by local residents who provide services to the surrounding area (e.g., an installation job for a local heating technology expert).

## 1.4 Gross jobs, net jobs and Full Time Equivalent (FTE)

**Gross jobs** are the direct jobs related to a specific project or intervention.

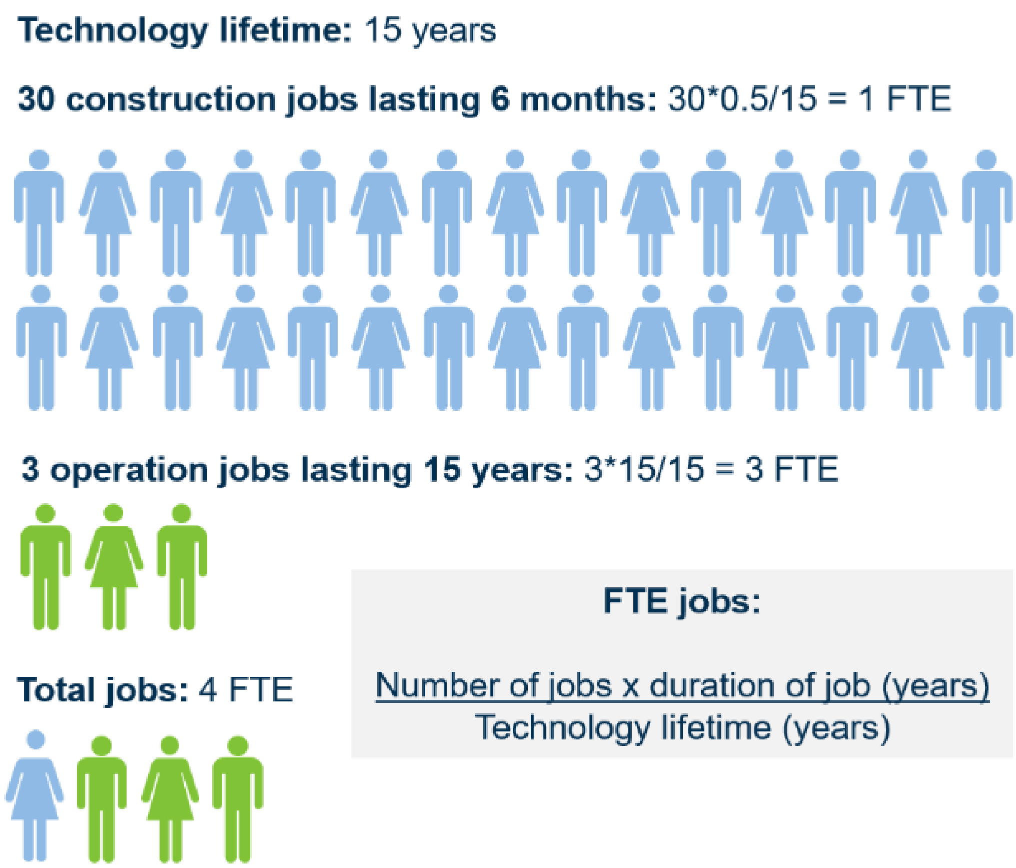
**Net jobs** reflect the net impact of the job gains alongside the job losses associated with transitioning from one technology to another.

Where possible, we present 'net jobs', in line with the best practice for economic impact assessment. The only case where this was not possible, due to limited data availability, was for the jobs associated with low carbon heating technologies; these are presented as 'gross jobs'.

To determine net jobs from gross jobs figures, the number of 'displaced' jobs are subtracted from the 'total' jobs in a given year. This method was used to try to better estimate the specific effects in a regional geography.

Some jobs associated with the energy transition will be **short term jobs** and others will be **long term jobs**. We deal with this by defining jobs in terms of **Full Time Equivalents** (FTE), wherever data allows. This is derived from the number and duration of jobs and the lifetime of the technology (Figure 2).

**Figure 2: Calculating Full Time Equivalent jobs**



## 1.5 (Approximate) Gross Value Added (aGVA)

We use the following definition for **approximate gross value added** (aGVA):

> *"…the amount that individual businesses, industries or sectors contribute to the economy.*
>
> *Generally, this is measured by the income generated by the business, industry or sector less their intermediate consumption of goods and services used up in order to produce their output, labour costs (for example, wages and salaries) and an operating surplus (or loss)."*
>
> Source: Office for National Statistics (Source 01)

## 1.6 Indicator-based approach

The energy modelling is a key input for the economic assessment. The energy modelling considers different areas of the energy system (Table 1).

