

South Humber Bank Energy Centre Project - FAQs

Who is EP Waste Management Ltd?

EP Waste Management Ltd (EPWM) are the applicant and a subsidiary of EP UK Investments Ltd (EPUKI).

EPUKI acquired the South Humber Bank Power Station (SHBPS) site from Centrica in 2017. The SHBPS site includes a combined cycle gas turbine (CCGT) power station with a gross electrical output of around 1,365 megawatts (MW), a cooling water pumping station and areas of undeveloped land.

EPUKI owns and operates a number of other power stations in the UK. These include Langage Power Station, a CCGT power station near Plymouth in Devon; Lynemouth Power Station, a biomass fuelled power station in Northumberland; and power generation assets in Northern Ireland and the Republic of Ireland. EPUKI also owns sites with consent for new CCGT power stations in Norfolk and North Yorkshire.

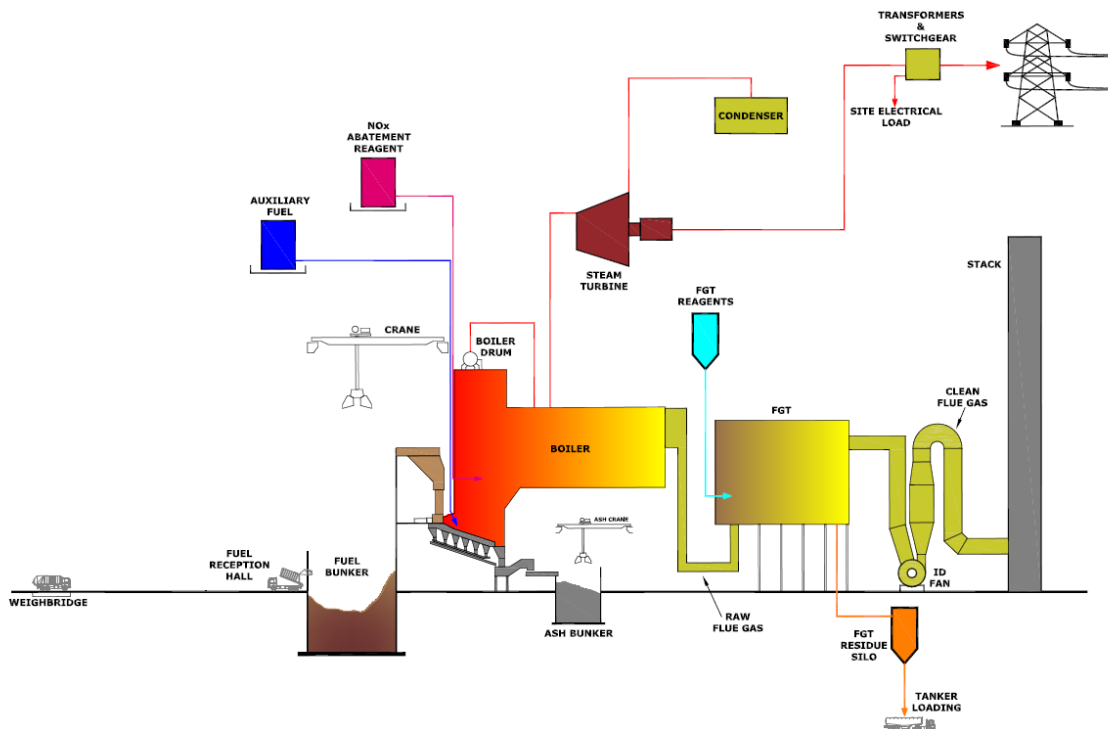
What is South Humber Bank Energy Centre?

South Humber Bank Energy Centre (SHBEC) is an energy from waste (EfW) power station. It would be built on undeveloped land within the boundary of the SHBPS site to the east of the CCGT power station (the 'Site').

SHBEC would comprise a number of buildings and structures. These include a fuel reception hall, fuel storage bunker, boiler hall, a flue gas treatment facility, emissions stacks, turbine hall, air-cooled condensers and an administration block. There would also be vehicle weighbridges, internal access roads and parking, a heavy goods vehicle (HGV) holding area and an electrical substation.

