

## SUPPORTING STATEMENT

Planning application for an electricity battery storage facility on land north of Twibell Street, Barnsley, S71 1JE

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## 1. INTRODUCTION

- 1.1 This Supporting Statement has been prepared in support of a full planning application submitted by UK Energy Reserve Limited (“UKER”) for an electricity battery storage facility on land north of Twibell Street, Barnsley, S71 1JE (the “Proposed Development Site”).
- 1.2 In June 2016, the Energy and Climate Change Committee published their Low Carbon Network Infrastructure Report. This recommended the rapid roll-out of battery storage in order to support the development of a low carbon economy. The purpose of the Proposed Development would be to contribute to this national programme to provide cost effective, flexible energy during peak electricity periods. It would also provide local energy security as, unlike national energy generation, it would feed electricity into the local electricity network at the point of need thereby ensuring that the lights stay on for local residents and businesses.

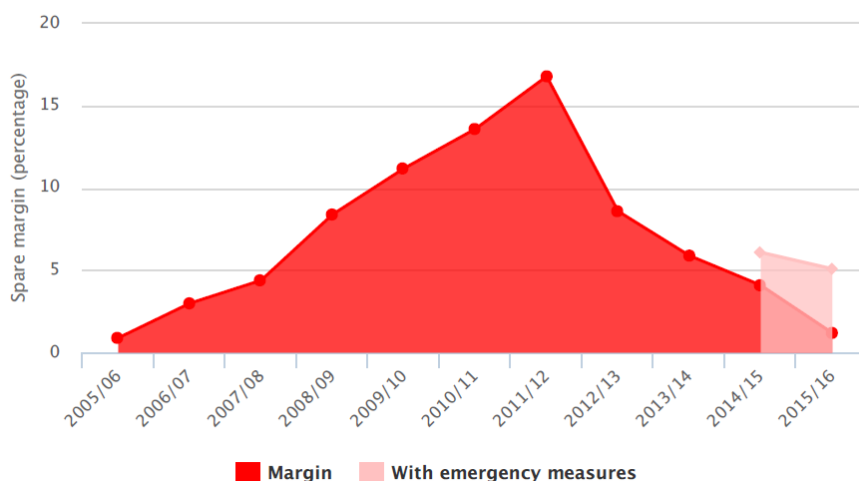
## 2. PROPOSED DEVELOPMENT RATIONALE

### Need for the development

- 2.1 The principal use of the Proposed Development Site would be to provide a facility to store electricity at times of surplus and release electricity at times of peak demand. The storage facility would operate through a series of containerised units. Within the units would be large battery cells that convert electricity into electrochemical energy that is then stored, before being converted back to electricity for exporting into the local distribution network.
- 2.2 Ofgem, DBEIS and National Grid have been working together to implement options that will provide consumers with additional safeguards against the increased risk to mid-decade security of supply known as the Electricity Market Reform (EMR). The EMR introduces two key mechanisms to provide incentives for the investment required in our energy infrastructure.
- Contracts for Difference (CFD) provides long-term price stabilisation to low carbon plant, allowing investment to come forward at a lower cost of capital and therefore at a lower cost to consumers.
  - The Capacity Market provides a regular retainer payment to reliable forms of capacity (both demand and supply side), in return for such capacity being available when the system is tight.

Britain's spare electricity capacity

Source: National Grid



- 2.3 National Grid has a target to operate with a reserve of 20% in order to accommodate sudden peaks in demand. During the Winter 2016/17 this reserve capacity was as low as 6.6%<sup>1</sup> which is significantly short

<sup>1</sup> National Grid Winter Outlook Report 2016/17

of the 20% target and represents only a slight improvement when compared with Winter 2015/16 when the capacity margin was 5.1%, the lowest since 2007/08.