We have used an **indicator-based approach** to estimate the job creation, GVA and investment associated with 'business as usual' and the 'energy system vision'. This involves reviewing literature to identify the most appropriate benchmarks such as jobs per megawatt (MW), or GVA per employee. These benchmarks are then applied to the energy model outputs.

## 1.7 Discount rate

**'Discounting'** is a method for comparing current costs and benefits with future costs and benefits. This is done by converting the values of costs and benefits in different time periods into a comparable 'present value', by applying a 'discount rate' to future costs and benefits.

We have applied a **discount rate of 3.5%** to technology costs and GVA calculations, where appropriate in the economic analysis. This aligns with HM Treasury Green Book guidelines (Source 02).

| Table 1: Energy modelling areas, description of inputs, and which areas are assessed for economic impact | | |
|---|---|---|
| **Energy modelling area** | **Description of energy modelling inputs (for 2020-2035)** | **Included in economic assessment?** |
| **Electricity generation** | Installed capacity (MW) and electricity generation (gigawatt-hours per year - GWhpa) by technology | Yes |
| **Domestic energy efficiency** | • Number of homes in each Energy Performance Certificate (EPC) rating<br>• Estimated number of energy efficiency measures required to achieve a shift to higher EPC homes<br>• Change in thermal demand of existing homes<br>• Change in thermal demand of new homes<br>• Change in non-heat electricity use (e.g. appliances, lighting) | Yes |
| **Domestic heat** | Number of homes using each heating technology | Yes |
| **Commercial and industrial energy consumption** | Changes in commercial and industrial energy consumption by fuel | No* |
| **Road transport** | Changes in vehicle numbers and type | No** |

***Commercial and industrial energy consumption:** The energy modelling inputs are insufficient to estimate jobs, GVA, or investment. The energy modelling impacts do not allow us to identify energy efficiency impacts from other factors influencing energy demand change, such as the macroeconomic assumptions underpinning the future energy scenarios.

****Road transport:** There was insufficient data to relate the uptake of EVs in the region with impact on jobs, GVA and investment. As such, road transport has not been assessed.

# 2. Electricity generation

## 2.1 Jobs assumptions

To estimate the number of jobs associated with each scenario in the energy modelling, a benchmark of either jobs per installed capacity (per megawatt, MW) or jobs per annual energy generation (GWhpa) is applied, depending on whichever benchmark is available (Table 2).

**Table 2:** Assumption: **Electricity asset gross jobs benchmarks**

| Average gross direct jobs per | Jobs per installed capacity or generation | | Source |
|---|---|---|---|
| **Anaerobic digestion** | MW | 2.926 | 03 |
| **Biomass electricity and CHP** | GWhpa | 0.25 | 04 |
| **Landfill gas** | GWhpa | 0.6 | 04 |
| **Offshore wind** | MW | 1.144 | 05 |
| **Onshore wind** | GWhpa | 0.5 | 04 |
| **Solar PV** | GWhpa | 1.75 | 04 |
| **Nuclear** | GWhpa | 0.18 | 06 |
| **Energy from waste** | MW | 2.926 | 05 |
| **Hydropower** | GWhpa | 0.25 | 04 |
| **Tidal stream** | MW | 1.408 | 03 |
| **Wave** | MW | 1.408 | 03 |
| **Tidal lagoon** | MW | 1.408 | 03 |
| **Coal** | GWhpa | 0.15 | 04 |
| **Gas** | GWhpa | 0.12 | 04 |

Note: For source 4, estimates are taken from charts in the UKERC study; tables with exact figures were not provided.

## 2.2 GVA assumptions

To estimate the GVA related to the energy generation projects and activities, we build on the jobs estimates and apply a GVA/ employee benchmark (Table 3).

**Table 3:** Assumption: **GVA/ employee for 'Production of electricity'**

| Approximate gross value added at basic prices[1] / Total employment average during the year | | Source |
|---|---|---|
| 2008 – 2017 average | £157,198 | 08 |

[1] Eurostat defines '**basic price'** as *'the amount receivable by the producer from the purchaser for a unit of a good or service produced as output minus any tax payable, and plus any subsidy receivable, by the producer as a consequence of its production or sale. It excludes any transport charges invoiced separately by the producer'* (Source 07).

