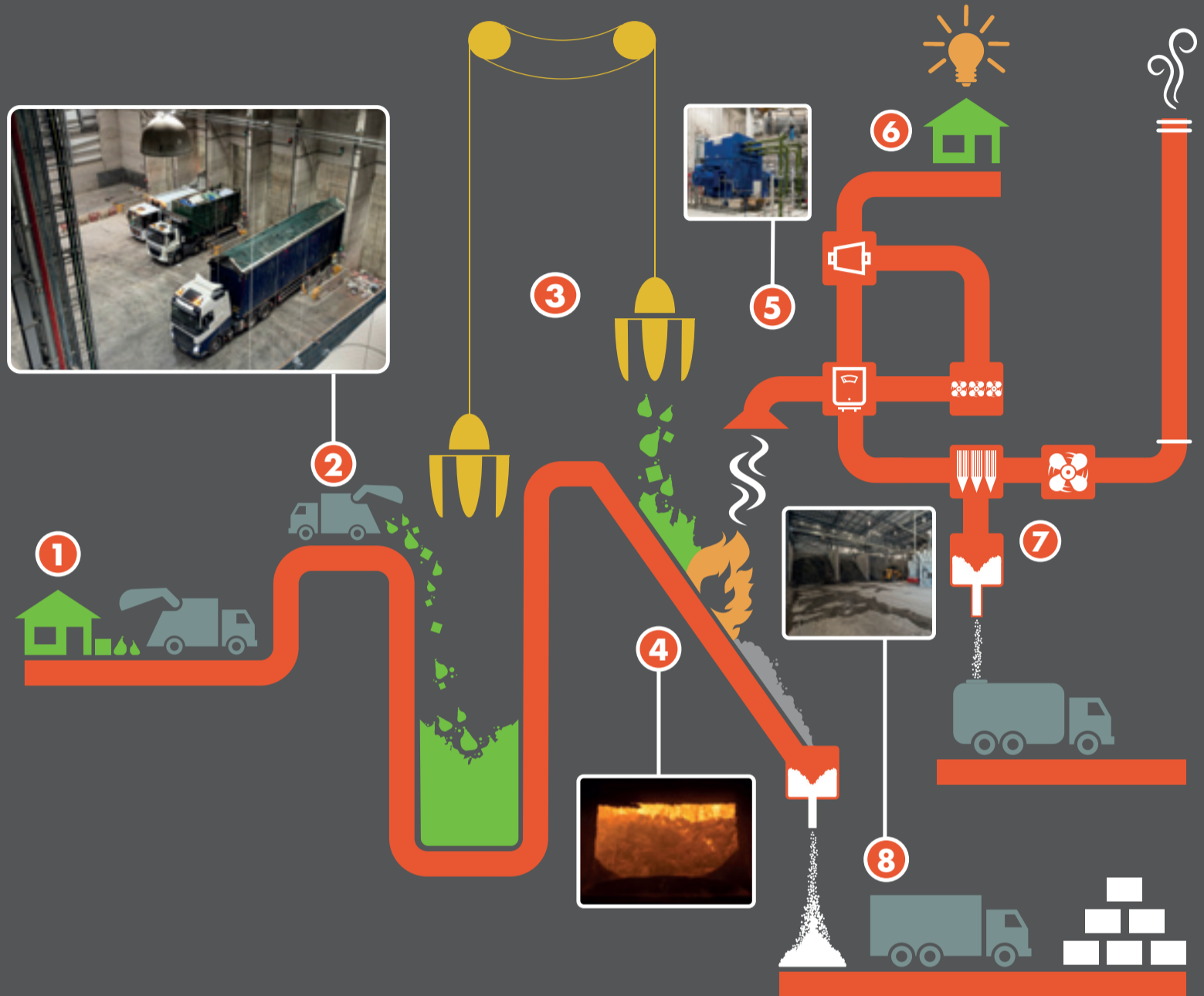


Making Energy From Waste

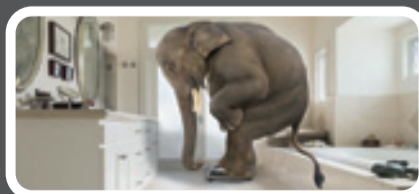
Your waste has to be collected and processed before we can turn it into energy, this process is quite complex and involves many steps.



- 1 Firstly a lorry carrying waste is brought from your home to the facility and is weighed.
- 2 The lorry travels to the tipping hall and tips the waste into the bunker.
- 3 Waste is then transported via an overhead crane (managed by the facility control room) and is dropped into the feed chute.
- 4 Waste travels on the combustion grate, which burns at more than 850°C. This combustion process heats water filled pipes inside the boiler to produce steam.
- 5 Steam from the boiler is fed into the turbine at 60 Bar pressure, connected to a generator which generates electricity.
- 6 The electricity then passes through the facility substation and is then exported to the National Grid. The facility generates enough electricity to power 25,000 homes.
- 7 Flue gases are neutralized by lime and activated carbon in order to reduce harmful toxins. The clean flue gases are then emitted via the stack. This process controls our emissions from the facility and keeps us within our strict emission limits.
- 8 Incinerator Bottom Ash (IBA) is the remains of the waste that cannot be burnt. IBA is firstly cooled in the quench bath before being processed to recover both ferrous and non-ferrous metals. The remainder is used as construction aggregates, which can be used for example, building the sub-base for roads.

Did you know?

• 130,000 tonnes of non-recyclable waste come from Gloucestershire - this is the equivalent of 21,667 fully-grown adult male African Elephants.



• When waste decomposes in landfill, greenhouse gases, including CO₂ and Methane, are released. Energy from Waste is a greener alternative. The process does release CO₂, but not as much as landfill (and no methane). We are strictly regulated by the Environment Agency, and we have a permit to operate.

At Gloucestershire Energy from Waste, we produce enough electricity to power 25,000 homes.

Weird & Wonderful!
Rain is captured on the roof and is used in the administration block for toilet flushing.
The rain is also used to cool the hot ash from combustion.