- 2.4 The electricity margin has been described as ‘tight but manageable’ by National Grid who were forced to issue a Notification of Inadequate System Margin (NISM) in May 2016, calling for an increase in power supply to meet demand. This was the second NISM in 6 months, following a similar notification in November 2015. Before that a NISM had not been issued since 2012, and before that in 2009. The increased use of this mechanism demonstrates the narrowing buffer between demand and available supply and reinforces the need for the Proposed Development.
- 2.5 It is proposed that the storage facility would participate in the National Grid’s DSBR programme. This provides balance to the National Grid during unexpected periods of high demand for electricity or where there are constraints on electricity generation available in England and Wales. Under the conditions of the programme, National Grid calls upon an electricity generator such as UKER to release the stored electricity from its assets on demand, thus placing a national importance on projects such as that proposed in this planning application.

#### **Benefits of the Proposed Development**

- 2.6 The Proposed Development would provide electricity which to meet the Electricity Market Reform objectives which are:
- decarbonise electricity generation by providing certainty to support renewable energy generation.
  - keep the lights on by being able to react to peaks in consumer demand
  - minimise the cost of electricity to consumers by providing a cost-effective solution
- 2.7 The International Renewable Energy Agency (IRENA) is an intergovernmental organisation that supports countries in their transition to a sustainable energy future, and serves as the principal platform for international cooperation, a centre of excellence, and a repository of policy, technology, resource and financial knowledge on renewable energy.
- 2.8 In 2015 IRENA reported on the outlook for battery storage. In simple terms, as an electricity system increases its reliance on generation from variable resources such as wind and solar, additional measures should be used to keep the supply and demand of electricity balanced. One such measure is through the storage of energy. Energy storage consists of a suite of technologies at various stages of development. The most mature energy storage technology is pumped hydropower, generally utilised for longer periods of charge and discharge (multiple hours). Pumped hydropower represents the vast majority (99%) of storage in use...it is economically and technically proven throughout the world. By contrast, battery storage is a new market development.<sup>2</sup>

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<sup>2</sup> Battery storage for renewables: market status and technology outlook (IRENA, 2015), page 4

- 2.9 Batteries store energy chemically. They can mitigate fluctuations in electricity supply and demand. However, IRENA noted that there are barriers to their use in the mainstream, including: financial, technological and regulatory. Nonetheless, UKER are committed to delivering battery storage in the UK.
- 2.10 In June 2016, the Energy and Climate Change Committee published their Low Carbon Network Infrastructure report. The Committee recommended that Government proceeds urgently with measures to assist with the roll-out of battery storage (paragraph 64). They also reported that:-
- “Storage technologies should be deployed at scale as soon as possible.”<sup>3</sup>*
- 2.11 It is evident that the development of battery storage will aid the UK’s transition to a low carbon economy, and will help enable more renewable energy generation to be installed whilst reducing risks of electricity supply and demand not being balanced. This will deliver environmental benefits as the UK continues to adapt and address the consequences and causes of climate change.
- 2.12 Measures to balance the electricity system also provide economic benefits, by virtue of underpinning the supply of power, providing a reserve of energy that can be supplied to the distribution network at times of need and overall supporting local businesses and properties that are reliant on security of supply.
- 2.13 The social benefits associated with the development are not only helping to secure the supply of electricity to consumers, but also through the incorporation of new technologies in a pioneering manner. If the UK is to become not only a greener economy but a greener society, storage of energy will need to be developed further.
- 2.14 It is acknowledged that the Proposed Development would not create significant levels of direct employment. However, the battery storage programme could generate up to 2 new jobs across the north west region for field service engineers, as well as temporary employment for the construction contractors and their employees. In addition, the Proposed Development would support existing and new local businesses and future job creation by providing electricity during periods of peak electricity demand and ensuring that they are not subject to electricity blackouts.

#### **UK Energy Mix**

- 2.15 The UK energy generation mix is changing as more renewables are integrated into the mix and large fossil fuelled power stations face closure due to environmental legislation or challenging economics. This creates an issue of managing a safe and secure power supply for the nation and as the energy generation mix changes so do the electricity margins (these margins being the differences between the energy which is needed to meet peak demand and the energy that is actually available).