## 2.3 Investment assumptions

To calculate the investment related to the electricity generation asset changes described by the energy modelling, we have applied a benchmark which combines pre-development and construction costs/ installed capacity to new generation.

The BEIS 2016 report ‘Electricity Generation Costs’ (Source 09*)* provided cost data for all technology areas except for tidal lagoon. Due to limited data on tidal lagoon costs, we have referenced the BEIS TLP Tidal Lagoon Programme: Factsheet (Source 10).

There is a slight mismatch in the structure of the energy model inputs compared to the main data source. The energy model inputs provide the year that energy generation comes online, however the base data relates to the year the project is commissioned. Acknowledging this, we have applied the discount factor to an estimated year the project is commissioned, and we match the estimated year of commission with the appropriate BEIS costs for that year. However, when it comes to interpretation this means that we present the total investment costs, but we do not break these costs down by year.

# 3. Domestic energy efficiency

## 3.1 Investment calculations and sources

To estimate the investment required, the average installed cost per dwelling for each measure was applied to the number of dwellings implementing the measure in a given year (Table 4).

**Table 4:** Assumptions: **Installed cost per dwelling for energy efficiency measures**

| Measure | £ | Source |
|---|---|---|
| 50 mm internal or external wall insulation | £ 8,500 | 11 |
| Add additional 80 mm jacket to hot water cylinder | £ 50 | |
| Cavity wall insulation | £ 900 | |
| Draughtproof single-glazed windows | £ 5,000 | |
| Flat roof insulation | £ 400 | |
| Floor insulation | £ 2,500 | |
| Flue gas heat recovery device in conjunction with boiler | £ 800 | |
| High performance external doors | £ 500 | |
| Hot water cylinder thermostat | £ 50 | |
| Increase hot water cylinder insulation | £ 50 | |
| Increase loft insulation to 270 mm | £ 400 | |
| Insulate hot water cylinder with 80 mm jacket | £ 50 | |
| Low energy lighting for all fixed outlets | £ 225 | |
| Replace single glazed windows with low-E double glazing | £ 5,000 | |
| Replacement glazing units | £ 5,000 | |
| Room-in-roof insulation | £ 400 | |
| Secondary glazing to single glazed windows | £ 5,000 | |
| Solid floor insulation | £ 3,000 | |
| Suspended floor insulation | £ 2,000 | |
| Time and temperature zone control | £ 250 | |
| Upgrade heating controls | £ 250 | |

Note: Source 11 did not include prices per dwelling for three types of energy efficiency measures. We did not find peer reviewed sources for these measures. Instead, we relied on websites that are commonly consulted by households to obtain price information (Table 5).

| **Table 5:** Assumptions: **Price per dwelling for domestic energy efficiency measures** | | |
|---|---|---|
| **Measure** | **£** | **Source** |
| Flue gas heat recovery device in conjunction with boiler | £ 800 | 12 |
| Low energy lighting for all fixed outlets* | £ 225 | 13 |
| Heat recovery system for mixer showers / waste water heat recovery systems | £1,000 | 14 |
| * assumes 30 light bulbs per home | | |

## 3.2 Jobs calculations and assumptions

To calculate the jobs associated with the energy efficiency measures installed in dwellings, we applied a benchmark for gross jobs/ investment (Table 6). Because a net jobs/investment benchmark is not available, a net job: gross job ratio is applied as shown in Table 7. This accounts for the reduction in jobs associated with a reduction in energy and electricity production.

| **Table 6:** Assumptions: **Gross jobs/ investment for average home weatherization (weatherproofing) and commercial retrofits** | | |
|---|---|---|
| | | **Source** |
| Direct jobs/$USD million | 4.55 | 15 |
| Direct jobs/£GBP million[2] | 6.69 | 15-16 |
| Note: The gross jobs/investment benchmark does not include long term operation and maintenance jobs. However, it is considered to be the most robust source available and we expect the long-term jobs associated with the energy efficiency measures described to be minimal. | | |

| **Table 7:** Assumption: **Domestic energy efficiency jobs: Net jobs as a percentage of gross jobs** | | |
|---|---|---|
| **Type of jobs** | **Jobs/ £million** | **Source** |
| Net energy efficiency jobs (including indirect and induced) | 10 | 04 |
| Gross energy efficiency jobs (including indirect and induced) | 14 | 04 |
| Net jobs as a percentage of gross jobs (calculated) | 71% | Table 7 |

[2] OECD 2019 purchasing power parities comparing US and UK currency of 0.68 was applied to convert USD to GBP (Source 16).