SHBEC would make use of Refuse Derived Fuel (RDF) and operate 24 hours per day, seven days per week with occasional shutdown periods for planned maintenance work. RDF would be delivered to the Site by road, using HGVs, via a new access road created from South Marsh Road.

RDF would be combusted at temperatures above 850°C. The heat created will be used to heat water in a boiler to produce steam, which can then be used to generate electricity using a steam turbine. Some of the steam could potentially be used to provide heat to local users. A process diagram is provided on the following page:



What is Refuse Derived Fuel (RDF)?

RDF comprises processed waste from municipal/household, commercial and industrial sources.

The Environmental Permit required for the operation of SHBEC would include a specific list of types of waste that can be accepted. The RDF accepted would be non-hazardous.

Where would the RDF come from?

There is a large amount of waste generated within the UK that continues to be landfilled. In addition, on average of 3 million tonnes of waste is exported each year to Europe due to a lack of domestic waste management infrastructure.

At this stage we are not able to state the precise locations of where the RDF used in the EfW power station would come from but based upon our studies we believe that there is sufficient available fuel.

How much electricity would be generated by SHBEC?

SHBEC is proposed to have a gross electrical output of up to 95 MW. This is enough energy to supply around 100,000 homes.

How many jobs would be created?

SHBEC would provide approximately 50 permanent jobs and create around 600 jobs during construction.

What land is required?

SHBEC would be built on available land within the boundary of the SHBPS site on South Marsh Road, near Stallingborough, between Immingham and Grimsby, in North East Lincolnshire.

The Main Development Area for SHBEC is located to the east of the existing CCGT power station and comprises largely undeveloped land. Cooling water pipelines (associated with the

CCGT power station) and other utilities cross the Main Development Area below ground and these have influenced the layout of the EfW power station.

The remainder of the Site (outside the Main Development Area) comprises the operational SHBPS site. Some of the land within this area would be used in connection with SHBEC for construction laydown purposes, ecological mitigation and access.

Why is an EfW Power Station needed?

The UK needs to develop new low carbon electricity generation capacity to replace its ageing coal-fired and nuclear power stations, which are in the process of closing down and being decommissioned. There is also a need for alternative forms of generation to those renewable technologies that are limited by weather conditions, to provide back-up (such as during low wind speeds or lower levels of solar energy). This is important to ensure that UK homes and businesses benefit from secure and reliable electricity supplies. The need for new electricity generation capacity, such as that which will be provided by SHBEC, is set out in government policy – the Overarching National Policy Statement for Energy ('EN-1') and the National Policy Statement for Renewable Energy ('EN-3').

SHBEC would also make a positive contribution to waste management by making use of waste that would otherwise go to landfill or be exported overseas. The adopted North East Lincolnshire Local Plan (2018) identifies that there is a need to ensure that there are sufficient waste management facilities within North East Lincolnshire to meet the requirements of the area. Within the Local Plan the justification for Policy 49 'restoration and aftercare (waste)' identifies that waste disposal through means such as landfill is the least desirable waste management option available.

What would happen to South Humber Bank Power Station?

In 2015, EPUKI committed £53m to an overhaul of the gas turbines at South Humber Bank Power Station in order to ensure its future until at least 2027.

The EfW power station would operate separately to SHBPS and therefore would have no impact on its operation.

Hasn't planning permission already been granted for SHBEC?

Yes. Full planning permission was granted by North East Lincolnshire Council (NELC) under the Town and Country Planning Act 1990 in April 2019 (the 'Planning Permission') for the construction of an EfW power station with a gross electrical output of up to 49.9 MW (the 'Consented Development').

We are now in the process of undertaking detailed design work on the EfW power station as approved and the submission of information to discharge the planning conditions attached to the Planning Permission has already begun. It is anticipated that applications to discharge the conditions relating to the detailed design of the Consented Development would be submitted to NELC during Q1 2020. We anticipate commencing construction later in Q1 2020.

Why is another application being submitted for SHBEC?

Since the Planning Permission was granted for the EfW power station in April 2019, we have been assessing potential opportunities to improve its efficiency. It is now proposed that the EfW power station (the 'Proposed Development') would have a gross electrical output of up to 95 MW. In order to achieve this, the following works (additional to those which have been approved by the Planning Permission) would be required:

- extended air-cooled condenser – an additional row of fans and heat exchangers would be added to the air-cooled condenser;

- increased cooling capacity for the generator – to allow the generator to operate at an increased load and generate more power;
- increased transformer capacity – to allow the generator to achieve up to 95 MW; and
- ancillary works – the above works would require ancillary works and operations, such as new cabling or pipes.