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<sup>3</sup> Low Carbon Network Infrastructure (House of Commons Energy and Climate Change Committee, 2016), paragraph 67

- 2.16 In 2001 the EU issued the Large Combustion Plant Directive (“LCPD”) which was introduced to reduce carbon output. Under the LCPD most UK coal fired power stations are required to close in the next few years, and all affected stations by at least 2025.
- 2.17 The retirement of the life expired nuclear generation power stations is also scheduled to occur over the same period as the closure of the large coal fired stations. The programme for completion of replacement nuclear stations is well behind schedule. In addition, the increasing size of these new nuclear power stations increases the impact of any short-term loss of capacity at a particular facility. The prospect of a reduced capacity margin in the UK is therefore very high and there is an even greater requirement for rapid response, reserve power.
- 2.18 Wind farms and solar parks do not have predictable outputs. Both wind and solar are inherently intermittent as generators and are not a ‘like for like’ replacement for the retired coal (and nuclear) base load generation. Again, this means an enhanced requirement for a flexible, fast acting response from other types of energy generation and storage, in order to meet demand.
- 2.19 Consequently, there is a challenge to security of supply due to closure of the coal fired power stations, the delay in replacing the nuclear fleet and the unpredictability of output of renewable energy (wind and solar).
- 2.20 A key feature of battery storage is that it is generally only used at times of ‘stress’ on the network, which are very infrequent – typically less than 300 hours per annum. Battery storage is the last line of defence to prevent serious power fluctuations and potential blackouts.<sup>4</sup> In these circumstances power would be fed into the local grid and local businesses and residents would be able to make use of the UKER’s power to keep the lights on.

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<sup>4</sup> National Grid: Operating the Electricity Transmission Systems in 2020; Follow Up Report; February 2010

### 3. SITE SELECTION

- 3.1 A number of factors beyond planning need to be considered when finding a suitable location for the Proposed Development. These include but are not limited to:
- proximity to available 33kV electricity network;
  - commercially available land;
  - proximity to residential uses; and
  - other physical land constraints.
- 3.2 Electricity networks in the UK were originally designed to support centralised power generation feeding outwards to meet local demand loads. A number of technical factors limit the opportunity to connect local storage, each case is location specific and treated individually by the local electricity network operator.
- 3.3 UKER's storage sites are economically constructed in the range of 10MW to 20MW electrical output. Electricity networks will typically accept 10MW to 20MW only on the 33kV 'level' of the local network.
- 3.4 The Proposed Development Site was chosen for its proximity to the Northern Powergrid substation which provides access to the local network without having to build major infrastructure, keeping connection costs to an acceptable level.
- 3.5 The site is brownfield, which reduces the impact on available land and provides a more acceptable planning use on a redundant site, which would otherwise remain vacant. It is located approximately 200m from the nearest residential receptor. This is considered in further detail in the Planning Statement.
- 3.6 This combination of factors means that the Proposed Development Site is a viable economic option for the Barnsley area, helping to improve the security of electricity supply for local residents and businesses.

## 4. PROPOSED DEVELOPMENT DESCRIPTION

### Proposed Development Site

- 4.1 The Proposed Development Site is located on land north of Twibell Street, Barnsley, S71 1JE. The site is accessed via an existing site access on Twibell Street.
- 4.2 The Proposed Development Site has an area of approximately 0.24 hectares and is outlined in red on the accompanying Location Plan Ref: 17284/101 Rev.1 at Appendix A.
- 4.3 The Proposed Development Site is situated within an existing industrial estate and comprises a concreted area with small ruderals and grasses growing along seams between the concrete slabs. The site therefore constitutes vacant brownfield land. There are some piles of earth and landscaping debris. To the east of the site lies a distribution warehouse. There are additional industrial buildings to the west. Immediately north of the site lies additional hardstanding. Beyond the the boundary to the north is the River Dearne and the Dearne Valley Country Park. To the south is Twibell Street and Barnsley Park Trading Estate.