## 3.3 GVA calculations and sources

To estimate the GVA related to these energy efficiency measures, we apply a GVA/ employee benchmark to the jobs estimates (Table 8).

**Table 8:** Assumption: **GVA/ employee for 'Construction' and 'Manufacturing'***

| **Approximate gross value added at basic prices / Total employment average during the year** | | **Source** |
|---|---|---|
| 2008 – 2017 average | £59,350 | 07, 17-18 |

*We recognise that there is not a 'perfect' match between energy efficiency activities and the standard industrial classification (SIC) codes used in the Annual Business Survey (ABS) (Source 17). The Office for National Statistics Low Carbon Renewable Economy (LCREE) data set (Source 18) places most jobs associated with LCREE in the construction (36% of jobs) or manufacturing sectors (37% of jobs). As such this assessment combined and averaged overall construction and manufacturing SIC figures from the ABS.

# 4. Domestic heat

## 4.1 Investment calculations and sources

We calculate the investment related to heat network and non-heat network heating technologies differently due to data availability. For non-heat network technologies, an average capital and installation cost per dwelling is applied to the dwellings that have switched to that technology in a given year. Table 8 below shows the costs and sources used.

**Table 8:** Assumptions:
**Non-heat network capex and installation costs per dwelling**

| Technology | Capex and installation costs/ dwelling (£) | Source |
|---|---|---|
| Mains gas boiler | £2,656 | 19 |
| Hybrid heat pump (HHP) | £6,500 | 20 |
| Oil boiler | £3,056 | 19 |
| Liquid petroleum gas (LPG) boiler | £1,800 | 21 |
| Bio LPG boiler | £1,800* | 21 |
| Biomass boiler | £14,700 | 22 |
| Radiant electric heaters | £153 | 23 |
| Air source heat pump (ASHP) | £9,005 | 24 |
| Ground source heat pump (GSHP) | £14,931 | 24 |

* Due to lack of data, bio LPG boilers assumed to be the same price as LPG boiler

For heat networks, investment costs are estimated based on both thermal demand of the connected homes as well as the number of homes connected. This is due to data availability of different heat network capital costs (Table 9 and Table **10**). Table 12 sets out the heat network distribution losses and operating hours assumptions.

**Table 9:** Assumptions:
**Heat network generation plant capital costs per capacity**

| Type | Capex £/ MW | Source |
|---|---|---|
| Gas heat network | £844,000 | 25 |
| Biomass heat network | £410,508 | |
| GSHP heat network | £1,500,000 | |

| **Table 10:** Assumptions: **Heat network heat interface unit (HIU) and distribution pipework costs per dwelling** | | |
|---|---|---|
| **Heat network other plant and equipment** | **Capex/ dwelling (£)** | **Source** |
| Domestic HIUs | £2,000 | 25 |
| Distribution network investment costs | £1,624 | 26 |
| Total per dwelling costs | £3,624 | Table 11 |

| **Table 11:** Assumptions: **Heat network distribution losses and operating hours** | | |
|---|---|---|
| **Parameter** | **Assumption** | **Source** |
| Heat network distribution losses | 10% | 27 |
| Average heat network operating hours per year | 5,000 hours/year | 28 |

## 4.2 GVA calculations and sources

To estimate the GVA related to domestic heating measures, we build on the investment estimates and apply a GVA/ turnover benchmark for non-heat network technologies (Table 13) and a GVA/ capex benchmark for heat network technologies (Table 14).

Turnover is a sufficient estimation for non-heat network heat technologies as they are more likely to be purchased in the year of installation. Heat networks differ in this regard because high capital costs must be recovered over a long period of time. As such, we consider GVA/ capital a more appropriate benchmark for heat networks.

| **Table 13:** Assumption: **GVA/ turnover for 'Manufacture of gas; distribution of gaseous fuels through mains'** | | |
|---|---|---|
| **Approximate gross value added at basic prices / Total turnover** | | **Source** |
| 2008 – 2017 average | 0.317 | 07-08 |

| **Table 14:** Assumption: **GVA/ Total capital expenditure for 'Manufacture of gas; distribution of gaseous fuels through mains'** | | |
|---|---|---|
| **Approximate gross value added at basic prices / Total capital expenditure** | | **Source** |
| 2008 – 2017 average | 3.35 | 07-08 |

## 4.3 Jobs calculations and sources

Estimating jobs related to heating technologies is limited significantly by lack of data. Net job benchmarks are not available and robust benchmarks for the traditional heating technologies, such as gas and coal boilers, are not available. As such, this analysis focuses on estimating the gross jobs associated with the transition to low carbon heating technologies.