It is important to note that we are not seeking any changes to the maximum building dimensions or RDF throughput that were approved by the Planning Permission and assessed as part of the Environmental Impact Assessment that accompanied the planning application submitted to NELC.

As the Proposed Development would have a gross electrical output of more than 50 MW, it is classed as a 'nationally significant infrastructure project' under the Planning Act 2008. This means that it requires development consent from the Secretary of State (SoS) for Business, Energy and Industrial Strategy (BEIS) before it can be constructed and operated. The application process is administered by the Planning Inspectorate (PINS). Development consent is granted by the SoS in the form of a 'Development Consent Order' (a 'DCO').

How does the development consent application process work?

Before an application for development consent can be submitted to the SoS there is a statutory duty on the applicant under Section 47 of the Planning Act 2008 to consult the local community within the vicinity of the site in question.

Following submission of the application PINS will first decide, on behalf of the SoS and within a prescribed period of 28 days, whether to accept the application for examination. If accepted, PINS then appoints an independent inspector or panel of inspectors, also known as the Examining Authority ('ExA'), who will examine the application on behalf of the SoS.

There is the opportunity for the local community and other stakeholders to be engaged in the examination process and to express their views on the application.

Following an examination process of up to six months, the ExA has three months to write a report setting out a recommendation as to whether development consent should be granted. The report is then sent to the SoS who has three months to consider it and to make a final decision on whether to grant development consent. If the SoS grants development consent this is in the form of a DCO.

The SoS's decision must be made in accordance with the relevant National Policy Statements ('NPSs') which have been designated, in this case those below that outline the need for new energy infrastructure and the issues to be considered in determining such applications. Other matters that the SoS may consider important and relevant when determining an application for development consent may include other national policies and local planning policies.

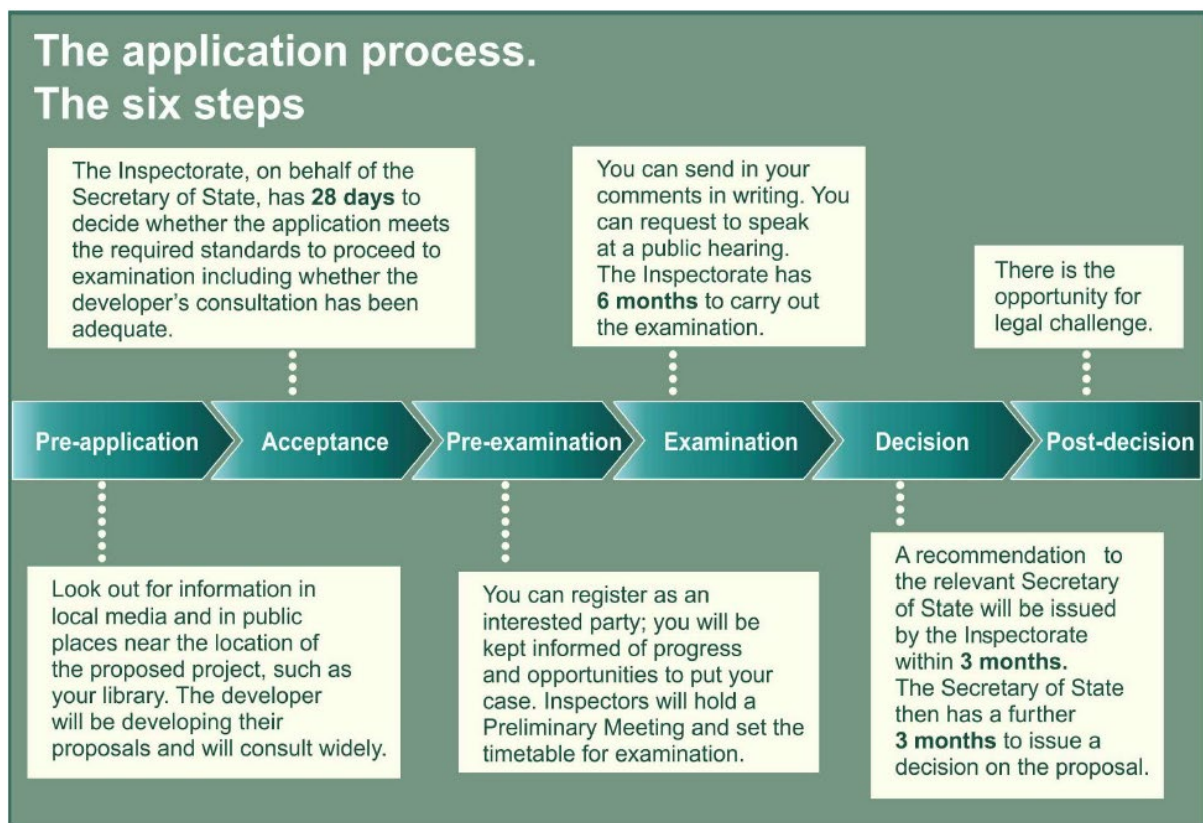
The NPSs of relevance to the EfW power station are:

- NPS EN-1 (Overarching Energy Policy); and
- NPS EN-3 (Renewable Energy Infrastructure).

These NPSs can be viewed via the following link:

<https://www.gov.uk/government/publications/national-policy-statements-for-energy-infrastructure>

The diagram below shows the six key steps of the application process.



The PINS website provides further details on the application process, which can be accessed via the following link:

<https://infrastructure.planninginspectorate.gov.uk/application-process/the-process/>

What is Preliminary Environmental Information?

The proposed EfW power station is classed as 'Environmental Impact Assessment ('EIA') development' for the purposes of the Infrastructure Planning (Environmental Impact Assessment) Regulations 2017 (the 'EIA Regulations 2017').

The application for development consent therefore requires an EIA, which is a detailed assessment of the likely significant environmental effects of the development. The EIA would identify any mitigation measures required to control or reduce environmental effects. The findings of the EIA would be reported within an Environmental Statement ('ES') that forms part of the application.

A Preliminary Environmental Information Report ('PEI Report'), including a non-technical summary is available as part of our pre-application consultation. The PEI Report provides information on the likely significant environmental effects of the proposed EfW power station so far as that information is available at this time. The comments received on the PEI Report will be considered before the completion of the EIA of the proposed EfW power station (the 'Proposed Development') and the submission of the ES with the application for development consent.

What would the EIA consider?

The EIA would consider the effects of the Proposed Development on the environment and set out measures to avoid or reduce any impacts (known as mitigation).

The EIA would look at all potential impacts on the environment associated with site preparation works, construction, operation (including maintenance) and eventual decommissioning of the Proposed Development. We would also take account of any potential impacts arising in combination with other consented and planned developments in the wider area. The following environmental topics would be assessed:

- air quality;
- noise and vibration;
- traffic and transport;
- ecology;
- landscape and visual amenity;
- geology, hydrogeology and land contamination;
- cultural heritage;
- water resources, flood risk and drainage;
- socio-economics;
- waste management;
- human health; and
- sustainability and climate change.

All of the above would be reported in the ES.

Who would regulate SHBEC?

The Environment Agency (EA) is responsible for ensuring that all EfW facilities in the UK are operated in accordance with best industry practice, meet the emissions limits set by the Industrial Emissions Directive (IED), and monitor their emissions whilst they are operational.

We would apply to the EA for an Environmental Permit. This is separate to the DCO process. If the permit is granted by the EA it then becomes the regulator and scrutinises monitoring data.

The EA can visit the site and assess compliance with the permit.

What would the impact be on air quality?

SHBEC, like all modern power stations, would be fitted with air emissions control technologies to monitor and control potential emissions. The air emissions control technologies coupled with stringent environmental regulations means that the power station would be designed and operated to have no significant impact on air quality or health.

As part of the EIA process, the potential impacts of the power station on air quality are being assessed and information is provided in the PEI Report and would subsequently be reported in the ES.

The air quality assessment would also consider potential impacts arising from traffic associated with the EfW power station.

What would come out of the stack?

Emissions from the stack would comprise gases from the combustion process (which have been cleaned by the flue gas treatment process) and water vapour.