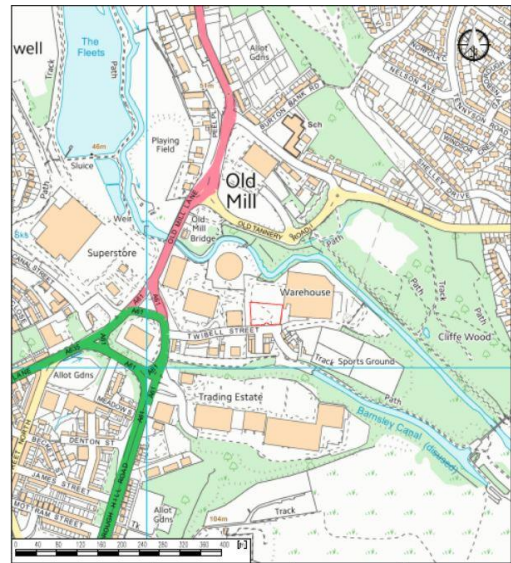


Figure 1: Location Plan (Ref: 17284 Rev.1)

### Proposed Development

- 4.4 The Proposed Development comprises a large portal framed building with dual-pitched roof which would reflect the appearance of other buildings nearby. Outside of the building would be ancillary infrastructure to facilitate the import and export of electricity. The layout is shown in the accompanying Site Plan Ref: 17284/102.1: Rev.1 and 17284/102.2 Rev.1 at Appendix B, and Elevations & Block Plan Ref: 17284/103: Rev.1 at Appendix C.

### Component Project Description

#### Building

- 4.5 The Proposed Development would be contained within a new portal framed building with a dual-pitched roof which would replicate the style of the existing buildings nearby and would contain a series of battery units to facilitate the storage of electricity for National Grid. In addition, the building would include control, maintenance and switch rooms. The Proposed Development components and specifications are shown on the Site Plan (Ref: 17284/102.1: Rev.1 and 17284/102.2 Rev.1) and Elevations & Block Plan (Ref: 17284/103 Rev.1).

- 4.6 The batteries would be served by a supply of electricity that is maintained at a constant level of charge in order to meet the National Grid's requirements. Electricity would also flow out of the battery in a similar manner.
- 4.7 Within the facility would be sealed battery cells, in which electrochemical storage takes place. This uses a lithium ion compound within the sealed cells. No further chemicals are required.
- 4.8 Ventilation is required via cooling units to maintain the temperature at approximately 20 degrees Celsius. These would be located on the side of the building.
- 4.9 The energy within the batteries can be stored indefinitely; the anticipated battery life is however five years. The Proposed Development incorporates relatively new technology at this scale and it is expected that future technological enhancements would drive more efficient and effective storage.

#### ***Transformer Compound***

- 4.10 The auxiliary transformer would supply electricity to the on-site equipment for the monitoring and welfare facilities.
- 4.11 The transformer would be located within a secure compound which would be fenced and set out as show in the Site Plan (Ref: 17284/102.1: Rev.1 and 17284/102.2 Rev.1). The equipment would be finished in a matt grey colour, similar to RAL7036 and would be surrounded by a standard vehicle crash barrier.
- 4.12 Electricity would be imported and exported to the Proposed Development Site via an underground cable connected to the substation of the local Distribution Network Operator, Northern Powergrid.

#### ***DNO Metering Station***

- 4.13 The purpose of this building would be to house the equipment required by Northern Powergrid to monitor and control the import and export of electricity to and from the site. This would be built to the design and specification required by Northern Powergrid.

#### ***Security Fencing***

- 4.14 The security fencing would seek to ensure that the facility remains secure at all times. This fencing would comprise a 2.4m high paladin style fence finished in matt fern green, similar to RAL6025. The internal fencing for the transformer compounds would be approximately 1m in height and comprise a standard galvanised steel vehicle crash barrier, similar to those seen on the highways.

#### ***Drainage***

- 4.15 Surface water will drain to the existing drainage system via an interceptor. Foul water would discharge to an above ground septic tank.

#### ***Lighting***

- 4.16 Lighting for the exterior of the site would be in use only when operatives are on site. At all other times, there would be no external illumination. Lighting design would comply with the requirements of Table 2 of the 'Guidance Notes for the Reduction of Obtrusive Light GN01: 2011', published by the Institution of Lighting Professionals. It is proposed that a dynamic lighting assessment is undertaken prior to operation which would ensure light fittings would be selected and located to minimise external light impact whilst providing protection and security for on-site staff.

***Waste***

- 4.17 There is no waste material associated with the operation. Any on site waste would be collected by an approved waste disposal contractor. This waste would be limited to packaging materials for consumables and maintenance waste. The manufacturer of the battery cells would be able to recycle the cells once they have reached the end of their use.