Employment associated with low carbon heating is substantially less studied than jobs associated with low carbon electricity or energy efficiency. Should more studies on low carbon heating jobs be released, we would be able to compare benchmarks and increase the level of confidence as they relate to these results. As with investment and GVA, our approaches differ for heat network and non-heat network technologies (Tables 15 and 16).

**Table 12:** Assumptions:
**Non-heat network low carbon technology jobs/£ million turnover**

| Technology | Jobs/£ m turnover | Source | Jobs/£ m turnover | Source |
|---|---|---|---|---|
| Hybrid heat pump (HHP) | 4.47 | 18 | 9.48 | 28 |
| Biomass boiler | 1.97 | | 11.88 | |
| Radiant electric heaters | 4.47 | | n/a | |
| Air source heat pump (ASHP) | 4.47 | | 9.48 | |
| Ground source heat pump (GSHP) | 4.47 | | 9.48 | |

* Source 18 was used in the analysis. Source 28 is shared to demonstrate variance in the two key data sources available. One possible reason for this variance is that source 28 may include indirect and induced jobs in addition to direct jobs; however, the source does not go into sufficient detail to allow for this comparison. Given the variation between the two key sources available as well as the uncertainty regarding which types of jobs were counted, we chose to use source 18 as the conservative option.

**Table 13:** Assumptions: **Permanent jobs/GWh heat generated**

| | Jobs/ GWh | Source |
|---|---|---|
| Heat networks (gas, biomass, and GSHP driven plant) | 0.21* | 29 |

***Only includes permanent jobs; does not include construction or installation jobs

# 5. About the authors

This technical annex and the economic modelling and analysis which supported the regional energy planning was prepared by the Welsh Government Energy Service.

The Energy Service appointed John Ward, Managing Director of Pengwern Associates, to provide technical and quality assurance to the economic modelling process and outputs. John is a Visiting Senior Fellow at the Grantham Research Institute on Climate Change and the Environment. He holds an MSc in Economics (Distinction) from University College London and a BA (Hons) in Philosophy, Politics and Economics from the University of Oxford.

The economic modelling and analysis was reviewed and refined in discussion with members of the Welsh Government's Climate Change, Energy and Economist teams.

# 6. Data sources and references

| Source | Reference | Category |
|---|---|---|
| 01 | Office for National Statistics. 2018. Annual Business Survey technical report: August 2018. | All: GVA |
| 02 | HM Treasury. 2020. The Green Book: Central Government Guidance on Appraisal and Evaluation. | All |
| 03 | Rutovitz, J., Dominish, E. and Downes, J. 2015. Calculating global energy sector jobs: 2015 methodology. Prepared for Greenpeace International by the Institute for Sustainable Futures, University of Technology Sydney | Electricity generation: jobs |
| 04 | UKERC, 2014. Low Carbon Job: The evidence for net job creation from policy support for energy efficiency and renewable energy | Electricity generation / Domestic energy efficiency: jobs |
| 05 | Ram M., Bogdanov D., Aghahosseini A., Gulagi A., Oyewo A.S., Child M., Caldera U., Sadovskaia K., Farfan J., Barbosa LSNS., Fasihi M., Khalili S., Dalheimer B., Gruber G., Traber T., De Caluwe F., Fell H.-J., Breyer C, 2019. Global Energy System based on 100% Renewable Energy – Power, Heat, Transport and Desalination Sectors. Study by Lappeenranta University of Technology and Energy Watch Group, Lappeenranta, Berlin | Electricity generation: jobs |
| 06 | WEI, M., Patadia, S., Kammen, D.M. 2010. Putting renewables and energy to work: How many jobs can the clean energy industry generate in the US? Energy Policy (38) 919-931 | Electricity generation: jobs |
| 07 | Eurostat, 2017. https://ec.europa.eu/eurostat/statistics-explained/index.php/Glossary:Basic_price | All: GVA |
| 08 | ONS, 2019. Annual Business Survey. Non-financial business economy, UK: Sections A to S | Electricity generation: GVA |
| 09 | BEIS, 2016. Electricity Generation Costs | Electricity generation: investment |
| 10 | BEIS, TLP Tidal Lagoon Programme: Factsheet | Electricity generation: investment |
| 11 | European Climate Foundation, 2016. RAP, Association for the Conservation of Energy. Buildings and the 5th Carbon Budget. | Domestic energy efficiency: investment |
| 12 | Thegreenage.co.uk, 2020. Flue Gas Heat Recovery Systems | Domestic energy efficiency: investment |
| 13 | Thegreenage.co.uk, 2020. Price of lightbulbs | Domestic energy efficiency: investment |
| 14 | Thegreenage.co.uk, 2020. Waste Heat Recovery Systems | Domestic energy efficiency: investment |