There may be a visible plume under certain weather conditions. This would be a result of water vapour. It would not always be visible, and its likely frequency is being considered in the air quality assessment. Similarly, its visibility is being assessed as part of the landscape and visual assessment in the ES. Further information is provided in the PEI Report.

How would odours be controlled?

Odour control at EfW facilities is well developed and consists of both design and operational measures. For example, the waste is delivered in enclosed lorries and the entire management process is then completed entirely within the building. The tipping hall and waste bunker remain under negative pressure, so these areas actually draw air into the building when the doors are open. In addition, the doors themselves open and close quickly during deliveries, further strengthening the measures in place to ensure any odour stays inside the building.

Would it be noisy?

The Site is well located away from residential properties and noisier activities such as tipping of waste from lorries would take place inside the building.

The potential impacts of activity at the Site will be considered in the noise and vibration assessment.

How would vermin be controlled?

Effective pest management and control is a function of both the design and operation of EfW facilities.

In terms of the operation, a pest management plan would be put in place, as required by the EA, as part of the Environmental Permit. This pest management plan would include measures such as the timely processing of waste, regular site inspections and good housekeeping measures, and the retention of a nominated contractor to provide monitoring and pest control services in the event that they are required.

Typically, pests are not an area of concern in well-run and modern EfW facilities.

Would there be any impacts on local ecology?

As part of the EIA process, the impacts of both the construction and operation of the EfW power station on ecology are required to be assessed.

The PEI Report assesses these impacts and identifies where mitigation is required in order to reduce the magnitude of any impacts. Mitigation measures would include a financial contribution toward the South Humber Gateway Strategic Mitigation Land that is being created by NELC, a visual screen between the Site and bird habitat to the south of the Site, and the delivery of new habitats in the ecological mitigation and enhancement area to the west of the SHBPS Site.

What would be the hours of operation?

The proposed EfW power station would operate 24 hours a day, seven days a week, with occasional offline periods for maintenance. RDF would be delivered to the Site by road 24 hours a day, seven days a week (excluding Christmas Day, Boxing Day and New Year's Day).

The EfW power station would have enough storage capacity for approximately four days of fuel, so that it can continue to operate if there are any short-term supply issues.

How many HGV movement would there be?

Operational traffic movements for the Proposed Development are detailed within the Transport Assessment (Appendix 9A of the PEI Report - Volume III). In summary it is anticipated that during the operational phase total HGV movements at the Site would be around 312 in and

312 out per day. These figures include RDF deliveries and movements associated with delivery of consumables and removal of waste products (e.g. bottom ash and flue gas treatment residues). The number of vehicle movements would be the same as for the Consented Development.

Although fuel deliveries would be accepted 24 hours a day, it is expected that the majority of such deliveries would occur between 6am and 6pm, with a maximum of 44 deliveries in any one hour, and only approximately three deliveries per hour between 6pm and 6am.

Would it be safe?

Yes. The EfW power station would have to comply with strict regulations and it would be regulated through the Environmental Permit issued by the EA and also subject to regulation by the Health and Safety Executive.

How big would SHBEC be when built?

The table below sets out the maximum dimensions for each component of the proposed EfW power station. The dimensions are the same as those that were approved under the Planning Permission in April 2019.

The dimensions are based on conservative assumptions and the actual dimensions are likely to be smaller. The visualisations provided at the consultation events give an indication of how the Proposed Development might look, whereas the photomontages included in the PEI Report are based on the maximum dimensions.

Component	Dimensions
Main building maximum height	59 m AOD (including 2 m parapet wall on boiler house)
Main building maximum footprint	210 m x 110 m
Fixed stack height	102 mAOD
Maximum stack diameter	3 m per combustion stream
Fuel bunker base maximum depth	-8 mAOD

How long would it take to construct the power station?

It is anticipated that construction of SHBEC (up to 49.9 MW gross electrical output, pursuant to the Planning Permission) would commence during early 2020. The construction phase is expected to last for approximately 36 months, with the EfW power station entering operation in early 2023. If development consent is granted by mid-2021, the additional works would also be completed within the same construction programme.

What are our next steps?

Following the close of this consultation we will take account of the comments received in finalising our application for development consent.

We intend to submit our application for development consent to the SoS during Quarter 1 2020. A decision on the application would then be expected by mid-2021.