## 5. DEVELOPMENT PHASES

5.1 The development of the site can be split into three distinct phases:

### ***Phase 1: Construction***

The construction period for the development is expected to last up to 14-weeks and consist of 4 tasks; ground works, infrastructure installation, equipment installation and testing and commissioning. Proposed vehicle movements are set out later in this report.

### ***Phase 2: Operation***

The site would operate on an unmanned basis with ad hoc visits from field service engineers for check-ups and maintenance during normal working hours. The electricity storage facility would be remotely operated and monitored by National Grid and UKER at their respective head offices (UKER's head office being 6th Floor Radcliffe House, Blenheim Court, Solihull, B91 2AA). In the event of unexpected facility operational issues the site may be visited outside of these hours.

### ***Phase 3: Decommissioning***

It is anticipated that, upon termination of the storage licence, the containers, batteries and infrastructure would be removed and the site reinstated prior to hand back to the landowner. This would be agreed with the landowner prior to the end of the storage licence.

## 6. ACCESS AND MOVEMENT

- 6.1 As set out earlier in this Statement, the site is located land north of Twibell Street, Barnsley, S71 1JE. The site is accessed via an existing site access on Twibell Street.
- 6.2 The construction period is expected to last up to 14-weeks and consist of 4 tasks; ground works, infrastructure installation, equipment installation and testing and commissioning. The installation of the equipment would be enabled by crane and other specialist equipment and this process is anticipated to take four months. It would be undertaken by expert contractors approved by UKER.
- 6.3 All construction vehicles would enter and exit the site using forward gears. Deliveries would be scheduled to ensure that no vehicles would be required to park on the public highway.
- 6.4 During operation, the site would operate on a remote controlled, unmanned basis. The site would be visited once per week by a field service engineer using a small commercial van. Parking for UKER's field service engineers, and approved contractors, who would visit the site on an irregular, ad-hoc basis, would be on site with the provision of two car parking spaces.
- 6.5 The Proposed Development would not have an adverse effect on the local highway network as traffic movements to and from the site will be minimal during operation.

## 7. SUPPORTING ENVIRONMENTAL INFORMATION

- 7.1 The potential impact from the Proposed Development Site on surrounding communities, landscape and wildlife is a key factor that UKER has considered greatly in preparing this planning application.
- 7.2 It is acknowledged that local perception in relation to developments of this nature could sometimes be less than positive. It is therefore essential to effectively demonstrate that the Proposed Development Site should become a trusted and beneficial component of the infrastructure of the local community. In order to achieve this, a comprehensive schedule of works is carried out to measure any potential adverse impacts arising and to further demonstrate how this will be managed sustainably going forward.

### Noise

- 7.3 A Noise Impact Assessment has been undertaken and is included at Appendix D.
- 7.4 The Noise Assessment was carried out in accordance with the guidance contained in British Standard 4142:2014 Methods for rating industrial and commercial sound. The assessment was based on the results of a baseline noise survey undertaken at a location representative of the noise environment at the nearest sensitive receptors to the Proposed Development over weekend daytime and night-time periods.
- 7.5 The results of the assessment show that the specific noise being generated by the Proposed Development would have a low noise impact at all the nearest noise-sensitive receptors considered during the daytime and at night. Therefore, no significant noise effects are predicted.
- 7.6 Considering the above, it is recommended that noise impact should not be considered a constraint to the Proposed Development.

### Air Quality

- 7.7 The Proposed Development would not include any processes which involve emissions to air and therefore no further assessment has been undertaken.

### Ecology

- 7.8 An Ecological Impact Assessment has been carried out and is included at Appendix E.
- 7.9 The assessment states that the Proposed Development is not anticipated to impact upon any designated sites for nature conservation. Overall, the small-scale loss of scrub habitat on the Proposed Development Site is not considered to be significant beyond the site level, due to its small-scale and species' poor character, and therefore no compensation has been recommended for the habitat loss. The eastern boundary wall with bat roosting potential will be retained.
- 7.10 The Proposed Development Site offers limited opportunities for nesting birds, and the margins of the site are likely to support foraging and commuting bats. The site is unlikely to be important or critical for any

protected, rare or notable species. Ecological enhancement is proposed through the provision of bird and bat boxes and tree planting.