| | | |
|---|---|---|
| 15 | Garrett-Peltier, H. 2017. Green versus brown: Comparing the employment impacts of energy efficiency, renewable energy, and fossil fuels using an input-output model. Economic modelling (61) 439 -447 | Domestic energy efficiency: jobs |
| 16 | OECD. Purchasing power parities (PPP). | Domestic energy efficiency: jobs |
| 17 | ONS, 2019. Annual Business Survey (ABS) Non-financial business economy, UK: section f: construction and section c: manufacturing | Domestic energy efficiency: GVA |
| 18 | Low Carbon and Renewable Energy Economy (LCREE) survey estimates, UK, 2014 to 2018. UK Renewable Heat FTE/turnover | Domestic energy efficiency: GVA |
| 19 | BEIS, 2017. What does it cost to retrofit homes? Updating the Cost Assumptions for BEIS's Energy Efficiency Modelling | Domestic heat: investment |
| 20 | Carbon Trust, 2020. Interview with Will Rivers (heat pump expert) | Domestic heat: investment |
| 21 | Price your job. The Installation Cost of LPG Gas Central heating | Domestic heat: investment |
| 22 | RHI Monthly official statistics tables August 31 2018. Average Median Capex (10 - 45kW) | Domestic heat: investment |
| 23 | The Renewable Energy Hub UK. How Much do infrared heating systems cost | Domestic heat: investment |
| 24 | RHI Monthly official statistics tables August 31 2018. Average Median Capex (4-15kW) | Domestic heat: investment |
| 25 | Committee on Climate Change, 2015. Research on district heating and local approaches to heat decarbonisation. A study for the Committee on Climate Change. | Domestic heat: investment |
| 26 | O.Gudmundsson, J.E. Thorsen, L.Zhang. 2013. Cost analysis of district heating compared to its competing technologies. Outer City averages - Euros converted to GBP on 03/06/2020 | Domestic heat: investment |
| 27 | Carbon Trust, 2020. Interview with Dr. Jonathan Williams (heat network expert) | Domestic heat: investment & jobs |
| 28 | European Commission. 2019. Competitiveness of the heating and cooling industry and services. Part 1 of the study on the competitiveness of the renewable energy sector. Heat Pumps or biomass Employment/ (turnover in euros * exchange rate) | Domestic heat: jobs |
| 29 | Turner and Townsend. Report Expected outcome calculations methodologies. Leeds City Region Energy Accelerator. West Yorkshire Combined Authority. | Domestic heat: jobs |

### Disclaimer

The Welsh Government Energy Service (“**WGES**”) is funded by the Welsh Government with the aim of developing energy efficiency and renewable energy projects that contribute to public sector decarbonisation and national energy targets. The WGES is delivered by the Carbon Trust, Energy Saving Trust and Local Partnerships (the “**Delivery Partners**”). This report (the “**Report**”) has been produced by the Delivery Partners and, whilst the views expressed in it are given in good faith based on information available at the date of this Report:- (i) these views do not necessarily reflect the views of the Welsh Government, which accepts no liability for any statement or opinion expressed in the Report; (ii) the Report is intended to provide general guidance only, rather than financial, legal or technical advice for the purposes of any particular project or other matter, and no-one in receipt of the Report should place any reliance on it in substitution for obtaining their own advice from an appropriate third party advisor; and (iii) any person in receipt of this Report should therefore obtain their own financial, legal, technical and/or other relevant professional advice insofar as they require specific guidance on what action (if any) to take, or refrain from taking, in respect of any project, initiative, proposal, involvement with any partnership or other matter to which information contained in the Report may be relevant; and (iv) the Delivery Partners accept no liability in respect of the Report, or for any statement in the Report and/or any error or omission relating to the Report.