

## **Factsheet – sources of greenhouse gases**

Greenhouse gases are gases in Earth's atmosphere that trap heat. They let sunlight pass through the atmosphere, but they prevent the heat from leaving the atmosphere.

The main greenhouse gases are water vapor, carbon dioxide, methane, ozone, nitrous oxide and chlorofluorocarbons.

Over the last 170 years human activities have increased the concentrations of some of these greenhouse gases, particularly carbon dioxide, methane and nitrous oxide, leading to enhanced warming of the Earth.

Greenhouse gas emissions come from several different sources. Carbon dioxide emissions come from burning fossil fuels (coal, oil and natural gas), solid waste and trees, and in the manufacture of cement for example. Methane is emitted during the production and transport of coal, natural gas, and oil, from livestock and other agricultural practices, and decaying organic waste in landfills. Nitrous oxide is emitted during agricultural and industrial activities, combustion of fossil fuels and solid waste, as well as during treatment of wastewater.

In order to make global reporting of greenhouse gas emissions simpler these sources are categorised under three different scopes which we will consider in turn.

### **Scope 1 or on-Island emissions**

Scope 1 emissions are the direct emissions generated and emitted into the atmosphere from the Island. They include all activities that involve the burning or combustion of fossil fuels, such as:

- burning oil or gas to heat buildings;
- driving petrol or diesel vehicles;
- gas used in cooking.

They also include any on-Island production of any of the other greenhouse gases, such as methane produced by livestock, such as cows.

Under our international obligations Jersey is only obligated to account for and report on our Scope 1 emissions.

These emissions are monitored, independently validated and reported annually by a UK company called Aether. Further details on this are provided in a separate factsheet.

### **Scope 2 emissions**

Scope 2 emissions are those arising from the generation of any imported energy. In Jersey's case this is electricity.

Although these emissions are the result of energy used in Jersey, and arguably are therefore our responsibility, they are reported as Scope 1 emissions in the country where the energy is generated.

Jersey imports 95% of our electricity from France and emissions associated with that electricity production will be reported by France under its international reporting obligations.

However, we know how much electricity is imported and the emissions associated with its production and so can calculate and publish our Scope 2 emissions. Within the Carbon Neutral Strategy, the decision has been taken that we should include our Scope 2 emissions within our carbon neutral target.

### **Scope 3 emissions (sometimes referred to as consumption emissions)**

Scope 3 emissions are those associated with the manufacture, transport and disposal of the goods and services consumed in Jersey.

Examples include:

- energy used to make the mobile phones, cars and computers we buy as well as the energy needed to transport them to Jersey
- any aviation fuel consumed when people from Jersey fly from Gatwick to Spain.
- marine diesel used to ship the food we buy in our supermarkets from where it is produced in the world to the UK distribution centres.

Scope 3 includes the full life cycle emissions throughout a supply chain. For example, a new iPhone 12 is estimated to be responsible for 70kg CO<sub>2</sub> across its full life cycle.

- Production – energy from sourcing the raw materials, manufacturing, and packaging
- Transport – energy needed to move the product over land, air and/or sea
- Use – the energy required to use the product
- End of life – energy required to dispose of the product

Calculating all Scope 3 emissions is exceptionally difficult due to the large amounts of information required, some of which isn't currently available. It is not possible to accurately measure Jersey's Scope 3 emissions at the current time.

We do not have to report on our Scope 3 emissions, but the country which produces the item will report on them under their Scope 1 emissions.

As Jersey is a wealthy jurisdiction, which imports many goods and products, our Scope 3 emissions are likely to be significantly higher than our Scope 1 and 2 emissions combined.

Local actions and individual choices on the goods we purchase and the food we eat and reducing consumption and waste will have an impact on global emissions. Although some such decisions will be left to individuals there may be a role for government in terms of regulations or financial incentives relating to consumption.

In summary, the emissions associated with the goods we consume in Jersey that are manufactured elsewhere, legally fall under the responsibility of the source country as their Scope 1 emissions. However, Jersey is arguably partly responsible for them. Even though we do not decide how those products are made, it is our demand for those products which drives those emissions.

### **Emissions from the activities of businesses worldwide that are headquartered or financed through Jersey**

As an international finance centre, Jersey and its economy benefit from the money that is invested through the funds and structures that are based here. Some of this money is invested in activities that generate greenhouse gas emissions in other countries, for example a pension fund that supports a coal fired power station in China.

Although the responsibility for reporting these emissions will lie with the country that produces them we need to consider what responsibility we have for those emissions and whether choices we make on how our money is invested can have an impact on global emissions.

### **What scopes does the Carbon Neutral Strategy cover?**

As set out by Principle 2 of the Carbon Neutral Strategy, the definition of carbon neutrality has been agreed as the balancing of the total Scope 1 and 2 emissions that we as an Island produce against any activity that captures, absorbs or reduces global emissions so that they are equal.

Although Scope 3 emissions are not included in this definition, the Carbon Neutral Strategy also recognises their importance and acknowledging that the Island needs to take action to reduce them.

### **Read more about sources of greenhouse gas emissions:**

- **Carbon Neutral Strategy -**  
[www.gov.je/Government/Pages/StatesReports.aspx?ReportID=5138](http://www.gov.je/Government/Pages/StatesReports.aspx?ReportID=5138).
- **Considering the Channel Islands' indirect GHG emissions, Aether March 2020**  
<https://www.gov.je/SiteCollectionDocuments/Environment%20and%20greener%20living/R-Channel%20Islands%20Scope%203%20GHG%20emissions%2020200401%20HL.pdf>