- 7.11 The assessment concludes that with the implementation of mitigation measures set out in the accompanying report, the Proposed Development is unlikely to result in any residual significant negative impacts upon the identified ecological receptors, and no contravention of relevant wildlife legislation is anticipated.

#### **Visual Impact**

- 7.12 The Proposed Development Site comprises a large area of hardstanding within an area characterised by warehousing and other industrial uses. The site is located near to the River Dearne and Dearne Valley Country Park, however, due to the screening effect of the intervening vegetation and existing development, there will be no visibility of the Proposed Development from these locations. In any case, the Proposed Development, comprising a new portal framed building with a dual-pitched roof, would replicate adjacent industrial buildings in both form and design.
- 7.13 Given the above factors, the scale, arrangement, and form of the Proposed Development would not harm the immediate landscape setting. Therefore, the visual impact of the Proposed Development is negligible.

#### **Coal Mining Reporting Area**

- 7.14 The Proposed Development Site is within a Coal Mining Reporting Area. A combined Groundsure Screening and CON29M Coal Mining Risk Assessment has been prepared and is included in Appendix F.
- 7.15 The assessment concludes that no potentially contaminative land uses have been identified at the site. Whilst potential contaminative historical land uses and a historical landfill have been identified in proximity to the site, Groundsure has not identified a potential contaminant-pathway-receptor relationship that may give rise to significant environmental liability.
- 7.16 The Proposed Development Site is not within a surface area that could be affected by past, present or future underground or opencast coal mining and there are no known coal mine entries within, or within 20m of, the boundary of the property.

## 8. CONCLUSION

- 8.1 The Proposed Development would contribute to a national programme to fulfil demand for energy during peak electricity periods. The Proposed Development would provide local benefits through energy security as, unlike national energy generation, it would feed electricity into the local electricity network at the point and time of requirement thereby ensuring that the lights stay on for local residents and businesses.
- 8.2 UK Energy Reserve is the UK's leading independent developer and operator of smart, flexible power generation. As a leading independent smart energy business, UKER has a proven track record of safely, reliably, and successfully operating a geographically-diverse portfolio of assets dedicated solely to providing the UK with critical security of supply.
- 8.3 The technology proposed is the Best Available Technology "BAT" as recognised by Environment Agency for the purpose electricity storage and being connected to the network at the point of use offers demonstrable efficiency improvements over non-distributed current standby generation.
- 8.4 The programme could generate up to 2 new jobs across the northern region for field service engineers, as well as employment for the construction contractors and their employees. In addition, the Proposed Development would support existing and new local businesses and future job creation by providing electricity during periods of peak electricity demand and ensuring that they are not subject to electricity blackouts.
- 8.5 All car parking and deliveries would use the existing site access provision. During construction, vehicle movements would be kept to a minimum to ensure there is no adverse impact to the local road network or its users. During normal operation, the site will be unmanned, however field service engineers would visit the site on an ad hoc basis to undertake general maintenance.
- 8.6 Through the provision of supporting studies, UKER has demonstrated, in relation to noise, ecology and visual amenity, the Proposed Development would not result in a significant impact on the surrounding environment or local residents. Therefore, as set out in the Planning Statement, the Proposed Development conforms with local and national planning policy and/or demonstrates why there are material planning considerations in which a departure is deemed appropriate.
- 8.7 The project has been approved by Ofgem, National Grid and Northern Powergrid as the relevant DNO. As such, UKER, as the applicant, would respectfully suggest that this Supporting Statement has demonstrated that there are no significant adverse environmental impacts and that there are material considerations that should enable Barnsley Metropolitan Borough Council to approve this planning application.

## 9. GLOSSARY OF TERMS

**Balancing Mechanism:** One of the tools National Grid uses to balance electricity supply and demand close to real time. It is needed because electricity cannot be stored and must be manufactured at the time of demand. Where National Grid predicts that there will be a discrepancy between the amount of electricity produced and that which will be in demand during a certain time period, they may accept a 'bid' or 'offer' to either increase or decrease generation (or consumption). The balancing mechanism is used to balance supply and demand in each half hour trading period of every day.

**Best Available Technology ("BAT"):** Best available technology (or just BAT) is a term applied with regulations on limiting pollutant discharges with regard to the abatement strategy. Similar terms are best available techniques, best practicable means or best practicable environmental option. The term constitutes a moving target on practices, since developing societal values and advancing techniques may change what is currently regarded as "reasonably achievable", "best practicable" and "best available".

**Capacity Market:** A new market introduced by the National Grid and which has as its objective the securing of future capacity to meet the UK's capacity requirements for years to come. The Capacity Market is designed to cost effectively bring forward the amount of capacity needed to ensure security of electricity supply. It will do this by correcting market failures and providing a predictable revenue stream to capacity providers. The level of revenue will be set through a competitive auction process and in return for payment successful providers must commit to deliver energy when needed or they will face penalties.

**Department for Business, Energy & Industrial Strategy (DBEIS):** The department brings together responsibilities for business, industrial strategy, science, innovation, energy, and climate change by ensuring that the country has secure energy supplies that are reliable, affordable and clean and tackling and mitigating impacts of climate change.

**Distribution Network Operator (DNO):** Distribution Network Operators own and operate the distribution network of towers and cables that bring electricity from our national transmission network to homes and businesses. They do not sell electricity to consumers. This is done by the electricity suppliers.

**Electricity Market Reform (EMR):** The Department for Business, Energy & Industrial Strategy's statutory consultation on the government's preferred electricity market framework. The Government sees nuclear, renewables and carbon capture and storage (CCS) as essential elements of the UK low carbon electricity mix needed to achieve its energy and climate policy goals. It recognises that to deliver this new low carbon generation with stable, predictable and transparent returns, a redesign of the market mechanism is required. As a result the EMR was launched in December 2010. The EMR is specifically targeted at addressing investor criteria, to make the UK an attractive place for energy investments.

**Embedded (or Distributed) Generation:** The generation of electricity from small energy sources. The UK predominantly generates electricity in large centralised facilities, such as fossil fuel (coal, gas powered), nuclear, large solar power plants or hydropower plants. These plants have excellent economies of scale, but usually transmit electricity long distances which can negatively affect the environment. Embedded generation allows the collection of energy from many sources and can give lower environmental impacts and improved security of supply.

**Large Combustion Plant Directive (LCPD):** In 2001 the EU issued the Large Combustion Plant Directive (LCPD) which was introduced to reduce carbon output. Under the LCPD most UK coal fired power stations are required to close in the next few years, and all affected stations by at least 2016.

**National Grid:** The National Grid is the high-voltage electric power transmission network in Great Britain, connecting power stations and major substations and ensuring that electricity generated anywhere in England, Scotland and Wales can be used to satisfy demand elsewhere.

**Notification of Inadequate System Margin (NISM):** This is a formal communication that lets market players know that National Grid's usual 'safety cushion' is not as big as they would like it to be at a particular time of that day.

**Ofgem:** The Office of Gas and Electricity Markets, supporting the Gas and Electricity Markets Authority (GEMA), is the government regulator for the electricity and downstream natural gas markets in Great Britain. It was formed by the merger of the Office of Electricity Regulation (OFFER) and Office of Gas Supply (Ofgas).

**Short Term Operating Reserve (STOR):** The National Grid's Short Term Operating Reserve (STOR) provides balance to the National Grid during unexpected periods of high demand for electricity or where there are constraints on electricity generation available in England and Wales.

**Small Scale:** This term relates to generation plant according to National Grid terminology. A 'small-scale' facility is one which is under 50MW of generation.

**The Energy Act 2013:** The Energy Act 2013 is the primary legislation that enables Electricity Market Reform (EMR), including the implementation of the Capacity Market (CM). The delivery of the EMR is a key objective of the Government's objective to secure energy on the way to a sustainable low carbon future. The government has established the CM and it is intended to incentivise investment in more sustainable, low-carbon electricity capacity at the least cost for energy consumers. This is needed to help secure electricity supplies for the future.